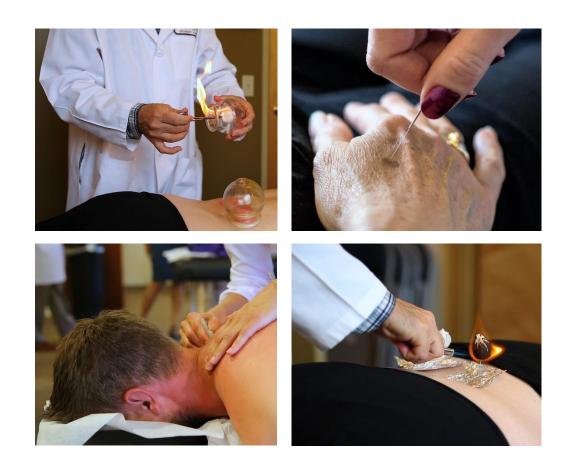
Colorado School of Traditional Chinese Medicine



Acu Moxa Techniques Manual

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Introduction and Prep

Introduction

This manual is to be used as a study and practice guide for the courses Acu Moxa Techniques/Practicum A & B. These courses cover history, equipment, various styles of acupuncture (zhen), moxibustion (jiu), and related modalities such as bloodletting, cupping, guasha, dermal stimulation with pellets, press tacks, seeds, electroacupuncture, cutaneous needling with plum blossom and rollers, three-edge needle bleeding, auricular acupuncture, scalp acupuncture, and other microsystems, TDP and infrared, injection, ion cords, magnets, and akabane, acupuncture analgesia, laser acupuncture, five element acupuncture, and Japanese acupuncture. The courses also cover: needle types, insertion, angle, depth, retention, manipulation and withdrawal, qi sensation, safety issues, cautions and contraindications, needle gauges, types, selection, replacement, inspection, needle disposal, dealing with fainting and other emergency situations, proper positioning of the patient, OSHA, and Clean Needle Technique (CNT). A popular saying in ancient China was "A single needle can free the body from ten thousand maladies". Many of these techniques are not used in the U.S. due to legal issues. There is conflicting information contained in this manual due to using almost 60 references. But, all information is knowledge.

Acu Moxa Technique/Practicum A Class #1

Acu Moxa Technique Introduction

Overview of TCM Therapeutic Acupuncture Modalities

Acupuncture, Bleeding & Pricking - 3 Edge Needles, Moxa - Types - Direct/Scarring & Indirect/Non-scarring - Needle Moxa - Moxa Sticks Thread/Cone Moxa - Moxa Burned on Other Substances- Moxa Used in Moxa Burners - Rolling Your Own Moxa Sticks - Akabane, Cupping - Glass, Bamboo, Porcelain, Manual Pump Cutaneous (Dermal) Needle Technique - 7 Star, Plum Blossom, Cluster Needle, Roller Needle, Gua Sha & Porcelain Spoon, TDP Lamp & Infrared Lamp, Injection Therapy, Suture Therapy, Electro-Acupuncture - TENS - Ryodo-Raku, Ion Cords & Magnet Therapy, Intradermal Needles, Pellets, Seeds, Auricular, Scalp Acupuncture, Acupuncture Analgesia, Microsystem Acupuncture (Face, Nose, Hand, Foot) and Five Element Acupuncture

Acupuncture History

Chinese, Japanese, Korean Needles

Needle Gauges, Length, Material, Insertion Tubes

Basic Skills of Acupuncture - Insertion - Manipulation - Angle & Depth - Qi Sensation Special Techniques - Free-hand Insertion - Strengthening Your Fingers, Practice Needling on Inanimate Objects

Clean Needle Technique & OSHA

Complications & Emergencies - Cautions & Contraindications

Positioning the Patient

Advanced Needle Techniques (Through and Through, Long Needle, Thick Needle, Press Needle (Push/Blunt) - Functions & Applications

Needle Disposal-Biohazard Units

Colorado Law (Scope of Practice)

Practice Needling Yourself

Practice Needling Your Classmates

Needling outside of class

Homework = Practice Needling Inanimate Objects

Most information in this manual was taken from the books referenced at the end of this manual.

The page numbers in the main books referred to throughout this manual are:

Chinese Acupuncture and Moxibustion, Revised edition (CAM)

Acupuncture: A Comprehensive Text (15th Printing) (C)

(CAM) = Pages 337 - 370) & (C) = Pages 395 - 545

Historical Perspective

Historical dates and chronological facts among scholars and text books vary considerably. Often, the transition from one Dynasty to another would not be a clean one; one Emperor of one Dynasty might retreat to a different part of China and continue on for some years; or, a new Dynasty might begin in a remote part of China and then take over the capitol. The question arises: what date is chosen to define when the Dynasty starts and ends? Some of the more common dates, chronological facts, and descriptions are used in this historical perspective. There are conflicting dates in this historical

perspective when various sources stated conflicting dates. In ancient times people did not have the mechanisms for storage and transmission of knowledge that we have today. This historical perspective has tried to focus on acupuncture, moxibustion, and its related modalities, and not on Chinese herbal medicine, diet, tuina, qigong, and taiji.

The Primitive Period in China was divided into 2 stages: The Old Stone Age (from antiquity to

10,000 years ago) and the New Stone Age) from 10,000-4,000 years ago). In the Old Stone Age, the ancestors knew how to use stone knives and scrapers to incise an abscess, drain pus and let blood out for therapeutic purposes. In the New Stone Age, because of the improvement in their technique of stone manufacturing, the ancient people were able to make "bian stone" as a special tool with more medical usage.

Chinese history is normally described in relation to Dynasties. The first historical emperor of

China was Qinshi Huangdi, or the Yellow Emperor of the Qin clan. His tomb has become a famous archeological site at Xian, best known for its hundreds of terra cotta warriors, guards and horses.

Before Qinshi, there were diverse tribes forming confederations, depicted as the Xia, Shang and Zhou Dynasties. Dating of the Xia and Shang Dynasties are based on archeological finds; dating of the Zhou Dynasty is influenced by historical records that are imprecise. Before that time, one encounters stories of a mythical period, projecting back to 5,000 years before the present, which gives the commonly-cited figure for the age of many Chinese cultural activities, including the frequently recited statement "Chinese medicine has a 5,000-year history".

Beginning with the Qin Dynasty, the common characteristic of Chinese rule is that there was one primary leader of China, the head of the Dynasty. Each leader was succeeded by another, usually by birthright, until an opposing group took power (at times, two or more Dynasties coexisted in different parts of China). It was common for a Chinese Dynasty to follow a basic pattern: begin with a very powerful leader taking over a weakened country; develop over several generations to a highly successful and vital civilization; and then degrade to the point that an opponent could take over. Some historical periods were highly unstable, in which there was frequent or nearly continuous upheaval. Thus, before the Tang Dynasty, there was the Six Dynasties period, followed by the short-lived Sui Dynasty (all together 7 Dynasties in 140 years). For those who are interested in China, the famous Han, Tang, Song, Ming, and Qing Dynasties particularly stand out; each of these lasted for about 300 years and ruled a vast territory.

Years of the Dynasty Period

2953-2357 B.C.

220-280 A.D.

265-420 A.D.

Chinese Dynasties

Mythical Rulers

Three Kingdoms

Jin Dynasty

Wei (North): 220-265 A.D. Shu (West): 221-265 A.D. Wu (South): 222 (229)-280 A.D.

Designation of Dynasty, Subdivisions, and Years

<u>wrythical Rulers</u>	2933-2331 D.C.
Fu Xi (Tai Hao): 2953 B.C.	
Shen Nong (Yan Di): 2838 B.C.	
Five Emperors	
1. You Xiong (Huang Di): 2698-2599 B.C.	
2. Jin Tian (Shao Han): 2598-2515 B.C.	
3. Gao Yang (Zhuan Xu): 2514-2437 B.C.	
4. Gao Xin (Di Ku): 2436-2367 B.C.	
5. Gao Xin (Di Zhi): 2366-2357 B.C.	
<u>Patriarchs</u>	
Tao Tang (Yao): 2357-2258 B.C.	
You Yu (Shun): 2255-2205 B.C.	
<u>Xia Dynasty</u>	2205-1766 (1806) B.C.
Shang Dynasty	1766 (16th century) -1121(1066) B.C.
Zhou Dynasty	1121 (1066) -255 (221) B.C.
Kingdom of Zhou (Eastern Zhou) 1121 (1027/1134)-770 B.C.	
Chun Qiu (Period of the Annals; Spring and Autumn): 770-464 (476) B.C.	
Zhan Guo (Warring States): 464 (475) (403) -221 B.C.	
<u>Oin Dynasty</u>	221-206 B.C.
Qin Shi Huang Di (first emperor): 221-210 B.C.	
Han Dynasty	206 B.C220 A.D.
Western Han: 206 B.C25 (23) (9) A.D.	
Eastern Han: 25 A.D220 A.D.	

2

Western Jin: 265-317 A.D. Eastern Jin: 317-420 A.D.

Song Dynasty (North & South Kingdoms)

Six Dynasties

1. Qi Dynasty: 479-502 A.D. 2. Liang Dynasty: 502-557 A.D.

Chen Dynasty: 557-589 A.D.
 Wei Dynasty: 386-535 A.D.

Northern Wei: 386-535 A.D. Western Wei: 535-557 A.D. Eastern Wei: 534-550 A.D.

5. Northern Qi Dynasty: 550-589 (577) A.D.6. Northern Zhou Dynasty: 557-589 A.D.

Sui Dynasty Tang Dynasty

Five Dynasties and Ten Kingdoms

1. Later Liang: 907-923 A.D.

Later Tang: 923-936 A.D.
 Later Jin: 936-947 A.D.

4. Later Han: 947-951 A.D.

5. Later Zhou: 951-960 A.D.

Song Dynasty

Northern Song: 960-1127 A.D.

Southern Song: 1127-1280 (1279) A.D.

(lin) (Tartar)

Yuan Dynasty (Mongol)

Ming Dynasty

Qing Dynasty (Manchu)

There were 10 Emperors in the Qing Dynasty

960-1280 (1279) A.D. (1115-1234 A.D.)

1280 (1279) (1271)-1368 A.D.

1368-1644 A.D.

1644-1911 A.D.

420-479 A.D. 420-581 A.D. 479-589 A.D.

589 (581)-618 A.D. 618-907 A.D. 907-960 A.D.

After the Qing Dynasty, the Republic of China was founded by Sun Yatsen; the Republic of China continues on today on Taiwan. In 1949, the People's Republic of China (PRC) was founded by Mao Zedong; the PRC is the current governmental structure for all of China except Taiwan.

In Chinese historical documents, it is common to identify a person's life and accomplishments by the Dynasty in which he (or she) lived and frequently according to the Emperor who lived at that time. Major historical developments are described in relation to the Dynastic period in which they took place. In the medical field, it is common to refer to medical works that arose during a specific Dynasty.

Chinese medicine was somewhat influenced and has a religious and philosophical character as most other traditional medicines also have. It has been sometimes described as a "quasi-religious" system. But it is more from simply giving ancient divine beings due respect as founders of the medical tradition. In Chinese medicine, there are 3 divine figures of ancient times: Fu Xi, who provided the people with writing, divination, yin-yang and five element concepts, and acupuncture; Shen Nang, who provided people with the plow and agriculture, as well as herbal medicine; Huang Di, who provided people with technology, music (with the aid of his assistant Ling Lun), and medical theories (with his physician associate Qi Bo, and with contributions from his other assistants Lei Gong, Shao Yu, Bo Gao, etc.). Many of the ancient texts are presented as a question and answer session between a divine figure and someone who represents an accomplished human seeking to gain further knowledge. While today these ancient god-like figures may be regarded as mythological beings, until the 20th century, most Chinese simply viewed them as divine historical individuals. For example, many modern texts and journals often simply refer to the "ancients" when talking about the Neijing. Interestingly, many scholars compare the Neijing to Hypocrites, in that they both represent a break from earlier supernatural and magical healing systems.

Acupuncture and moxibustion knowledge came from those who actually practiced the techniques.

They amassed experiential and clinical knowledge and passed their knowledge on. The word acupuncture comes from the Latin "acus" meaning needle and was coined at the end of the 17th century, after European travelers to China had observed Chinese doctors treating their patients with acupuncture needles. Zhenjiu means "needles and moxa". Zhen as a noun means "needle" and as a verb it can mean "to use a needle". Jiu is a word that has been used extensively as a technical term in medicine since the earliest of times. The word moxa was originally borrowed from the Japanese and was adopted in the West to describe the herb Artemesiae vulgaris and was coined to describe the procedure itself. In the West, "acumoxa therapy" would be the equivalent of "zhenjiu".

Chinese legend has it that the two most important events in early Chinese culture, the invention of agriculture and the founding of the nation of China, were made by the two most important figures in the history of Chinese medicine. Shen Nang, successor to the legendary sage ruler Fu Xi (who reigned from 2852-2737 B.C.), was given credit for agriculture and wrote the great herbal text Shen Nang Ben Cao. Eight hundred years later, the legend holds, in 2698 B.C., China's first emperor appeared, and later, to him is ascribed the most important source in Chinese medicine, the 18 volume, 162 chapter, Yellow Emperor's Classic of Internal Medicine (Huang Di Nei ling or Neijing). The Neijing was actually in 2 parts of 81 chapters each, the Suwen (Simple/Plain Questions) and the Lingshu (Spiritual Axis/Miraculous Pivot). The Neijing focused on Fu Xi's systems of describing nature in terms of yin-yang and the five elements, and acupuncture. The Neijing, written in an archaic language, is often unclear and inconsistent. [Which could explain inconsistencies in translations and some theories and techniques; many scholars believe that translations of the Neijing should be read with caution] Most scholars say the Neijing was a dialog between Huang Di, the Yellow Emperor, and Qi Po, a sage, doctor, and teacher in that time. The Neijing was probably compiled sometime between 475 B.C. - 23 A.D.). Many scholars say that it was primarily compiled in the Warring States Period (403-201 B.C). The Neijing does refer to the "Earlier Classics" and the" Ancient Masters". Therefore, it was probably not the first acupuncture and folk medicine text that was written. The Neijing, is however, commonly called the "bible" of Chinese medicine. The Shang Empire, the first Chinese Dynasty to leave traces of therapeutic activity, arose approximately during the 18th through 16th century B.C. and lasted into the 11th century B.C. The Shang period is documented by historical reports compiled during the subsequent Zhou Dynasty (1050-256 B.C.). Archeological finds of the late Shang Dynasty include both acupuncture needles and divination bones and tortoise shells, on which were inscribed discussions of medical problems. Some scholars date the first use of metal needles to the Bronze Age which was during the Shang Dynasty, and grew with the subsequent introduction of iron. Legend, then, sees medicine as an integral part of the formation and unification of Chinese culture.

Primitive Chinese medicine practiced in prehistoric times was derived from the instincts of self-preservation and preservation of the species. Chinese medicine was therefore based on instinct and acquired experience. It is likely that the first thing done in primitive times, whenever someone became ill, especially with pain, was to put one's hands on the affected part of the body to relieve suffering. Through instinct and experience people knew that placing one's hand on the ailing part has a soothing and healing affect. With the advancement of civilization, it is thought that various implements come into use such as stone needles (flint stones for draining abscesses) and then the "Nine Metal Needles of Antiquity" or "Ancient Nine Needles" described in the Neijing Ling Shu. Some of the "Nine Needles" more closely resemble scalpels used for surgery. Among the "Nine Needles (Jiu Zhen)" the "haozhen" was the most often used needle for acupuncture treatments and resembles filiform needles today. "Hao" means hair and "zhen" means needle so "haozhen" means hair-thin needle. Also methods of using moxa for cauterization and herbs for ointments and poultices were developed.

Bian Que (approximately 407-310 B.C.) is given credit for being the first physician to practice acupuncture. The 81 chapter Nan Jing (Book of Difficult Questions) appeared in the Han Dynasty and was the only book attributed to him. However, scholars question if he really wrote the book himself or if it was written several centuries later.

In the Huangdi Nei Jing, it is written that stone needles came from the east, herbal medicine from the west, moxibustion from the north, the nine metal needles from the south, and exercises and manipulation (tuina) from the central region. This shows different forms of medicine were developed in various regions according to the environment and culture. Some form of acupuncture and moxibustion was also practiced in ancient India, because legend has it that the famous Indian physician Jivaka, a contemporary of Buddha (5th century B.C.) held a needle and medicinal herbs in his hands at birth. Also there is occasional mention of acupuncture in various Buddhist scriptures. It is generally thought by scholars that acupuncture came from China, but there are scholars who believe it could have come from India. However, in China, acupuncture was developed into a complete system of medicine.

The use of acupuncture needles in China preceded the development of iron and steel technology. The most primitive form of acupuncture needles is recorded in Chinese classics as being the "bianshi". These "needles" were slivers of flint stones used to drain abscesses. Ancient texts used the word stone and explained they meant "bian stone" and was also called

needle stone and arrow-headed stone. A bian stone needle 4.5 cun long was recovered in ruins in Duolun County of Inner Mongolia. [The term cun is used in this manual along with inch] At one end, it is oval shaped with a semicircular edge used for incising boils and abscesses, at the other end it is pyramid shaped with a square base used for bloodletting. Two other bian stone needles were discovered in a grave in Shandong Province. Several bian stone needles were found in archaeological diggings at Anyang dating from about 1700 B.C. Scholars are certain that acupuncture was actively practiced during the Zhou Dynasty (another scholar's dates 1121-222 B.C.). It was considered an art and a collection of formulas. In the Han Dynasty (206 B.C. – A.D. 220), there was a book, Shuo Wen Jie Zi, in which explained that "bian means using stone to treat diseases". In primitive time needles were also made of bone, jade, and bamboo, but once metal working technology arrived, gold, silver, and bronze became the preferred materials for acupuncture needles. Some scholars say by the Warring States Period (464-221 B.C.), advances in metallurgy made it possible to manufacture steel needles of a fine, thin quality. Excavations into Han Dynasty tombs have yielded examples of gold and silver needles used in ancient times. Other scholars say the development of iron and steel technology during the Han Dynasty enabled the production of thin needles which are closely resemble those used today. Another noteworthy doctor in this dynasty is Hua Tuo (110-207 A.D.). He is known as one of the first surgeons. The frequently used Hua Tuo Jiaji points are named after him. Cao Cao, ruler of the state of Wei, had Hua Tuo killed in 207 A.D. at age 97. Zhang Zhongjing was another notable herbal doctor of the time who wrote the Shanghan Lun and the Jingui Yaolue. Chinese culture and even medicine spread far and wide during the Han Dynasty. The Chinese empire exerted considerable political and cultural influence on its neighbors. Chinese military garrisons occupied areas as far west as modern Afghanistan and as far south as Vietnam. In the Han Dynasty, the basics of Chinese medical theory and practice were firmly in place.

The Nan Jing (Classic of Difficult Issues/Questions), from the Zhou and Qin Dynasty period (1122 B.C. - 207 B.C., is an important acupuncture text which expanded on the principles laid down in the Su Wen and Ling Shu. Some sources say the Nan Jing was compiled during the early Han Dynasty, though the form referred to historically was probably written around 100 A.D. The Zhen Jiu Jia Yi Jing (Classic of Acupuncture and Moxibustion), from the Jin and Sui Dynasty period (A.D. 265-617), written by Huang Fu Mi (215-286 A.D.), was the most comprehensive text on acupuncture ever written and further contributed to the development of acupuncture and moxibustion. The Zhen Jiu Jia Yi Jing was not published until 1601.

In the Tang Dynasty (618-907 A.D.) acupuncture and moxibustion developed steadily. From this period came the well-known physician and alchemist, Sun Si Miao (581-682 A.D.), who advanced the idea of ashi points and probably more famous for his work in herbal medicine. Also in this period, the first college specializing in medicine was established. The greatest imperial expansion in Chinese history occurred in the Tang Dynasty, when numerous delegations went back and forth between countries. Not only did China absorb a great degree of foreign influence but its culture and medicine spread throughout East Asia. Sun Si Miao (590-682 A.D.) is considered to have discovered ashi points and wrote a book that gave diet a prominent place in Chinese medicine. Following the Tang Dynasty, China underwent a series of internal disputes and wars with Central Asian people, making easy contact and transmission of texts impossible.

In 1078, in the Song Dynasty (960-1279 A.D.), the practice of all arts and sciences, including medicine, came to be closely supervised by the imperial bureaucracy. Chinese medicine was encouraged to flourish in this period and the famous bronze statues were commissioned. A government sponsored Chinese medical school was established that could accommodate 300 students and a press was set up at the school to print classical and more recent works. In the period of the Five Dynasties (907-960 A.D.), the Song Dynasty and Yuan Dynasty (1206-1368 A.D.), the extensive application of printing greatly promoted medical literature with faster dissemination throughout the country.

In the Ming Dynasty (1368-1644), four scholars dominated medical thought: Shu Danxi (1281-1368 A.D.), who considered malnutrition a fundamental cause of disease; Li Dongyuan (1180-1252 A.D.), a specialist in gastrointestinal diseases, who advanced diet as a cure or prevention of disease; Zhang Zihe (1156-1228 A.D.); and Liu Wansu (1120-1200 A.D.). Also in the Ming Dynasty was the most famous Chinese herbalist Li Shizhen (1518-1593 A.D.), who wrote the Ben Cao Gang Mu and 11 other books. Another important acupuncture and moxibustion book, Zhen Jiu Da Cheng (Compendium of Acupuncture and Moxibustion), was compiled in 1601 by Yang Ji Zhou. Zhang Jiebin rearranged the Neijing and produced the Lei Jing, which is considered one of the most important reference books for the study of the Nei Jing. There were numerous other important doctors and books from this Dynasty.

Demons as a cause of illness was a significant concern (and sometimes a dominant concern) in the traditional texts of Chinese, Indian, Tibetan, and all other ancient cultures. Many treatments involved getting rid of demons causing disease until the establishment of the Qing Dynasty (1645 A.D.). The government finally enforced what amounted to a "no spirits" decree as part of policies against religion and superstition. In modern terminology, a person who might be

described suffering from the weakening or disruption of spirit, with influence of demons, would most likely be categorized as having some type of psychological disorder.

Finally, from the 17th century on, elements of Western medicine began to be introduced in China. The Roman Catholic church started to initiate missionary activity in China during the Ming Dynasty. European scientific knowledge (Western medicine) was introduced to China and many books were translated into Chinese. Some scholars say there was an obvious decline in Chinese medicine between the 15th century and 19th century. During the latter part of the Qing Dynasty (1644-1911 A.D.), China opened its doors to trade with foreign countries. Also, during this period the Japanese stole the Bronze Man statue and placed it in a museum in Tokyo.

Following the Opium War in 1840, China fell into something that resembled feudal and colonial society. The Revolution of 1911 ended the rule of the Qing Dynasty. 1911 marked the beginning of the Republic of China (Taiwan), where Chinese medicine was flourishing. Traditional medicine methods were revolutionized and a school devoted to the study of acupuncture was opened.

From 1914, the government continuously tried to ban traditional medicine and adopted a series of measures to restrict its development, resulting in a decline of Chinese traditional medicine. Because of the need for medical care, acupuncture began to spread among the folk people. In 1944 when the Chinese forces were still heavily engaged against the Japanese, Chairman Mao stated "If we solely relied on modern medicine, then we would not be able to accomplish anything". Beginning in 1949 after the Chinese revolution, academies of traditional medicine were established in all China's major cities and traditional medicine was given a fresh look. However, there were only a few thousand doctors in all of China who were true masters of traditional medicine. Chinese medicine was in disarray at this time and also there were only a few thousand trained Western medicine doctors. During the 1950s, Chinese and Western medicine were beginning to be combined and in 1958 the government established the formal equality of Chinese and Western medicine in an effort to bring healthcare to hundreds of millions of people (mainly in out-lying areas) who had almost no access to medicine. Also in the 1950s, the Chinese performed thousands of experiments and clinical studies. Chairman Mao made the famous statement in 1958: "Chinese medicine and pharmacology are a great treasure-house, and efforts should be made to explore them and raise them to a higher level". In the 1950s, China was training doctors from the Soviet Union and other Eastern European countries. During the cultural revolution of the 1960s, Chinese medicine went through political, social, and cultural changes.

A Barefoot Doctor's Manual was published in 1970 by the Institute of Traditional Chinese Medicine of Hunan Province, to supply its barefoot doctors with a basic guide to their work of serving the rural population. These doctors were given the name barefoot doctors because they worked in the paddy fields like any other commune member, barefooted and with trouser legs rolled up. Basically, the manual was an attempt to improve medical care in the rural villages and explain the relationship between Chinese medicine and Western medicine. The book has a mixture of Chinese medicine and Western medicine. This book was brought to the West in 1974 and translated and published in a limited edition by a group in Bethesda, Maryland. Most of the original political and non-medical passages were omitted for the sake of brevity. Since 1975, China has trained doctors from many countries at the request of the World Health Organization (WHO). Today, Chinese medicine and Western medicine co-exist together in China.

As Chinese medicine was spreading south and east, it also reached Tibet, whose king married a Chinese princess in 641 A.D. In her dowry, she brought books, instruments, and herbs, stimulating the translation of 27 medical works and enhancing a general interest in Chinese medicine. This also led to the invitation of physicians from Persia and India. Tibetan medicine grew from these different strands to the present day.

Chinese medicine entered Korea in the Qin Dynasty (249-206 B.C.), but Korean medicine became primarily identified with the Chinese literature of the Han Dynasty (206 B.C. - 220 A.D.) and Tang Dynasty (A.D. 618-907). Other sources state that Chinese medicine was not introduced to Korea until the 6th century. There are scholars who say that during the later years of China's Shang Empire (1600-1100 B.C. another scholar's dates), a government official escaped the ruthless emperor, and with a group of people, settled in neighboring Korea, thus introducing Chinese medicine. Later, Chinese medical practitioners coexisted with shaman healers and herbalists. In 1493, the king ordered the writing of a Korean pharmacopoeia including Korean native plants. In 1574, a Buddhist monk expanded on five phase theory from the Difficult Classic. He created the so-called "Korean Four Needle Constitutional" method of treatment. This marked the first development of a uniquely Korean approach and set a trend for the tendency to focus on the five phases as their major theoretical model. This approach was further expanded in 1603 in a 33 volume work with an underlying theoretical position again centered around the five phases, even including herbal components. This broke away from the Chinese model where herbal decoctions were most often organized around organ pathology. The text also served a political

dimension in its presentation of Korean medicine as a branch of Chinese medicine and called it "Eastern Chinese" medicine. Politically this served as a justification for asking the Chinese for help in the face of several Japanese invasions in the late 16th century. Another distinct Korean development was the "Four Constitutions" method in 1894. The theory was developed that the body is born with an innate constitution, which dictates tendency for health or disease of the organs. By determining the patient's constitution, the practitioner can best manage the patient's long-term care since he will be aware of disharmonies and diseases that the patient will potentially develop over time. The Four Constitutions incorporates the five phases model with a constitutional tendency based on the interrelationship of the internal organs. It acknowledges 4 constitutions and is quite complex. It has been commonly used ever since its development. In 1960, another Korean doctor expanded it into "Eight Constitutions Method". In 1975, Taewoo Yoo developed the Korean Hand Acupuncture method.

Vietnam came under the influence of Chinese civilization in the early Han Dynasty (206 B.C. - A.D. 220). Many significant works appeared during the 14th to 19th centuries. Vietnamese medicine developed into a northern medicine which closely imitated the Chinese model and a southern medicine which relied largely on locally grown herbs and knowledge transmitted through family lines. Both are still active today. Western medicine was emphasized during the French colonial rule but the central government of the Democratic Republic of North Vietnam decreed in 1957 that traditional and modern medicine were to be integrated as was done in mainland China in 1949.

Some scholars say that acupuncture and moxibustion were introduced into Japan from Korea early in the 5th or 6th century and went through periods of expansion and decline. Other scholars say Chinese medicine was introduced into Japan in the Qin Dynasty (249-206 B.C.). The first official classes in Chinese medicine in Japan are said to have been given by a Korean physician in 602 A.D. In 984 A.D., the Japanese court acupuncturist compiled the Essential Medical methods, which closely mirrored the medicine of the Chinese Tang Dynasty. In the 15th century, many distinct schools of Japanese medicine arose. Western medicine is said to have been introduced to Japan by the Portuguese around 1590. Additional Western medicine came via Spain during the early 1600s.

Early in the Edo period (A.D. 1602-1868) a blind acupuncturist named Waichi Sugiyama, born into a samurai family and went blind at an early age, developed a so called "painless needle insertion technique" using a guide tube and very thin needles. He opened an acupuncture school and had a profound influence on Japanese acupuncture, and the use of guide tubes and thin needles became widespread in Japan. Blind practitioners were noted for their acupuncture and massage expertise throughout Japan. Another major Japanese development was the School of Classical Formulas, which favored the unchanged maintenance of old traditions and relied mainly on conformation theory. Within acupuncture, a major school of thought using abdominal palpation for diagnosis developed and is still in use today. The biggest boost to Western medicine in Japan came with the introduction of smallpox vaccination in 1849, fifty years after it had been developed in Europe.

In the more modern Japanese era, the Meiji Restoration Period (1868-1902 A.D.) marked the end of the feudal era and the new government resolved to modernize Japan after the Western model, particularly influenced by Germany. All physicians were required to study and pass an examination in Western medicine, and thus practitioners of traditional medicine lost their status as physicians. For about 50 years there was no education in Chinese (Japanese) medicine. Eventually, traditional medicine did receive approval from the government. However, new standards were established for acupuncture education disregarding traditional theories, and acupuncture was defined as nothing more than a nervous system stimulation therapy. The traditional methods of the blind were given exceptions to continue practicing acupuncture, moxibustion, and anma, as part of the government's social policy towards the blind. After the American occupation following the war, a new law was passed to guarantee the right to practice traditional forms of medicine. Since that time a wide range of acupuncture and herbal medicine has developed and flourished in Japan.

Acupuncture, moxibustion, and herbal medicine have attained a level of clinical success in Japan that compares well with Western medicine. However, typically acupuncture and moxibustion colleges exist independently but practitioners get licenses from both. Herbal licensure, on the other hand, is unavailable to acupuncturists because herbal training programs are attached to pharmacy colleges and licensure in Western pharmacy is required for attendance. Acupuncture and moxibustion colleges offer 3-year vocational school programs. This means that the social position of Japanese acupuncturists is different from those in Korea and China, where both acupuncturists and herbalists are trained in a format similar to the western bachelors, masters, and doctorate levels. Alongside the separation of acupuncture and herbal treatments (kanpa/kampo), there is little effort in Japan to integrate Western and Eastern medicine into one coherent system. Patients choose one or the other, equally covered by national health insurance, which reimburses two thirds of most medical expenses. However, allopathic doctors are well aware of traditional herbs, and 72% prescribe them in one

form or another, and many patients alternate between the systems, depending on the particular ailment they have. The Kampo system of herbs focuses on only about 80 formulas out of an approved 148 formulas. Kampo was introduced to the U.S. from Taiwan by Dr. Hang-yen Hsu, who had studied pharmaceutical science and technology. He established Sun Ten Pharmaceutical Works in Taiwan and began producing Kampo medicines in 1963. He emigrated to the U.S. in 1975 and established Oriental Healing Arts Institute (OHAI) to publish translations of Chinese medicine books and Brion Herbs Corporation, to distribute Kampo herbal medicines.

In England, there were a few references on acupuncture in the medical literature in the early 19th century, but there was little sustained interest in the art. In 1950, attention was again directed to acupuncture. About 1958, Felix Mann, a Western medicine general practitioner, became interested in acupuncture and wrote several books on acupuncture. He also taught acupuncture to other physicians. Jack Worsley, a physiotherapist, began to study acupuncture in the 1950s and studied in Singapore, Korea, Hong Kong and Taiwan. He later organized the College of Traditional Acupuncture and later came to the U.S. to teach his style of acupuncture. Many Americans went to England to study "Worsley" medicine at the British college in the 1970s and 1980s.

One of the earliest books on acupuncture in France was published by Placide Harvieu (1671-1746). One of the first Westerners to entertain the possibility that acumoxa therapy might be of some benefit was a Frenchman, Felix Vicq-d'Azyr (1748-1794). He influenced the appointment of a commission to investigate the phenomenon. Another important book on acupuncture and moxibustion was published in France in 1863. The greatest impetus to acupuncture throughout Europe was through the interest, efforts, and publications of Georges Soulie De Morant (1878- 1955). He was fluent in Chinese, a bank representative, and French consul to China beginning in 1907, and spent 20 years in government service. He studied acupuncture in China and became an acupuncturist. A student of his helped establish the French Association of Acupuncture in 1945. By 1966, the association had 6 teaching centers in France. While the Chinese were developing a more complete system of Chinese acupuncture and herbal medicine, the French Energetic Acupuncture relied mostly on the meridians/channels Uingluo) [meridians and channels are used interchangeably in this manual], while Chinese herb therapies relied more on zangfu theory. As late as the 1990s most Chinese medicine practitioners in Italy did not understand or use herbal medicine. In the late 1990s Chinese herbal medicine was being incorporated into the training. Acupuncture training is now conducted only as a post-graduate specialty for medical doctors, including 400-500 hours of training over 4 years. According to Italian law, acupuncture must be performed only by medical doctors (this is also the case in France, Belgium, Denmark, and the Scandinavian countries).

It is estimated that about 10,000 MDs practice acupuncture in Italy. Italy has had a long interaction with China. Two famous early Italian visitors to China were the Venetian Marco Polo (1254-1324) and the Jesuit priest from Macerata Matteo Ricci (1552-1610). However, Chinese medicine made its way to Italy later, primarily via its development in France during the 20th century.

A German naturalist, Englebert Kaempfer, was one of the first to introduce acupuncture into Europe in 1683. His writings, along with Ten Rhyne, on acupuncture first appeared in 1690-1692. Both Ten Rhyne and Kaempfer had served with the Dutch East India Company's trading station in Japan. A doctor presented his experiments with acupuncture to a convention in Frankfurt in 1825. Germany has since made significant contributions in Chinese medicine. The German Acupuncture Society was established in 1951.

EuroTCM is an organization currently recruiting Chinese medicine organizations across Europe to participate in a central information clearing house and to unify TCM education and laws. Participating countries include Austria, Belgium, Bulgaria, Czech Republic, England, Germany, Greece, Hungary, Italy, Ireland, Netherlands, Serbia/Montenegro, Slovac Republic, Slovenia, and Sweden.

Traditional Chinese medicine herb (internal medicine) doctors and acupuncturists have been practicing in Taiwan since the beginning of the country's history. Western medicine was introduced to Taiwan during Japan's occupation (1895-1945). Both medicines have continued through to the present. Many Americans went to Taiwan to study Chinese medicine in the 1980s. Sri Lanka and Makau were also popular countries for Americans to study Chinese medicine, mainly acupuncture, in the 1970s and 1980s. Chinese medicine and Asian medicine have continuously changed down through the ages. In Chinese, "shou po li", and in Japanese, "shu ha ri", simply means what we absorb and obey, we must eventually break away from (so as to begin our own new tradition). To merely follow our teacher's tradition is not sufficient, but it is a necessary starting point.

Although acupuncture was practiced in a limited way in the early 19th century in the U.S., it did not receive much attention. There were favorable articles on acupuncture published in medical journals in 1822, 1826, and 1833.

Acupuncture was well known and practiced in Chinese settlements throughout the country in the 20th century. A few scattered references also appeared in literature including a book in 1940 and a limited translation of the Neijing in 1949. Acupuncture did not become popular in the U.S. until 1972 coinciding with President Nixon's visit to China. Two acupuncture journals were founded between 1972 and 1975 and clinics began to open. However, interest waned and did not pick up again until the 1980s. The first book in the U.S. to be considered a textbook was An Outline of Chinese Acupuncture published in 1975 by Foreign Languages Press in Beijing. Essentials of Chinese Acupuncture (translation of Zhongguo Zhenjiuxue Gaiyao) was published in 1980, revised as Chinese Acupuncture and Moxibustion in 1987, and revised again in 1999. Another important Chinese medicine book published in the U.S. was The Web That Has No Weaver by Ted Kaptchuk in 1983. There were also medical reviews on acupuncture as early as 1980.

2 parts of the Neijing (Su Wen & Ling Shu) have interesting statements about acupuncture & needling.

Some of those statements are as follows:

All proper needling first treats the spirit. Su Wen

Those who use needles must not forget the spirit. Ling Shu

The use of techniques like acupuncture is to regulate the Qi. Ling Shu

The chief purpose of acupuncture is to bring about the arrival of Qi and good effect. Su Wen

If after insertion the Qi does not arrive, use as many methods of manipulation as is necessary to obtain it. If after insertion the Qi arrives, remove the needle. Ling Shu

When the Qi arrives, the treatment is effective. This is essential in needling. Ling Shu

Into that which is Yin, insert deeply and retain the needle. Into that which is Yang, insert superficially and quickly remove the needle. Ling Shu

The needle should be inserted deeply and retained for a relatively long time, and the number of needles as well as the frequency of treatment should be greater when treating patients who are heavy, big, or of robust health, or for whom the needling sensation is not strong. On the other hand, children or patients who are thin, weak, and very sensitive to needle stimulation should be needled superficially, quickly, less frequently, and with fewer needles. Furthermore, Cold or Excess conditions require strong needling, whereas mild needle stimulation is indicated for deficient or hot conditions. Ling Shu While needling a point, one must remain poised in calmness and quiet to seek the movement of (the patient's) spirit. The doors and windows must be closed to shut out all distractions and one's attention should be totally focused. One should pay no attention to other voices and must concentrate wholly on the needle". Ling Shu [This is somewhat also related to "intent". Many practitioners believe your focused intent on what you desire or expect the needle to accomplish (i.e. tonify /reduce/even) is a necessary part of treatment with needles.]

One must disperse where there is Excess and tonify where there is Deficiency. Su Wen

When needling the chest or abdomen, it is imperative to avoid the Five Organs. Su Wen

The seventh is shallow puncture (one of the nine needling techniques to puncture the skin superficially with a short filiform needle in treatment of neurodermatitis), and the fifth is "Shu-point" puncture (one of the five needling techniques to treat cervical ossifications, by thrusting the needle deeply to the bone). [This is in reference to needle depth according to the location of the disease.] Su Wen

The location of a disease is either superficial or deep; needle insertions are likewise superficial or deep. Each insertion should reach its proper depth without exceeding its proper path. If the depth of insertion is wrong, great harm will result. Su Wen

The diseases in the blood vessels should be treated by letting blood, those of the Blood and Qi by superficial needle insertions, and those of the flesh by deep insertions. Pain is regarded as a shallow (Yang) symptom for which a superficial insertion is indicated. Su Wen

Don't needle those who are very drunk as this leads to disordered Qi. Don't needle those who are very angry as this leads to rebellious Qi. Don't needle those exhausted by work; don't needle those who have just eaten; don't needle those who are very hungry; don't needle those who are very upset. Also stated before beginning to needle, the physician should ask the patients who were transported to the clinic to wait for the period of time it takes to eat a meal, and for those who came on foot to rest the time it takes to walk three miles. Su Wen

The ear is the place where all the channels meet. Ling Shu

Other classical sources commented on various needling techniques such as:

Insert needle with another needle close to it with a different direction increases the stimulus;

Needle both sides of the same point and leave in with intermittent manipulation sedates and is an analgesic;

Needle deep and withdraw slowly pulls excess heat out of the body and sedates;

Slanted parallel insertion to skin is for superficial and external Cold invasion;

Multi-shallow needle insertions re used over a boil or local Blood stasis:

To treat arthritis, insert needle, massage above and below, add another needle, massage above and below Many ancient sources stated that you should train your hands to feel Qi so you "get the Qi" before your patient feels the sensation.

Refer to (C) Pages 1-2 & (CAM) Pages 1-11

Modern Perspective on Meridians and Acupuncture Points

Research has been conducted from various angles since the beginning of the 20th century to study the physiological effects of acupuncture stimulation and to elucidate the physical basis of meridians and acupuncture points. Despite all the research, there have been no adequate scientific theories and especially no theories to explain why the acupuncture points are arrayed along the traditional meridian lines. One theory is that the meridians are basically nerve reflexes, or a system of reflexes which connect the internal organs with the body surface. Another theory adopts the model of an energy circulation system, as spoken of in the classical texts and postulates another circulation system for body fluids independent of the circulatory system or the nervous system. Another theory relates the meridians to blood vessels and lymphatic vessels. Yet another theory equates the meridians to the peripheral nerves. Amidst all the disagreement and speculation, possibly the theory most popular with clinical practitioners is the first theory of nerve reflexes based on a modern medical viewpoint. Some theories about acupuncture and moxibustion say that local tissue damage (twisting of tissue fibers when stimulating acupuncture needles, extended cellular damage by the intense heat of moxa) initiates a non-specific healing reaction that can have effects throughout the body. This healing reaction is stimulated by production of immunological mediators and neurotransmitters.

There are theories that talk about the synergistic workings of the body, homeostatic mechanisms of the body; the stimuli stress theory, the principle of cybernetics theory, and the "reilly phenomenon".

There are even more theories about the mechanisms of pain and the analgesic effect of acupuncture. There is the specialization theory, patterning theory, gate control theory, acupuncture effect related to morphine and endorphins theory, and the analgesic effect produced by electrical stimulation of specific areas of the brain.

There is considerable material available from both clinical studies and experimental research, especially from China, showing various results from a Western medical perspective. One should always be skeptical about such studies and research without knowing more details about exactly how they were carried out. Many studies and research often do not meet the criteria of the biomedical communities of industrial nations. The problem is usually in the methodology used.

Some examples are as follows: St 36 has effect on the digestive system, however these studies have conflicting information; acupuncture has a regulatory effect upon the function and motility of the small intestine; acupuncture is effective in increasing the transportive function of the large intestine; the effect of acupuncture on leukocytes differed widely according to the acupuncture points selected; acupuncture can raise red blood cell count; acupuncture can affect blood platelets and coagulation; acupuncture can regulate the heartbeat, strengthen heart contractions and regulate blood pressure; acupuncture has a regulative effect on the permeability of capillaries; acupuncture affects the lymph system; acupuncture affects the respiratory and urinary systems; acupuncture can reduce fever, increase production of antibodies, and increase the body's resistance to inflammation; acupuncture exerts varying degrees of influence on the endocrine glands, including the pituitary-adrenal cortex system, thyroid gland, and sex hormones; acupuncture affects the nervous system; etc.

A controlled experiment, on rats showing acupuncture caused neurochemicals to be released, was published in a medical journal in 1976. Other studies related to acupuncture and endorphins were published in 1976. Research on acupuncture in relation to pain and analysesia were published in 1977.

Refer to (C) Pages 531 – 541

Clean Needle Technique (CNT) - OSHA

Students are given a basic introduction to CNT and applicable OSHA regulations in Acu Moxa Techniques/ Practicum A. This will give students basic knowledge required to safely handle acupuncture needles and other equipment. It is recommended students purchase and refer to the book Clean Needle Technique: A Manual for Acupuncturists, 7th edition This book is a required textbook beginning in 2nd trimester in Acumoxa A and later in the program for the CNT /OSHA & Clinic Prep course. The book describes the clinical application of microbiology to the practice of acupuncture, including infection control, sterilization, disinfection, antisepsis, and needle disposal or re-sterilization. It details cardiovascular, iatrogenic, infectious, and other complications and contraindications to safe acupuncture treatment, and provides clinical

protocols including body needle insertion and ear needle insertion. Remember, sterility is compromised by touching anything that is not sterile.

General Guidelines

- 1. Wash and dry hands Refrain from touching any contaminated surfaces
- 2. Perform any physical exam
- 3. Wash and dry hands Refrain from touching any contaminated surfaces
- 4. Establish clean field Open packaging to expose needles without contaminating needles
- 5. Minimal palpation may be used to relocate acupoints but is considered acceptable if the hands are clean Prepare insertion site Swab with alcohol in an outward spiral. Using a sterile or clean cotton ball or alcohol swab Use 1 cotton ball per location Allow alcohol to dry
- 6. Insert needle without touching the shaft, using sterile technique If an insertion technique is used that requires touching of the needle shaft, a sterile gauze or cotton ball must be used on the shaft of the needle Manipulate needle
- 7. Wash and dry hands before leaving the treatment room
- 8. Wash and dry hands prior to removing needles Remove needles one at a time and swab point, place needle in biohazard container, and place cotton ball in trash unless soaked (dripping) with blood; place in biohazard trash if dripping with blood, Wash and dry hands

General Clinic Protocols

- 1. Explain treatment to patient
- 2. Assist patient in positioning themselves comfortable on treatment table and arranging clothes to expose acupoints to be used; if disrobing is required, instruct patient to use a gown/ towel and leave the room; to decrease risk of fainting, needling should not be done with the patient standing or sitting unless absolutely necessary.
- 3. Nitrile gloves are advised if practitioner expects to come in contact with body fluids or if practitioner has an area of non-intact skin that cannot be covered with a bandage.
- 4. Wash and dry hands before and after each patient contact.
- 5. The points and number of needles used should be noted on the chart in order to avoid forgetting to remove a needle.
- 6. The patient should not be allowed to get up until all needles have been removed and are accounted for.

Equipment - CSTCM Needle Kit

The Needle Kit must be purchased in the pharmacy in order for all students to have identical supplies to start with. The kit contains all the basic supplies a student will use in Acu Moxa Techniques/ Practicum A & B. The kit is usually about \$125.00 depending on current prices and contents or manufacturers may very slightly. We usually try to include several different brands of needles for students to try in order for them to determine which needles they like the best.

Needle Kit Contents

	~-	~ .	~
1	(flass	Cunning	Set

1 Pipe 7 Star Plastic Handle (disposable)

1 Operating Scissors 4 1/2"

1 Helstead Mosquito Hemostat 51/2"

1 Smooth Face Press Tack Tweezers

1 Ceramic Gua Sha Spoon

1 Moxa Extinguisher

1 Roll Micropore Surgical Tape 1/2"

20 Alcohol Swabs (disposable)

20 KMI Kang Hwa Mini Stick-On Moxa

20g Dark Green Crude Indirect Moxa

5g Wakakusa Direct Moxa

1g Super Pure Gold Direct Moxa

1 Traditional Moxa Roll

1 Smokeless Moxa Roll

10 Needle Moxa

10 Sandalwood Incense Sticks

10 Pyonex Press Tacks (disposable)

5 Spinex Sterile Intradermal Needles (disposable)

10 Bleeding Lancets (disposable)

1 3-Edge Needle (disposable)

1 Magrain Stainless Steel Ear Pellets

1 Set of Moxa Rolling Boards

Disposable Needles

Serin (Japanese)	Viva (Chinese)	Millenium
20 #3 x 30mm	10 32g x 1.5"	10 34g x 1"
10 #5 x 40mm	10 32g x 1.0"	10 34g x 1.5"
10 #8 x 50mm	10 32g x 0.5"	10 36g x l"
DBC 10 pack (Korean)	Peace (Chinese)	Carbo
10 36g x 1"	15 36g x 1"	15 34g x 1"
10 36g x 1.5"	15 34g x 1"	15 34g x 1.5"
<u> </u>	15 34g x 1.5"	15 34g x 0.5"
	Ç	15 32g x 1"

You are also required to purchase an electro-stim (electroacupuncture) machine before the first electro-acupuncture technique class.

You will need to make-up a "travel kit" including the contents of the needle kit. You will need some type of container/bag/case to carry your travel kit in. Some examples of containers would be an over-sized brief case, an old fashioned doctor's bag, fishing tackle box, salesman's sample bag, etc. You want the travel kit to have a professional look, be durable, organized, and protect your supplies. The contents of your travel kit must be organized in order to easily find the items you will be using. You will use this kit for: practicing on yourself at home, bring it to all Acu Moxa Techniques/Practicum A & B classes, and in the future to Acupuncture Internship 1 classes and all student clinics. Practitioners who do house-calls also use this type of travel kit.

Other supplies you might want to add to your travel kit include: small travel-size biohazard needle container; ear probe, some type of ash tray (3-5" sea shells work ok); other shells to use under certain applications of needle moxa to protect the treatment table; small cardboard pieces or aluminum foil with a slit to place under needle moxa; cutaneous roller; stick-on magnets; Wang bu liu xing (Vaccaria) seeds; 1" 30g Chinese needles; additional needles; additional 3-edge needles; additional alcohol swabs; additional moxa rolls; additional plum blossom.

Practicing Outside of the School

For practicing on yourself at home, you should always set up a clean field and always use CNT. Refer to the CNT Manual for more information. Other items you may want to purchase for practicing techniques at home are: cotton balls and 70% isopropyl alcohol, or alcohol swabs, 190 proof denatured alcohol for fire-cupping, and a small bio-hazard (sharps) container. When the sharps container is full (3/4), seal it, and bring it to the school for bio-hazard disposal. CSTCM realizes that it is very exciting for students to begin learning and practicing acupuncture, moxibustion, and other related techniques. Practicing the techniques that you are learning is extremely important in developing your skills. However, in the beginning, you are a novice and you need close supervision. Practicing techniques outside of the school supervised educational setting should be limited to practicing techniques only on yourself and only techniques that you have learned in class. If you are uncertain about any aspect of needling or other techniques, you should wait and ask a supervisor before practicing on yourself. Unsupervised practicing of techniques on anyone except yourself, outside of the school, is illegal in the state and grounds for suspension or dismissal from CSTCM.

A practitioner's needling skill is directly related to giving painless treatments to patients, therefore not losing patients due to a painful experience, and the increased effectiveness of their treatments. Never think your skill in all techniques is adequate. Always strive to improve your techniques. Improvement can only come from practice.

Care and Use of Equipment

It is best to buy acupuncture needles by the box, store them in your travel kit, and keep unused needles in the box to keep them sterile and to protect them, and be able to easily identify their number/ gauge and length. You should not keep needles loose in your travel kit. Opened packs of needles are not sterile. If you need advice about equipment, ask your instructors and classmates.

Needles and Needle Insertion Techniques

A Traditional Chinese Acupuncture Needle

The Chinese acupuncture needle is designed for smooth insertion and easy manipulation. The needle has 5 parts:

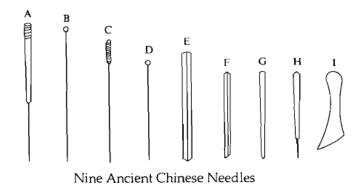
- 1. Tip/Point The sharp point of the needle is smooth and rounded and may be angled for a comfortable insertion. Unlike the sharp cutting edges of needles used for injections, the tips of acupuncture needles are designed to slide through tissue without causing any damage. The needles actually separate tissues as they penetrate deeper. In China, it is said that the tip should be as sharp as a pine needle.
- 2. Body/Shaft The shaft of the needle between the handle and tip, which is uniform, solid, straight, and is made of stainless steel wire of varying thickness.
- 3. Root The Root is where the Body of the needle meets the handle.



- 4. Handle The Handle is designed for easy gripping by the fingers. The Handle is made of wound wire. The wire may be stainless steel, silver, copper, or aluminum.
- 5. Tail/Knob The Tail is the top circle end-ring of the Handle. It is designed to assist in gripping & manipulating the needle.

Types of Needles

There are 2 basic types of Chinese acupuncture needles used today, the filiform and the prismatic needles. The filiform needle is a slim and solid needle that is used in general acupuncture techniques and is one of the 9 kinds of needles in ancient China. The prismatic needle is a thicker needle with a sharp, three-edged tip used for bleeding techniques. The plum blossom needle is a variation of a prismatic needle and has either 5 or 7 closely-grouped short points at one end of the handle. It is used to apply a technique called "cutaneous acupuncture" in which the surface of the body (skin) is tapped for superficial stimulation.



- A. **Large/Big Needle** (Dazhen) 4" long with a slightly round tip shaped as a stick (thick body), used to treat joint disorders and treat retention of fluids; altered during the Cultural Revolution to become the "Barefoot Doctor" needle.
- B. **Long** (Changzhen) 7" long with a round and sharp tip and big body, used to treat disorders of deep tissue or persistent bi syndrome, deep insertion; in modern times also called the "Beard of Wheat".
- C. **Fine/Filiform** (Haozhen) 1.6" long with a sharp tip and a thin body, used for cold, heat, and pain (obstruction); most common of all acupuncture needles and still used today.
- D. **Sharp-round** (Yuanlizhen) 1.6" long with a thin round body and a slightly large head, used to drain abscesses or eliminate obstruction with deep insertion, used for sudden attack of rheumatic arthritis and pain.
- E. **Sword-shaped/like** (Pizhen) 4" long, 0.25" wide, shaped like a sword, used for pain and drainage of pus from superficial abscesses; used to make surgical incisions; the forerunner to modern surgical instruments
- F. **Sharp-edged/Three-edged** (Fengzhen) 1.6" long with a triangle needle body and sharp pyramid tip, used as a scalpel for heat-toxin abscesses or for bloodletting; predecessor to the three-edged needle today.
- G. **Blunt/Pressure** (Chizhen) 3.5" long with a round needle body and slightly sharp tip (like a grain of millet), used for blood vessel disease and for pressing against the channels without deep insertion.
- H. **Round-headed** (Yuanzhen) 1.6" long with an oval-rounded tip, used to rub/press against the skin to treat the muscles or for massage; treats superficial Stagnant Qi.
- I. **Arrow-head** (Chanzhen) 1.6" long with a round head and a tapered sharp tip, often used for superficial bleeding/pricking for Hot conditions; this needle evolved into the modern Plum Blossom needle; it has also been used to introduce herbal preparations beneath the superficial layers of the skin, therefore also called a "Painting needle".

The length of the Nine Ancient Chinese Needles was described in texts as units or, not in inches.

Filiform needles are made in a variety of lengths and gauges (thickness). The standard lengths are: 0.5" /13mm, 1.0" /25mm, 1.5" /40mm, 2.0" /50mm, 2.5" /60mm, 3.0" /75mm, 4.0" /100mm, 5.0" /125mm, 6.0" /150mm. The most commonly used needle lengths are 1.0" and 1.5". Needle lengths were traditionally referred to in "cun/tsun". A

needles length refers to the length from the root to the tip. Needles can vary somewhat to the above stated millimeter lengths according to the manufacturer.

Needle gauges are designated as 26g, 28g, 30g, 32g, 34g and 36g. The 26g needle is the thickest and the 36g is the thinnest. In China, the 30g needle is probably the most often used needle for most techniques because it offers both stability for hand insertion and comfort of insertion for the patient. However, if your hand insertion technique is not good, the patient can experience some pain when a needle of this thickness is inserted. Very few Western practitioners would use a needle this thick.

The choice of needle length and gauge depends on the location of the point, the desired manipulation of Qi, and the relative size of the patient. As a general guideline, shorter needles (0.5") are used over thin musculature such as the head and face. Longer needles (1.5"-2.0") are used where the musculature is thicker, such as the hips and legs. One inch needles are good for use on the chest, abdomen, and back where deeper insertions are prohibited to avoid puncturing the internal organs. Scholars report that in ancient times, needles could commonly be as long as 12" and as thick as a chopstick. These needles were used primarily in the winter months, when heavy clothing had to be penetrated before the skin could be reached. Today, needles are not thicker than 20g, but these are almost never used.

The gauge of needles used for Japanese acupuncture techniques are numbered by a different system. The following chart illustrates the comparisons between Chinese and Japanese needle gauges.

Chinese	26g	28g	30g	32g	34g	36g	38g
Japanese	#15	10	8	5	4	3	2
Diameter	.40mm	.35mm	.30mm	.25mm	.22mm	.20mm	.18mm

A 30g Chinese needle is thicker than a 32g Chinese needle. A #5 Japanese needle is thicker than a #3 Japanese needle. A 32g Chinese needle is equivalent in thickness to a #5 Japanese needle.

Needles can vary somewhat to the above stated millimeter diameters. Japanese acupuncture needles originally were very similar to Chinese needles but they underwent various modifications in the course of history to become very thin, with no tail, and therefore better suited for use with insertion tubes. Generally speaking, the most commonly used needle in Japanese acupuncture is a 1" #3 needle. Japanese needles can come with plastic or solid stainless steel handles. Obviously, the plastic handles are not used for moxa needles.

In Japanese style acupuncture, gold and silver needles are commonly used. They are said to be less dispersing and damage tissue less. Some scholars say the gold needles are best for tonifying and silver needles best for reducing. However, this practice is becoming not as common due to legal issues regarding sterilization. Neither of these needles should be autoclaved since the body of the needle will tarnish. It is too expensive to use gold and silver needles one time and dispose of them. The only alternative is to have the patient on which you want to use the gold or silver needles, buy their own needles. The practitioner would keep these needles only for this patient in labeled containers. These needles could be boiled between uses or rinsed in alcohol. However, most practitioners feel this style is not worth the effort and do not want to expose themselves to potential legal liability.

Korean acupuncture needles originally were also very similar to Chinese needles, but they also underwent various modifications in the course of history to become very thin, with no tail. Korean needles usually have wound wire handles, similar to Chinese needles, except no tail on the handle.

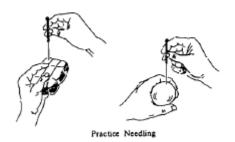
Methods for Strengthening your Fingers

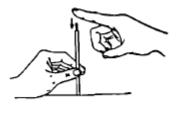
In order to insert needles in an effective and comfortable manner, a student must develop strength and dexterity of their fingers as the first step to learning needle technique. This will affect the force with which the needle is inserted and eliminate any patient discomfort with needle insertion. This will take a lot of practice outside of the school. With a lot of practice, your fingers will acquire a familiarity in handling needles in order to facilitate needle manipulation of Qi, and gain more finger strength and dexterity. This should be mastered before inserting needles into yourself or others. The needle skills of a practitioner are directly related to the amount of practice they have undertaken with needles.

A common practice method for students learning needling is to insert needles into different materials or objects. Some common materials or objects are: a foam pad tied tightly with string or rubber bands to make a surface that has resistance to needle pressure; pin cushions such as those used for sewing (find as dense a pin cushion as possible); cotton batting rolled tightly into a dense orange/lemon-size ball and wrap with string; several layers (20-30 sheets folded 4 times) of folded tissue paper or toilet paper, wrapped with string; a bar of soap with the wrapper left on; several layers of thick pieces of rubber; a piece of fruit or vegetable (lemon, orange, grapefruit, cucumber, etc.). You can start with the softest material (least dense) and work your way up to harder materials.

Another method involves using an old book. Begin by inserting the needle through 2 pages at a time. When this becomes easy, add more pages. When you can easily insert the needle through a thickness of 1/2" to 1", your fingers should have gained enough strength and dexterity to insert needles into your own skin.

To practice free-hand needle insertion, hold the material or object in one hand and the needle in the other hand. It is best to start learning needle technique with a 1" 30-32g needle. Generally speaking, it is best to start with a thicker and shorter needle and progress to longer and thinner needles. In accordance with CNT, your fingers must only touch the handle of the needle and not the shaft. Hold the needle firmly with the thumb and index finger. The third finger may be used at the handle if this feels more natural to you. With a firm downward movement, press the needle while rotating clockwise and counter-clockwise through the surface of the materials or object to a depth of about 1/4". The most important aspect is inserting the needle quickly. Ancient literature states over and over the importance of quick, painless insertion of the needle. This penetration of the needle is the initial phase of needle insertion. As your skill increases, you can try a 34-36g needle and then longer needles. This needle technique practice could also be practiced later with an insertion tube.





Needle guide tuhe

In humans, needle penetration of the first layer of skin is the initial phase of insertion. This is the level at which a pain sensation may be felt, so this step should be done smoothly and quickly. The needle should be supported firmly in the skin layer and should not be flopping around.

The second phase of insertion involves moving the needle deeper to the proper depth. The depth varies according to the location of the point and the desired manipulation of Qi. The needle can be rotated clockwise and counter-clockwise, inward and outward (deep to superficial) evenly as it is manipulated. The final phase of insertion is to "obtain Qi" and this includes a number of different movements/manipulations described later in this section. These movements/manipulations can all be practiced on your material or object to develop your finger-force and increase your skill. The object you are practicing on may need to be enlarged as your skill increases & longer needles are used. Another type of practice involves the following: fill a large bowl with water with a paper towel underneath the bowl; float a piece of fruit/vegetable (cucumber, apple, orange, lemon, etc.) in the water; the weight of the piece of fruit needs to bring the water level to the very top of the bowl, without spilling-over; if the paper towel gets wet, replace it with a dry piece; you should be able to insert a needle by hand or with a tube, into the piece of fruit without making the water spill over the edge of the bowl wetting the paper towel (the fruit should not be pushed down into the water, making it spill over the edge of the bowl). Students should dedicate at least an hour a day for a month for some type of needle practice until needles of any diameter or length feel comfortable. Needle insertion and manipulation should be able to be performed with less concentration as your skill increases. After you have developed some skill with insertion, you can practice needle manipulation with the same objects after you have inserted the needle. When your skill is sufficient, practice on your leg, on a non-acupoint area.

The 6 Necessities of an Acupuncture Treatment

There are 5/6 "necessities" a practitioner must pay attention to for an acupuncture treatment. 1. Correct selection of acu points

1

- 2. Body position of the patient
- 3. Direction/ angle and depth of insertion
- 4. Method and intensity of needle stimulation
- 5. Duration of needle stimulation, retention time of the needle, needle withdrawal method
- 6. Patient records Treatment notes

There are many different theories about the number of needles that should be used for a treatment. There really isn't a set number of needles that is best for all treatments.

Proper Positioning of the Patient

In an acupuncture treatment, appropriate posture of the patient is significant in the correct location of points, manipulation of the needle, correct moxa techniques, prolonged needle retention, and in the prevention of fainting, stuck needles, bent needles, or broken needles.

The most commonly-used patient positions are:

1. Lying

Supine/Recumbent - Place a bolster under the patient's knees and a pillow under the neck. Suitable for points on the anterior neck, head and face, chest and abdomen, medial side of the upper limbs, anterior side of lower limbs, and the hands and feet.



Lateral recumbent - The arms should be slightly bent and placed in front. The knees should be comfortably bent. The natural flexion of the limbs in this way allows muscle tension to be increased or decreased as needed. The patient may or may not want a pillow under their head. Some patients may prefer a pillow between their legs. Suitable for the points on the posterior of the head, neck, back, buttock, and lateral aspect of one side of the limbs.



Prone - Place a bolster under the patient's ankles. The patient may or may not want a pillow under their head. Suitable for the points on the posterior of the head, neck, back, lumbar and buttocks, and the posterior part of the lower limbs.



2. Sitting

Upright or leaning back - Suitable for points on the head, forehead, face, neck, and the upper portion of the chest. Patients can be more likely to faint in this position.



Facing back bent over back of chair/Sitting on low stool with arms resting on treatment table (flexion) - Suitable for points on the vertex, back of head, neck, and shoulder, and mid to upper back.





Sitting with side of face resting on treatment table - Patient may or may not prefer a pillow under their head. Suitable for points on the head, cheeks, and for some points on the exposed ear.



It is always best if new, nervous, elderly, weak, and ill patients are treated in a lying position to limit the possibility of fainting. It is always best, when treating back pain in a prone position, to loosen up the patient's back with some tui na or massage before inserting needles. Some practitioners use something like Po Sum On for this massage. This will cause much less pain when inserting needles in a back which is not tense or tight.

Alcohol Swabbing

All points should be swabbed with cotton ball and 70% alcohol. The points should be swabbed in a tight circular motion from the point and working outward. Alcohol swabs may be used or an alcohol dispenser and cotton balls. Always allow the alcohol to dry before inserting needles. The area should not be touched (unless hands are clean) or come in contact with any objects until the needle has been inserted and removed.

Chinese Needle Insertion Techniques

The free-hand insertion of Chinese acupuncture needles requires a lot of skill to accomplish a comfortable, painless, and accurate insertion. An insertion technique will be selected based on several factors such as the thickness and length of the needle, the thickness of the muscle at the insertion site, the presence of blood vessels, the surface tension of the skin, wrinkles or folds, and the patient's own unique characteristics such as "tough skin". One of the most important aspects is to penetrate the skin quickly with little or no pain. A short forced exhalation (abdominal contraction) assists with concentration and strength while inserting needles.

The handle of the needle is held the same way for most needle insertion techniques. The fingers should never touch the shaft of the needle unless the shaft is held with a sterile cotton ball.



There are 3 main types of insertion methods:

Rotation-Insertion Methods

These methods are the techniques used in the general practice of acupuncture. There are 4 basic techniques in this category, as well as several variations on these techniques.

1. Pinch Needle/Two-Finger Pressing/Supporting/Holding the Body of the Needle Technique

This technique is so named because both hands are used to perform the insertion. The left hand holds a dry sterile cotton ball around the needle tip with the thumb and index finger directly over the point, while the right hand holds the needle at the handle. Together, both hands move the needle quickly downward to penetrate the skin. The cotton ball is then removed from the base of the needle and the needle is manipulated to proper depth.

The Two-Finger Pressing Technique offers the greatest control over longer needles (1.5" or longer) since the body of the needle is supported by the fingers. Longer needles tend to bend under the pressure of insertion. It is very important that the fingers do not directly touch the body of the needle thereby compromising sterility. The cotton used to hold the body of the needle must likewise be sterile cotton.

Longer needles are used where the musculature is thicker, such as the hips and legs. A special technique known as "threading", in which two consecutive points are connected with one needle through a horizontal insertion, also utilizes longer needles.





The fingers supporting the needle should have a sterile cotton ball.

2. Finger Press/Single-Finger Pressing/Pressing Finger/Nail Pressing Technique

With this technique, one hand holds the needle at the handle and the other hand presses firmly on the skin next to the point with a finger nail. The pressing finger, usually the thumb, index finger, or middle finger does not cover the point nor does it come into contact with any part of the needle. Some sources say the needle tip should be held closely against the border of the nail of the pressing finger. However, this would not be a sterile needle technique. It serves to increase the surface tension of the skin at the point to aid insertion and draws the patient's attention to the pressure of the finger nail. The tip of the needle is placed lightly on the skin next to the pressing finger. A quick, firm, downward movement allows the needle

to penetrate the skin, after which the needle is manipulated deeper to the correct depth. A variation of this method uses the fingernail pressing on the skin next to the point. This technique is commonly used to insert 1.0" needles. This length needle does not require the extra support that the longer needles require. Another application of this technique is the insertion of needles over blood vessels or where a pulse can be felt. The pressing finger covers the blood vessel pulling it gently to one side and the needle is inserted safely in front of the pressing finger. Similarly, the pressing finger covers the pulse thus protecting the underlying blood vessel from injury during insertion. An advantage to the single-finger pressing technique is that the pressing finger feels comfortable to the patient, distracts the patient, and reduces the sensation of pain from insertion.



The fingers holding the needle shaft should have a sterile cotton ball.

3. Spreading Skin/Tight Skin Technique

This technique involves the use of the thumb and index fingers or index and middle fingers of one hand to stretch the skin taut on either side of the point to increase the surface tension. The other hand holds the needle and inserts it at the point with a firm, downward movement.

There are 2 methods of holding the needle for this type of insertion. One method is to hold the needle a few millimeters from the tip with a piece of sterile cotton. The tip of the needle below the cotton is inserted into the point. With a second movement, the needle is held at the handle and manipulated to the desired depth. This is the easier method to use with the spreading skin technique. A second method involves holding the needle at the handle with the tip placed either above the skin or resting lightly on the skin. With a firm and quick downward movement, the needle is inserted with one hand while the other hand stretches the skin around the point. To do this technique with needles longer than 1" requires a great deal of skill. Spreading skin technique is used to insert needles in an area of loose or wrinkled skin or folds in the skin such as at the elbow or on the abdomen or in the treatment of elderly patients.



4. Pinching Skin Technique

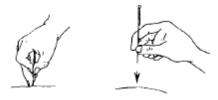
Here, the skin above the point is "pinched" or lifted with the thumb and index fingers of one hand. The other hand holds the needle with the tip of the needle placed lightly on the skin. The insertion is a quick, firm movement into the pinched-up layer of skin. This technique is useful where the point is located over thin skin or muscle, such as on the face at Yintang, BL 2, or GB 14. The insertion would be at an oblique angle since the skin is thin.





Stabbing/Rapid Insertion Method

This technique is commonly used as a hand-insertion technique. The shaft of the needle is held with cotton near the tip and rapidly jabbed into the skin and then the handle is used to insert the needle deeper and manipulate the needle. This technique is also applied with the prismatic needle for the purpose of bloodletting. One holds a three-edged prismatic needle, or a lancet, while the other hand secures the skin at the acupuncture point. The needle is quickly and firmly inserted to a depth of 0.6 to 1.0 cm and is immediately withdrawn. A small amount of bleeding at the puncture site is expected. This bloodletting technique is used to reduce pathological heat in the body and to circulate stagnant Blood.



The fingers supporting the needle should have a sterile cotton ball.

Tube Insertion/Tapping Method

This technique was invented in Japan by a blind acupuncturist and is the most commonly used needle insertion technique in Japanese acupuncture, especially with very thin or long thin needles. Insertion tubes come in many sizes and styles. Reuseable insertion tubes are not used much any longer due to sterilization issues and legal liability. There are disposable insertion tubes available and also many brands of needles come pre-packaged with needles already in plastic insertion tubes. Most acupuncturists who practice a Japanese style acupuncture use this method.

With this technique, the needle is inserted handle first into a thin tube that is slightly shorter (3-5mm) in length than the total length of the needle. Never insert the needle into an insertion tube tip first. The handle of the needle comes through the opposite end of the tube just far enough to be held by the thumb and index finger, with the middle finger pressing on the side of the tube. The tube and needle are placed over the acupoint and held in place with one hand. The other hand is used to tap with the finger on the top of the needle causing it to enter the skin. It takes practice to determine the correct amount of force to tap the needle into the skin. Some practitioners apply a little downward pressure on the tube while tapping the needle into the skin. The guide tube is then removed and the needle is inserted by hand to the desired depth. This technique is most often used with very thin (some texts say long) needles as well as in the treatment of children and some texts say adults who are nervous about receiving acupuncture. This method is also useful when inserting needles at an angle. Very thin needles can be inserted with tubes that would be difficult to insert otherwise. Experienced practitioners can place (load) the needle in the tube and insert the needle in the skin, all with only one hand. This was a sign of an experienced practitioner. This method takes a lot of practice. One-handed needle loading allows the other hand free to locate the acu point.





Patients With Needle Insertion Sensitivity

There are techniques used by practitioners for patients who have a heightened sensitivity to needles when they are inserted, such as a fingernail pressing on the skin, distracting the patient by a tap or slap on the skin near the point before

inserting the needle or inserting needles when the patient is distracted during a conversation. It is always a good idea to show new patients, who have had an acupuncture treatment, an acupuncture needle before treatment. This allows the patient to see an acupuncture needle is nothing like needles used for injections.

Ancient 9 and 12 and 5 and 14 Needling Methods

In Chapter 7 of the Lingshu, it says, "There are 9 ways of needling applied to treat 9 different diseases".

- 1. **Shu-point** used to treat disorders of the 5 Zang Organs, by which the needle is inserted at Ying-Spring points of the yin meridians and the Shu points.
- 2. **Distant** used in the treatment of disorders of the 6 Fu Organs, by which the needle is inserted at the points in the upper region distant from the affected regions below; Lower He-Sea points of the 6 Fu of the 3 yang meridians of the foot are selected
- 3. **Meridian** used to treat an affected meridian by needling along that meridian or the meridian related to the affected part
- 4. **Collateral** used to cause bleeding of the subcutaneous small vessels to eliminate blood stasis and treat the collateral diseases
- 5. Crack used to needle the space between two muscles to treat muscular pain
- 6. Evacuation used with a sword-shaped needle to perform surgical operation and remove purulent blood
- 7. **Shallow** used to treat superficial disorders; the cutaneous needle used is developed from this method.
- 8. **Contralateral** indicating the needling applied to the points on the right side when the affected region is on the left side or vice versa
- 9. **Heat** used with a red-hot needle to treat rheumatism

The Lingshu also states, "There are 12 needlings in response to various diseases of the 12 regular meridians".

- 1. **Coupled puncture** needle is inserted at 2 corresponding points in the frontal and posterior regions of the body respectively to treat cardialgia and thoracodynia
- 2. **Trigger puncture** used to treat wandering pain; when pain is not localized in one definite area, perpendicular insertion of the needle into the affected region should be applied and retained, and removed after a pressure has been applied to the affected region
- 3. **Lateral puncture** -needling one side of a painful muscle, and shaking the needle in a large circular motion so as to expand the needle hole and relax the muscle; used to treat rheumatic pains
- 4. **Triple puncture** needles are inserted at 3 spots simultaneously, with one in the center and two on both sides to treat rheumatism caused by cold that attacks the body on a small scale with deep penetration
- 5. **Quintuple puncture** needles are inserted at 5 spots with one in the center and the 4 around it; treat a large area caused by cold
- 6. **Straight puncture across the skin** push up the skin with the fingers and insert needle at the points and across the skin; treats diseases caused by cold with a superficial invasion
- 7. **Shu-point puncture** insert needle perpendicularly deep into a few points and withdraw rapidly to treat heat caused by excess of qi
- 8. **Short puncture** insert needle with slight shaking down to the bone that suffers from rheumatism; then needle is gradually pushed deeper until it reaches the region close to the affected bones; move needle up and down as if ribbing the bone; used to treat bone rheumatism
- 9. Superficial puncture insert needle oblique or shallow to treat muscular spasms caused by cold
- 10. **Yin puncture** needle K 3 on both ankles to treat cold limbs and cold conditions
- 11. **Adjacent puncture** needle the affected part perpendicular and oblique with one needle each to treat prolonged rheumatism
- 12. **Repeated shallow puncture** needle is repeatedly inserted perpendicular and superficial and withdrawn rapidly to cause bleeding of the affected part to treat carbuncles and erysipelas

The Lingshu states, "There are 5 needling techniques developed to treat various diseases associated with the 5 Zang Organs".

- 1. **Extreme shallow puncture** shallow insertion and immediate withdrawal without injury to muscles; developed for diseases associated with the Lungs, and functions to reduce superficial pathogenic factors; used to treat fever due to exogenous pathogenic factors, cough, asthma
- 2. **Leopard-spot puncture** needles are used to pierce small blood vessels around an affected area to evacuate sludged blood; developed to treat disease associated with the Heart which controls the blood; treat swellings and pain;

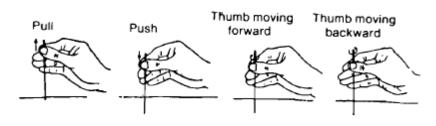
- 3. **Joint puncture** insert needle rapidly into muscles around joints of extremities, avoid bleeding; to treat rheumatism of tendons; developed to treat diseases associated with the Liver which controls tendons
- 4. **Hegu puncture** insert needle into muscles of affected area, obliquely right and left to cure rheumatic pain of muscles; developed to treat diseases associated with the Spleen which controls muscles
- 5. **Shu-point puncture** thrust needle deeply to the bone to treat osteal pain; developed to treat diseases associated with the Kidney which controls bone

Fourteen needle methods from collected works of the Ming Dynasty.

- 1. **Moving** after needle is inserted, if qi does not move, agitate the needle by shaking, raising, and moving it side to side; later called 'wagging the green dragon's tail"; useful in controlling needle sensation; moves qi
- 2. **Withdrawing** first withdraw needle to just below the skin, then remove it using a tonifying or reducing technique; usually reduces the chance of bleeding; clears the qi
- 3. **Twisting** after needle is inserted, twist it like yarn, but not too tightly; needle is twisted right for Cold and left for Hot conditions; twisting right and left has questionable clinical value; twisting with wide amplitude will strengthen stimulation; used for Hot and Cold conditions
- 4. **Entering** If qi is not obtained, rotate the needle to the left for a man and right for a woman, while pressing needle more deeply; right and left has questionable clinical value; used to stimulate qi; benefits qi
- 5. **Bowling** after needle is inserted in the soft flesh of the abdomen, rotate as if inscribing an imaginary bowl in the air for 5 rotations; insert needle deeper and rotate to left to strengthen; raised and rotated to right to drain; right and left has questionable clinical value; used to strengthen needle stimulation; strengthens Deficient conditions and drains Excess conditions
- 6. Shaking needle is shaken as it is withdrawn so as to drain Excess condition; augments stimulation; drains qi
- 7. **Plucking** thumbnail lightly plucks the tail of needle causing the qi to move quickly; strengthening method; corresponds to mild or moderate stimulation; strengthens qi
- 8. **Turning** turning the needle to the left strengthens and treats diseases above a point; turning to the right drains and treats diseases below a point; questionable clinical value; strengthens, drains, and moves qi
- 9. **Following** use fingers to rub up and down the channel below the point needled; supplemental method to obtain qi; regulates qi and Blood
- 10. **Covering** after withdrawing needle, place finger on point to strengthen; questionable clinical value, except to stop bleeding; strengthening method
- 11. **Assisting** if, after needle is inserted, the muscle tissue contracts around it, press with fingernail along affected channel; can be used for stuck needle; spreads qi
- 12. **Pressing** to tighten up the rotation of an inserted needle without moving it deeper or shallower, press finger against the body of the needle as if loading a crossbow; strong stimulation method; augments qi
- 13. **Scratching** at point to where needle is to be inserted, press the skin with fingernail to mark spot; commonly used to mark insertion point; good to go back and find point after locating it
- 14. **Cutting** before needling, press the thumbnail of the opposite hand hard against the skin beside the point, then insert needle; commonly used method; reduces pain and possibly bleeding; spreads qi and Blood

Specific Needle Manipulation Skills

1. **Rotation** - With all of the rotation-insertion techniques, the needle may be rotated just after insertion to facilitate moving it to the proper depth. The tip of the needle is rounded for the purpose of gliding through skin and muscle tissue without causing any injury. The movement of rotation with a small amplitude, slow frequency and even direction (equally rotated both clockwise and counterclockwise) eases the needle into position more comfortable than with simple, direct, downward pressure.

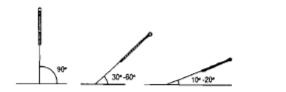


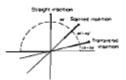
- 2. **Grip** The fingers must have a firm grip on the handle of the needle. The fingers must be able to press the needle into the point in a smooth and controlled manner. If their grip is weak and loose, the needle will not penetrate the skin and the patient will feel a painful sensation. If the needle is not firmly in place in the skin, it will fall over or fall out completely. To avoid this, never let go of the handle of the needle until the needle is supported firmly in the skin. Never allow the fingers to touch the shaft of the needle.
- 3. **Movement** The movement of insertion should be definite, firm, and quick. Hesitation on the part of the practitioner causes an insertion to be uncomfortable. Needle insertion is probably the most challenging skill for a beginner to master, so it is important to be prepared and to feel confident before attempting the insertion.

Angles of Insertion

There are 3 angles at which the needle may be inserted into an acupuncture point:

- 1. **Perpendicular** The needle forms a 90 degree angle with the skin.
- 2. **Oblique** The needle forms a 45 (30-60) degree angle with the skin.
- 3. Horizontal/Transverse/Subcutaneous The needle forms a 15-25 (10-20) degree angle with the skin.





The angle of insertion that is most commonly used over fleshy muscle tissue is the perpendicular insertion. The oblique angle is used where deep insertion is not advisable. The musculature is thin or where the point lies above the organs, blood vessels, bones, or near scars. The transverse insertion is used where the skin is very thin, such as over bone on the head, the face, and the chest.

Most textbooks describe the angle of insertion that is indicated for each acu point. Different angles of insertion can be applied at the same point to achieve different therapeutic effects. For example, SI 11 may be needled perpendicularly to treat pain in the scapula. Or, the needle may be directed obliquely toward the neck to address pain in that area; pain in the shoulder can be treated with SI 11 by directing the needle toward the shoulder area. This illustrates the concept of needling in the direction of pain or to "move the qi" in a specific direction.

Depth of Insertion

Always visualize the depth and anatomy (what is beneath the skin) as you insert a needle. The depth of insertion depends on the location of the point, the desired manipulation of Qi, the condition of the patient, the pathological condition, and the quality of needle sensation that the patient experiences. Each point has a recommended depth of insertion that corresponds to the thickness of the muscle or tissue over which the point is located. Beyond this consideration, there are other factors to consider. In a patient who is very weak, the Qi may be very deep within the body and a deeper insertion would be required to regulate the Qi. Similarly, in a patient with strong Qi, a relatively shallow insertion may produce a strong Qi sensation. Once the Qi sensation has been obtained, it is not necessary to move the needle to a deeper level.

Qi (De Qi) Sensation

After inserting the needle to the proper depth, the needle will contact the Qi. The patient will feel a distinct sensation often described as numbness, heaviness, electric shock, soreness, or distention around the point and sometimes even cold, warm or hot, itching, pain, electric-shock feeling, or ant-crawling feeling. This is known as "Qi sensation". It is a distinctly different feeling from the sensation of pain. The acupuncturist can often sense when the Qi has been obtained if they concentrate. Holding firmly onto the handle of the needle and concentrating on the acupuncture point, the acupuncturist can sense when the Qi has been stimulated by the needle. There is a resistance, tightening or a tenseness around the needle, which is known as "the arrival of Qi".

Some acupuncture points are characteristically subtle in the Qi sensation and others are strong. The Qi sensation also varies from patient to patient. You must work within a patient's tolerance. Some factors influencing the Qi sensation are the patient's constitution, severity of the problem, location of the point, and the needle manipulation being used. Generally speaking, a patient with abundant channel Qi or Qi and Blood, may have a rapidly developed needle sensation, while a

patient with excessive Yin and Deficient Yang, a slow needle sensation or none. If there is no needle sensation during the treatment of a patient with a weak constitution or a chronic illness, it is possible that therapeutic results will not be attained. If no Qi sensation is felt, the practitioner should check the point location to be sure that it is accurate. The needle can be re-angled without removing it completely. Withdraw the needle to just below the skin and redirect it at a different angle. Pressing the skin along the channel may also promote the movement of channel Qi reach the point and needle. If still no Qi sensation is felt, the practitioner would want to "induce the arrival of Qi".

In ancient times, it was said that if you encounter a patient in whom no points elicit a Qi sensation, insert a needle in Ren 6, if there is still no sensation felt from the needling, the patient cannot be cured. It was also said that you could try 5 direct moxa cones on DU 20 as a last resort to restore the patient's sensitivity.

When treating pain, the arrival of the Qi sensation is very important and the Qi travels or radiates to the appropriate area. If there is a Qi sensation but the Qi is radiating in the wrong direction, apply finger pressure directly behind the needled point and manipulate the needle until the Qi is felt traveling in the desired direction. For example, needling SJ 5 for Shao Yang area shoulder pain, the Qi sensation extends downward to the wrist instead of upward; press distal to the needle and at the same time manipulate the needle to make the Qi travel upward to the shoulder.

When a specific amount and quality of stimulation is applied over a period of time, the physiological effect is greatest in the beginning and the effect diminishes with time as the body becomes accustomed to the stimulation. When, on the other hand a weak stimulation and strong stimulation is applied alternately, the body does not become accustomed to this form of stimulation as readily as it does to continuous forms of stimulation. In other words, intermittent and periodic variation of stimulation produces a greater effect than continuous stimulation.

The body is more sensitive in the anterior aspect of the torso, the flexor muscles of the four limbs, and the peripheral areas (fingers and toes). The body is less sensitive in the posterior aspect of the torso and the extensor muscles of the four limbs.

There is considerable difference in the sensitivity of various types of tissues in the body to acupuncture stimulation. Tissue of the nervous system is most sensitive and muscle tissue is the next most sensitive.

The effect of acupuncture stimulation varies considerably according to the sensitivity of the patient. In general men are more tolerant of strong stimulation than women. Young children are more sensitive to stimulation than adults. Infants in particular are very sensitive and have strong reflexes so that sometimes even mild stimulation can cause muscle spasms. Those with a nervous temperament are more sensitive to acupuncture stimulation than those who have a relaxed disposition. Thin people tend to be more sensitive to stimulation compared to those who are overweight. The type of disease/symptom can affect stimulation tolerance. What is a moderate level of stimulation for a healthy person could be strong stimulation for patients with neuralgia or weak stimulation for a patient with paralysis.

Patients who receive acupuncture treatments on a regular basis are able to tolerate stronger stimulation simply because they are used to it. Those patients who are new to acupuncture or have not had many treatments will tend to be more nervous and even mild stimulation can feel strong to them. As a general rule, new patients should always be given mild stimulation and gradually increase the amount of stimulation in subsequent treatments.

Acupuncture stimulation generally follows the same principle as other types of physical stimulation, in which mild stimulation excites the function of the nervous system and continuous or strong stimulation inhibits the function of the nervous system. However, this does not always apply clinically. For example, when trying to relieve pain, good results can be obtained by applying a very mild stimulation for a long time, which tends to produce a pleasant sensation. The appropriate amount of stimulation can only be learned through clinical experience. In ancient times, acupuncturists commonly treated head points first, and then body points; points on the front of the body, and then points on the back. For convenience, modern acupuncturists usually treat the arm first, then the leg, then the back, and finally the front. Some say treat the principal point first, then the assistant points. For patients who require the stimulation of painful points, treat the least painful points first, the painful points last. Treat points farthest from the painful area first, then gradually add points closer to the painful area. However, each practitioner must develop their own style.

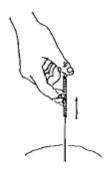
When treating patients, always pay attention to the following:

- 1. Watch the patient's facial color and expression
- 2. Dialogue with the patient about the stimulus they are feeling
- 3. After 3 or 4 needles, ask the patient how they feel. If the patient is suddenly tired or upset, stop the treatment for a few minutes before resuming.
- 4. Some practitioners ask patients to wait 10-30 minutes before leaving so they can monitor any delayed reactions.

Auxiliary Manipulations for "The Arrival of Qi" - "De Qi"

There are a number of techniques that can be used to induce the "arrival of Qi" or needle sensation:

- 1. **Rotation/Twirling** The needle is rotated quickly back and forth (clockwise-counterclockwise).
- 2. Scraping The handle of the needle is scraped with the fingernail from the root to the tail using the thumb at the top of the handle to stabilize the needle.



- 3. Vibrating The needle is raised and lowered (shallow-deeper) with small amplitude and rapid speed to cause the needle to vibrate, tremble, or shake.
- 4. **Flicking/Flipping** The tail of the needle is flicked with the fingernail of the index or middle finger.



5. **Hover** - The tail of the needle is moved in a large circle or large amplitude "like a bird".



- 6. **Pressing** Slightly press the skin up and down along the course of the channel.
- 7. **Plucking** In the process of retaining, pluck the needle handle slightly with the finger, causing it to tremble.
- 8. **Shaking** After the needle is inserted to the desired depth, shake the needle with the hand holding the handle.



9. Flying - After the needle is inserted to the desired depth, twirl the needle and depart the thumb and index finger from it quickly. The two fingers separate just like a "flying bird spreading its sensation.

Sudden Release

wings", which strengthens the Qi

Manipulation of the Needle

After the needle has been inserted, moved to the correct depth, and Qi sensation has been obtained, the needle can then be manipulated for different therapeutic effects. The effects of needle manipulation are that of reinforcing/tonifying and reducing. There are 3 categories of manipulation methods:

1. Reinforcing methods

Effect - To correct the Deficiency of vital function and strengthen body resistance Indications - Deficient conditions, chronic conditions, and no fever

2. Reducing methods

Effect - To eliminate an Excess pathogenic factor

Indications - Excess conditions, acute conditions with fever and distinct symptoms

3. Even methods

Effect - To treat diseases which involve both deficiency and excess. For example, using LI 4 or P 6. Indications - Diseases that are both hot and cold, both deficient and excess.

In addition to needle technique being reinforcing, reducing, or even in therapeutic effect, some points have specific properties with regards to tonification and dispersion. For example, needling points ST 36, REN 6, REN 4, BL 23, DU 4 will have a reinforcing effect in promoting functional activity. Needling points LI 11, BL 40 and P 3 in order to reduce fever and expel an Excess pathogenic factor will have a reducing or dispersing effect.

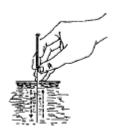
(Hand) Needle Manipulation Techniques - Shou Fa

1. Lifting and Thrusting Method (Sparrow pecking) - Ti Cha Bu Xie

Technique - The needle is moved up (lifting from deeper layer to superficial layer) and down (thrusting from superficial layer to a deeper layer) repeatedly

Reinforcing - Lift gently and slowly; Thrust heavily and rapidly - To push the Yang Qi down into the Ying in order to reinforce its growth

Reducing - Lift forceful and rapidly; Thrust gently and slowly - To pull out Evil or pathogenic Qi



2. Twirling/Rotating/Twisting Method - Nian Zhuan Bu Xie

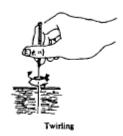
Technique - The needle is twirled or rotated forward and backward (clockwise counterclockwise) continuously in place with the thumb, middle and index finger of one hand, the effect being dependent on the amplitude, speed, and direction of the rotations

Reinforcing - a) Rotate the needle back and forth continuously with small amplitude, slowly, and with low frequency

b) Rotate the needle clockwise by moving the thumb forward; return the needle part way and begin the clockwise motion again; the forward movement of the thumb is done with more heaviness or emphasis than the return movement

Reducing -

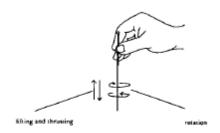
- a) Rotate the needle back and forth continuously with large amplitude, rapidly, and with high frequency
- b) Rotate the needle counterclockwise by moving the thumb backward; return the needle part way and begin the counterclockwise movement again with emphasis on this movement



3. Even Method

Technique -The needle is manipulated by Lifting and Thrusting and/ or Rotating Methods in an even and gentle manner and at a moderate speed to cause a moderate sensation and withdraw needle at moderate speed. The needle could be removed immediately after obtaining Qi.

Effect - This technique has an even effect that addresses conditions in which both deficiency and excess exist simultaneously



4. Direction of Meridian/Meeting and Following Method - Ying Sui Bu Xie

Technique - The needle is angled in a specific direction

Reinforcing - The needle in the direction of the meridian flow; for example, to tonify ST 36, angle the needle toward the foot

Reducing - The needle in the opposite direction of the meridian, that is against the flow of the meridian; in the example above, needle ST 36 upward toward the head to disperse

5. Needle Withdrawal/Opening and Closing Method - Kai He Bu Xie

Technique - The manner in which the needle is withdrawn affects results

Reinforcing - Slow withdrawal and quickly close the needle hole by pressing it with a cotton ball for a few seconds after the needle is withdrawn - This insures that no Righteous Qi escapes

Reducing - With draw quickly and widen the needle hole by moving the handle in a circle as the needle is withdrawn; the hole is left uncovered or open or closed very slowly - Lets Evil Qi depart

6. Respiratory/Exhaling and Inhaling Method - Hu Xi Bu Xie

Technique - The needle is inserted and manipulated in coordination with the patient's breath

Reinforcing - The needle is inserted on the exhalation and manipulation is done on the exhalation; withdraw needle on inhalation

Reducing - The needle is inserted on the inhalation and manipulation is done on the inhalation; withdraw needle on exhalation

7. Quick and Slow Insertion - Ji Xu Bu Xie

Technique - The needle is inserted either slowly or quickly

Reinforcing - Insert needle slowly and remove it quickly - This is an attempt to lead the Yang Qi from the surface to the interior so that Yang can activate the Yin and then leave that Qi deep

Reducing - Insert needle quickly and remove it slowly and gradual- This is like someone screaming "fire" in a crowd and everyone running away - This is leading the Evil Qi to and out the surface

8. Nine and Six -

Technique - Rotation and or thrusting of the needle is performed either 9 (Yang) or 6 (Yin) times

Reinforcing - Rotate and thrust the needle 9 times

Reducing - Rotate and thrust the needle 6 times

9. Simple Insertion and Withdrawal -

Technique - The needle is inserted to a certain depth without any other manipulation and then withdrawn immediately. The amount of stimulation is very mild so this technique is often used for patients who are hypersensitive. This is a common Japanese acupuncture technique for reinforcing and reducing.

10. Retaining the Needle -

Technique - This is a commonly used technique in which the needle is left in place for a certain amount of time after inserting it to a certain depth. The amount of time for retaining the needle varies between 5 to 45 minutes. Often the skin around the needle will gradually turn red. The needling sensation while retaining Japanese needles is usually very mild if felt at all. This is a common technique for reinforcing and reducing. Generally, there is more stimulation when the needle is left in place for a certain length of time, rather than when quickly inserted and withdrawn.

11. Intermittent Insertion -

Technique - In this needle technique the needle is inserted in stages. Initially the needle is inserted only a half to a third of the desired depth, after which it is held for a few breaths, and then the next half or third is needled. The amount of stimulation is mild and used when extra caution is necessary during needle insertion. This is a technique for reinforcing & reducing. This is a technique for reinforcing & reducing.

12. Contact Needling-

Technique - Instead of inserting the needle, the tip is gently held against the skin to stimulate a point. This technique is very useful for applying extremely mild and subtle stimulation. The technique is also used with brushing and stroking techniques in pediatric acupuncture. For adults this technique is only used for very sensitive points and patients. This is a technique for reinforcing and reducing.

13. Scatter Needling -

Technique - This is random needling over a broad area without particular relation to meridians or acupuncture points. It is generally applied to the interscapular area or lumbar area for superficial tension and tender points. Thin needles are inserted superficially and quickly withdrawn on many points in and around the area. The depth of insertion is usually little more than that of tapping insertion with a tube. There is a Japanese insertion tube with a slot in the side to hold the needle against the tube after it is inserted, as the tube is pulled up the needle is withdrawn also. The key is quick and rhythmical insertion and withdrawal of the needle. This technique stimulates the sensory nerve endings close to the skin surface and increase local circulation. This technique is used for problems like osteoarthritis of the knee, eczema, and neck and shoulder muscular tension.

14. Length & Thickness & Type of Needle -

Reinforcing - Shorter and thinner needles; some say gold needles; some say warm the needle Reducing - Longer and thicker needles; some say silver needles; some say do not warm the needle

15. **Depth**-

Reinforcing - Shallow

Reducing - Deeper

16. Massage Point-

Reinforcing - Lightly rub point before insertion

Reducing - Insert needle without rubbing point

17. Pinch Point -

Reinforcing - Pinch point with finger nails before inserting needle

Reducing - Insert needle without pinching point

18. Five Elements -

Reinforcing - Needle Mother point on affected channel

Reducing - Needle Child point on affected channel

19. Source - Luo Points

Reinforcing - Tonify Source point on affected channel- Even on LUD point on paired channel Reducing - Reduce Source point - Even on LUD point on paired channel

20. 12 Time periods - 12 Earthly Branches

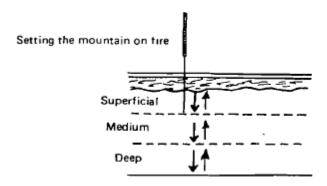
Reinforcing - When time associated with a particular channel is past, select the Mother point Reducing - During the time associated with a particular channel, select the Son point

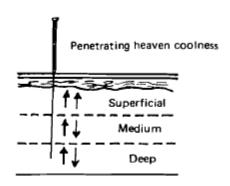
21. **Removing Needles** - Since ancient times there has been much written on the effect of the method and the order in which needles are removed. The following is one version.

- 1. For the average patient who does not have a lot of Excess or Deficiency, remove needles from above to below working downward from the head or remove needles starting from the side of the body closest to the practitioner to the far side.
- 2. For a Deficient patient, after removing the needle, swab the point and knead/massage the point. If the patient is not responding to treatment, stimulate the point & remove the needle quickly. Withdraw the needles in the same order as in #l.
- 3. For Excess symptoms, after a reducing technique, twirl the needle, remove it, and do not knead the point.
- 4. For prolapse of organs or tissues, withdraw needles from below to above starting at the feet in order to lead the Qi upward.
- 5. To bring pathogenic factors downward, such as cough or hypertension due to upward flow of Qi, remove the needles from above to below starting at the head.

Some literature says most methods are based on the concept of Three Level Puncture (San Ci). According to this theory, the depth of each point is divided into 3 levels or layers, Heaven (shallow), Human (middle), and Earth (deep). The Heavenly level corresponds to the flow of the Wei Yang, and the Earthly level to the flow of the Ying Xue. All methods are designed to lead Yang Qi deep to activate the Yin in order to tonify or scatter and lead out the Evil Qi from deep to superficial in order to disperse. When needling an acupoint, some scholars say there are 5 levels between the skin and the bone: 1) Skin, 2) Wei, 3) Channels, 4) Qi/Blood/Organ, 5) Jing.

Two other needle techniques based on the Three Level Puncture are used to warm and to cool. "Set the Mountain on Fire" (Shao San Huo) is a warming technique to treat Deficiency Cold. Insert the needle into the Heavenly level (superficial); twist the needle 9 times; and then insert down to the Human level (middle) and twist again 9 times; finally insert deeper to the Earth level (deep) and twist 9 times; quickly raise the needle to the Heavenly level and repeat the entire process 3 times. "Cool Like a Clear Night Sky" (Tau Tian Liang) or "Penetrating Heaven Coolness" is a cooling technique to treat Excess and Heat. Thrust the needle quickly and deep to Earth level; twist 6 times and slowly withdraw to the Human level; twist 6 times and slowly withdraw to the Heavenly level; twist 6 times; thrust quickly down to Earthly level again and repeat process 3 times.





Other classical sources (post 3rd century AD) list 14 needle technique methods:

- 1. **Moving** "Wagging the Green Dragon's Tail" After the needle is inserted, if the Qi does not move, agitate the needle by shaking, raising, and moving it from side to side. This is useful in controlling the needle sensation to move Qi.
- 2. **Withdrawing** When the needle is to be removed, first withdraw it to a position just beneath the skin, then remove it using either a strengthening or draining technique. This technique can cause less bleeding and it clears the Qi.
- 3. **Twisting** Once the needle is inserted, it is twisted like yarn, but not too tightly. The needle is twisted to the right for Cold, and to the left for Hot conditions. Some scholars say the concept of right for Cold, left for Hot has not been shown to have clinical value. However, the wide amplitude with which the needle is twisted is effective in strengthening stimulation.
- 4. **Entering** If, after inserting the needle, Qi is not obtained, rotate the needle to the left for a man and to the right for a woman while pressing the needle deeper. Some scholars say the distinction between left and right for men and women is baseless. However, the method does help stimulate the Qi.
- 5. **Bowling** Once a needle has been inserted in the soft flesh of the abdomen, it is rotated as if "inscribing an imaginary bowl in the air' for 5 rotations. The needle is inserted deeper and rotated to the left to strengthen; it is raised and rotated to the right to drain. Some scholars say the distinction between left and right has no basis in reality, but the method does strengthen needle stimulation and used to strengthen Deficiency and drain Excess.

- 6. **Shaking** The needle is shaken as it is withdrawn so as to strengthen the Qi sensation and drain an Excess condition. This method augments stimulation and drains Qi. If the body of the needle is pulled in one direction and shaken, the conduction of the Qi sensation in the direction toward which the needle points is facilitated.
- 7. **Plucking** The thumbnail lightly plucks the tail of the needle causing it to move back and forth, causing the Qi to move quickly. This is used as a strengthening method. This method corresponds to mild or moderate stimulation techniques and strengthens Qi.
- 8. **Turning** Turning the needle to the left strengthens and treats diseases above a point; turning the needle to the right drains and treats diseases below a point. Some scholars say this method has no practical value. This method strengthens, drains, and moves Qi.
- 9. **Following** After the needle is inserted, partially withdrawn, and then thrust again at a slightly different angle, use the fingers to rub up and down the channel below the point needled. This is a supplemental method to obtain Qi, move Qi along the channel, and regulate Qi and Blood. This method was first mentioned in the Ming Dynasty.
- 10. **Covering** After the needle is withdrawn, a finger is placed over the point as a strengthening method. Some scholars say this method has no effect except to help stop bleeding.
- 11. **Assisting** If, after the needle is inserted, the muscle tissue contracts around it, press with the finger nail along the affected channel. This method spreads Qi and can be used for a stuck needle.
- 12. **Pressing** To tighten up the rotation of an inserted needle without either inserting it deeper or withdrawing it, the finger can be used to press against the body of the needle as if "loading a crossbow". This is a strong stimulation method and augments the Qi.
- 13. **Scratching** At the point where the needle is to be inserted, press the skin with the fingernail to mark the point. This is a commonly used method to mark the location of a point before needling.
- 14. **Cutting** Before needling, press the thumbnail of the opposite hand, hard against the skin beside the point, then insert the needle. This is commonly used method to reduce the pain of inserting a needle and spreads Qi and Blood.

The following is from a book titled Ode of the Golden Needle:

- 1. To regulate the Qi, after inserting the needle to the Earth level, raise it to the human level. If it is desired that the Qi move upward, rotate the needle to the right; if downward, rotate the needle to the left. If the area in front of the point of insertion is pressed, the Qi will move behind the point; if the area behind the point is pressed, the Qi will move in front.
- 2. Method of removing the needle: When the strength of the disease has subsided, the needle Qi will be as if rooted and pushing will not move it and twisting will not turn it. This is because the Excess holds the needle and the normal Qi has not arrived. At this time, the needle should not be withdrawn, if it is, the disease will return. Moreover, when strengthening or draining, one must wait until there is some loosening before the needle can be removed.

Other ancient sources on Moving Qi:

- 1. "Wagging the Tail" or "Green Dragon Wags Its Tail" After obtaining Qi, the needle is angled in the direction of the disorder. The needle is neither lifted, thrusted, or rotated. Instead, the "tail" of the needle is "wagged" back and forth, either 9 or 27 times. This is a Yang method and therefore specifically moves Yang Qi. Although the association of 9 with Yang is obvious, the method does control and strengthen the conduction of the needle sensation.
- 2. "Shaking the Head" or "White Tiger Shakes Its Head" The needle is thrust with a leftward rotation, and "shaken" when the patient exhales. When the needle is raised, it is rotated to the right and "shaken" upon inhalation. These techniques are repeated 6 or 18 times. This is a Yin method and therefore is intended to move Blood, which is Yin. Shaking the needle strengthens the needle sensation.
- 3. "Searching for the Point" or "Green Turtle Searches for the Point" The needle is inserted slowly (in 3 stages) and withdrawn quickly. This method is repeatedly performed, each time altering the direction and angle of insertion. This is an easy method of obtaining Qi.
- 4. "Meeting the Source" or "Scarlet Phoenix Meeting the Source" The needle is repeatedly thrust, first to the deep level, then raised to the superficial level, and finally thrust to the middle level. While this is being done, the needle should be shaken back and forth and rapidly twirled to hasten the Qi. If the disease is above the point, the needle is rotated to the right and raised as the patient exhales. This technique is definitely useful in obtaining Qi.

Other ancient sources on needle technique to affect Qi:

- 1. **Flowing Qi** The needle is inserted to a depth of about 0.7 cun and is raised and thrust in accordance with strengthening techniques 9 times. Then, when Qi has been obtained, the needle is further inserted to a depth of about 1 cun, and raised and thrust in accordance with draining techniques 6 times. Performed repeatedly, this is a treatment for masses or lumps of Qi which are migratory areas of painful nodules that are soft to the touch, or not even palpable.
- 2. Raising Qi The needle is raised forcefully and thrust slowly 6 times so as to drain an excess.

The needle is left in place until the muscle tightens and the needle is "settled". This indicates that Qi has been obtained. The needle is then rotated slightly, and gently raised. It is believed that this technique is effective in the treatment of numbness, cold limbs, and persistent pain accompanied by difficulty in movement. It is thought to facilitate the circulation of protective and nourishing Qi. It is definitely effective in strengthening local needle sensation.

- 3. **Circulating Qi** Raise the needle forcefully and thrust it slowly 6 times to drain. When Qi has been obtained, slant the needle in the direction of the disorder, and ask the patient to inhale 5 times to cause the Qi to flow towards the problem area. Although the inhalation itself does not control the needle sensation, deep breathing during acupuncture treatment does relax the patient and reduces pain. This method can be used for any type of pain.
- 4. **Receiving Qi** This method utilizes the technique of "circulating Qi' as its basis. After performing the "circulating Qi' procedure and Qi has been obtained at the site of the disease, the needle is held perpendicular to the skin, pressed straight down, and the area on the side of the needle away from the affected part of the body is pressed. It is believed that this procedure prevents the Qi from flowing back toward the point. This method is clinically useful in directing the conduction of the needle sensation.

All students and practitioners should read an excellent out-of-print book called Chinese Acupuncture by Wu Wei Ping, 1962. This book describes theory, ancient acupuncture theories and techniques, and is especially good at describing the use of the fingers and many ancient needle manipulation techniques. He talks about the 8 manipulations described in the classics, the 4 phases in needling, & the 9 rules of acupuncture which are classic needle manipulations like "Fire of the Volcano", "Penetration of Celestial Freshness", "The Blue Dragon Moves His Tail", "The White Tiger Shakes His Head", etc. The therapeutic effects of acupuncture refer to the various effects of acupuncture to correct the functional abnormalities in the tissues and organ systems of the body. From a Western medical perspective, the main effects of acupuncture could be stated as:

- 1. Regulating effect Acupuncture stimulation to the tissues and organ systems to regulate various physiological functions of the body. This could be inhibiting hyper-functions such as pain and muscle spasms or invigorating nerve functions such as in numbness and paralysis.
- 2. Induction effect Acupuncture stimulation of an affected area and stimulation of a distal area affects the vascular network to cause hyperemia in the stimulated area. This effect is used to regulate blood flow to the affected area. This could be needling the affected area directly to increase circulation as when treating numbness or muscle atrophy. Another way is to induce blood flow to a distal area as in treating a localized inflammation with a point far from the affected area.
- 3. Anti-inflammatory effect Very slight needling causes reflexive vasoconstriction in the stimulated area and this reduces the blood flow in the area and can attract white blood cells and facilitate the absorption of pathological secretions.
- 4. Hematinic effect Acupuncture treatments directly and indirectly affect the autonomic nervous system and generally creates a condition of parasympathetic tonus. This condition heightens the activity in the reticuloendothelial tissue, which brings an increase in red blood cells, white blood cells, and platelets. Also this condition stimulates the production of antibodies and facilitates recovery from various illness.



Method	Tonifying	Reducing
Needle Type & Warming	Gold; warm the needle	Silver; do not warm needle
_	Gold, warm the needle	Sirver, do not warm needle
Length & Thickness of Needle	Shorter and thinner needles	Longer and thicker needles
Massage point	Lightly rub point before insertion	Insert needle without rubbing point
Pinch point	Pinch point with fingernails before insertion	Insert needle without pinching
Exhaling/Inhaling	The needle is inserted on the exhalation and manipulation is done on the exhalation; withdraw needle on inhalation	The needle is inserted on the inhalation and manipulation is done on the inhalation; withdraw needle on exhalation
Quick/Slow		
Insertion	Insert needle slowly and remove it quickly	Insert needle quickly and remove it slowly and gradual
Needle insertion	Less sensation Insert smoothly	More sensation Vibrate needle during insertion
Insertion depth	Shallow	Deeper
Needle manipulation	Lift gently and slowly; Thrust heavily and rapidly Rotate the needle back and forth continuously with small amplitude, slowly, and with low frequency	Lift gently and slowly; Thrust heavily and rapidly Rotate the needle back and forth continuously with large amplitude, rapidly, and with high frequency
Needle rotation	Rotate the needle clockwise by moving the thumb forward; return the needle part way and begin the clockwise motion again; the forward movement of the thumb is done with more heaviness or emphasis than the return movement Left rotation (counterclockwise)	Rotate the needle counterclockwise by moving the thumb backward; return the needle part way and begin the counterclockwise movement again with emphasis on this movement Right rotation (clockwise)
	[This is inconsistent with the previous]	[This is inconsistent with the previous]
Needle Direction	The needle in the direction of the meridian flow	The needle against the direction of the meridian flow
Retention of Needle	Shorter (Longer) retention [Inconsistent]	Longer (Shorter) retention [Inconsistent]
Opening/Closing	Slow withdrawal and quickly close the needle hole	Withdraw quickly and widen the needle hole by moving the handle in a circle as the needle is withdrawn; the hole is left uncovered or open or closed very slowly
Nine and Six	Rotate and thrust the needle 9 times	Rotate and thrust the needle 6 times
Five Elements	Needle "Mother" point on "Mother" channel	Needle "Child" point on "Child" channel
Source - Luo points	Tonify Source point - Even on Luo point	Reduce Source point - Even on Luo point
12 Time periods	Time associated with channel past, select "Mother" point	During time associated with channel, select "Son" point

^{*} The ancient literature has many inconsistencies regarding tonifying and reducing techniques.

Many modern scholars have researched acupuncture and meridians in terms of electrons and circuitry and their relation to tonifying and reducing such as:

Fundamentals of Meridian Circuitry

In Yin meridians, electrons flow upwards and in Yang meridians, electrons flow downwards; sedate upper stream and tonify lower stream to increase electron flow in the meridian; silver needles sedate and gold needles tonify; twirling a needle sedates and retaining a needle will tonify; north sedate and south tonifies; negative sedates and positive tonifies.

Ion Pumping - Nature of Semi-conduction - Electrons flow from black negative to red positive in ion cords and the opposite in meridians

 $\begin{array}{c} \textbf{Electro-stimulation} \text{ - Clear waves of } 0.01 \text{ second duration are best; } 0.1 \text{ to } 1.0 \text{ volts is most comfortable;} \\ \text{with amperage lrnA to } 25 \text{ rnA is most comfortable; the frequency should be same as patient's pulse rate} \\ \end{array}$

Magnets - To increase the electron flow in a meridian, apply North on the upper stream and South on the lower stream; use 400 gauss to 800 gauss magnets for treatment; apply for 2 days and rest 1 day

Needle Stimulation

There are 3 degrees of needle stimulation: strong, moderate, and mild

1. Strong stimulation

Technique - Manipulation of the needle is strong and energetic

Sensation - The patient feels a strong Qi sensation locally and in distal areas

Application - Excess, acute, painful disorders; patients with a strong constitution and no fear of

needles; this stimulation is usually used at points on the four limbs – The downside of too strong stimulation is the possibility of causing the patient to be fatigued, nauseous, or light-headed.

2. Moderate stimulation

Technique - Manipulation of the needle is steady, regular, and moderate

Sensation - The patient feels a mild Qi sensation around the needle locally and sometimes in distal areas as well

Application - For general use and used most often

3. Mild or Weak stimulation

Technique - Manipulation of the needle is slow, gentle, and movements are shallow

Sensation - The patient feels a slight Qi sensation around the needle

Application - Weakened conditions; needle-shy or nervous patients; this stimulation is appropriate for use over major internal organs

Continuous stimulation for a few minutes to a few hours is often used for relieving severe pain, cramps, spasms, and for anesthesia. Intermediate stimulation or occasional stimulus is the most common method used. The needle is stimulated for a few seconds to a few minutes, wait a few minutes (3-5) and stimulate again, and repeat. The shorter the interval between stimulating the needle, the stronger the amount of accumulated intensity. Stimulation by retaining needles for a few minutes up to several hours is another method and varies on a case-by-case basis.

Long Needle Acupuncture or "Beard of Wheat" Needle

The "Beard of Wheat" needle, so called because of its shape, is related to the "long" needle, which is one of the Ancient Nine Needles. Its length, varying from 5" to 2', makes it possible to join several points along a channel with one needle, with strong stimulation. The needle is generally 28-32g.

Method

The length of the needle requires the use of both hands. The right hand holds the handle and is used mainly to twirl and rotate, while the fingers of the left hand guide the tip and exert vertical pressure near the skin using a sterile cotton ball. Thus the hand closer to the tip controls the direction and force of the needle. The same when the needle is withdrawn. The direction and depth are determined by local anatomy and the weight/ size of the patient. Straight, vertical insertions can be made on parts of the abdomen, whereas oblique or transverse insertions are used for the lower back, buttocks, and above or below the knee. On the head and near vital organs, a transverse insertion almost parallel to the skin is used. All movements of the needle should be performed slowly and the patient asked as to the needle sensation. If the patient reports an abnormal sensation, the needle should be withdrawn.

Indications

Because of the difficulty of this technique, it is generally only used for the treatment of chronic diseases where other treatments have not been effective. This technique is appropriate for certain mental diseases, gastro-intestinal disorders, irregular menstruation, and rheumatism.

Caution

Extreme caution should be used on very weak or thin patients. A thorough knowledge of anatomy is essential. Patients seeing a very long needle can be apprehensive.

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Threading Needle Technique

Threading is a traditional technique using "long" needles. These needles are usually larger gauge such as 26g-30g. Typical needles can be as long as 12". The needle is inserted on a transverse or subcutaneous angle with one hand pinching-up the skin and the other hand holds the needle near the tip with a cotton ball and inserts the needle under the skin. This technique is often used to connect points and also to treat pain. Extreme caution should be used and always consider local anatomy. Even longer "Ultra long" needles are available and developed on the basis on the Ancient Nine Needles.

Threading can also be performed with shorter needles. An example would be in treating facial paralysis. A 3" needle can be inserted transversely from ST 7 to ST 6. This is sometimes also called through-and-through acupuncture.

Through and Through Technique

A type of threading can involve a through-and-through technique. This technique can stimulate 2 points with one needle. A transverse through-and-through insertion is often used subcutaneously such as ST 4 through to ST 6; Extra Taiyang

through to GB 8; etc. Oblique through-and-through is used for 2 points close together such as SJ 21 through to GB 2 or LI 4 through to P 8. Perpendicular through-and-through is used for 2 points located opposite each other such as a needle inserted perpendicular into SJ 5 through to P 6 or GB 34 through to SP 9; etc.

A one-direction through-and-through connecting several points could be needling HT 4 to HT 5 to HT 6 to HT 7. A multiple-direction through-and-through would be like inserting a needle into LI 15 and direct the needle to SJ 14 or insert a needle into ST 4 to ST 2 and another needle into ST 2 to ST 6; For example, to treat asthma or cough, patient lying in supine position, a 3" - 4" needle is inserted obliquely into REN 17, after the arrival of Qi, the needle is manipulated horizontally along the sternum through REN 16 through REN 15 through to REN 14. There are almost 100 point combinations where the through-and-through technique is commonly used for various diseases/symptoms.



Hot Needle Technique

The Neijing referred to this technique as "temper puncture". A doctor in the Ming Dynasty said "First burn the "tempered needle" to red and then insert it, for the treatment of coldness and numbness of bone". This technique uses a traditional thick needle (3-4 cun long 0.5-1.0 mm diameter) or a filiform 26g needle. Traditional thick needles often had wooden, bamboo, or bone handles to prevent burning the hand. The needle is heated with a flame and inserted to various appropriate depths and removed quickly. This technique is often used to remove Cold obstruction which affects deep to the bones, for abscesses and carbuncles, hardening of the lymph glands, skin diseases, and severe arthritis. This technique is not used much in the U.S. due to legal liability.

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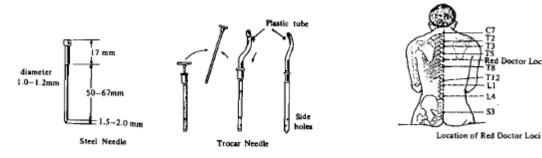
Red Doctor or Barefoot Doctor Needle Therapy

Red Doctor Needle Therapy is the use of a special thick needle (a variation of one the Ancient Nine Needles) inserted subcutaneously over the midline of the back (DU channel) and other locations. This therapy has long been popular in Northeast China. This technique was further developed during the Cultural Revolution. Clinical practice has shown this technique has anti-inflammatory, anti-allergy, analgesic action, and regulates the functions of the nervous and endocrine systems. This technique has the advantages of using fewer points. It is sometimes used in acupuncture analgesia. The sites for use are typically along the DU channel on the mid-line of the back. The DU channel is the sea of Jing. This therapy uses the points on the DU channel as the main stimulating points.

Two varieties of needles are used. The first needle is almost like a nail. The tip of the needle is not too sharp. These needles are about 0.6 mm to 1.2 mm in diameter and 2-4.5" long. The patient typically sits upright in a chair, neck bent forward with their arms folded across the chest, and shoulders dropped.

An example of a treatment would be for psoriasis, eczema, or other skin problems. The points would be T2 on the upper edge of T2 spinous process and T5 on the upper edge of T5 spinous process. The points would be needled once daily in acute stages for 3 consecutive days and then once every other day for 10 treatments for a course. In chronic cases, once every other day for 10-15 treatments as a course. The second needle, a tubular needle made of stainless steel tubing with 2-4 small holes in the body through which medicine can be injected.

One of the advantages of this technique is that only a few points are used to treat a broad range of diseases. The main points used are the intervertebral points on the spine and called "Barefoot Doctor" points. These points correspond to the vertebrae, such as Thoracic 1, Cervical 7, etc.



Red Doctor Needling

Both of these needles produce a strong stimulus and can cause fainting and has all the other precautions of acupuncture.

Examples of Treatments

Psoriasis, eczema, other skin diseases - Thoracic I, 5 Asthma, bronchitis - Thoracic 3, 5 Acute tonsillitis, pharyngitis - Cervical 7, Thoracic 5

Most conditions are treated once per day for the first 3 days, then on alternating days, 10 treatments to a course. Chronic diseases should be treated on alternating days, 10-15 treatments to a course.

Caution

This method produces extremely strong stimulation. There is a likelihood of patients fainting.

This method is not to be used on pregnant women or those with hemorrhagic diseases.

This technique is not used much in the U.S. due to legal liability.

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Great Needle Acupuncture

This is considered a hybrid needle, developed from crossing two of the Ancient Nine Needles, the "long" and the "big/large". The length varies from 3" to I', however its diameter usually is that of the large or barefoot doctor needles. It also has the advantage of being able to join points, therefore using less needles. The great needle is manipulated in the same manner as the "beard of wheat needle" and has the same cautions. Because of its diameter, the stimulation is stronger. The needle is believed to work best in muscular or tendinous tissue. The great needle is used today primarily in the treatment of paralysis.

This technique is not used much in the U.S. due to legal liability.

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Needle Retention and Withdrawal

The purpose of retaining the needle is to strengthen the needling sensation and to facilitate the manipulation of the needle. In general, needles are retained from 10-20 minutes. But for some cases the needles are retained longer or shorter depending on primary or secondary points and the patient's constitution. Some practitioners believe the needle should be inserted and Qi obtained; perform the desired needle manipulation; and remove the needle immediately. On withdrawal of the needles, press the skin around the point with the thumb and index finger of one hand, rotate the needle gently and lift slowly to the subcutaneous level, then withdraw and close the hole with a cotton ball. Some sources say that needles should be removed immediately after needling points DU 15, REN 23, REN 22, and Jing Well points, and also when treating shock or unconsciousness.

Frequency of Treatment

In China, patients are treated with acupuncture anywhere from 3 times a week to 5 times per week. This focused, continuous treatment has a residual effect. A course of treatment would be 10- 15 sessions, with a week off and then another course if needed. For an acute emergency condition, a patient could receive 3 treatments a day. In the U.S., patients have financial and time considerations. Therefore, once a week treatment is probably the most common. Many practitioners believe initially patients should be treated at least twice a week for the first and second week. This could be thought of as an "attack" on the problem. This is especially useful when giving new patients bulk herb decoctions and you do not want to give the patient more than a 3-4 day dose to see how the patient responds to the decoction.

Precautions

The following is a list of general precautions to consider in the use of acupuncture:

- 1. Delay treatment or use only a few needles if the patient is hungry or has over-eaten, and if the patient is intoxicated, exhausted, or in a very weakened condition.
- 2. The fontanel of infants should not be needled.
- 3. Do not needle points located on the abdomen and lumbosacral region of a pregnant woman in the first trimester. After 3 months, avoid the upper abdomen as well. Points causing strong sensation (such as LI 4, SP 6, BL 60, BL 67) are forbidden to needle on a pregnant patient. [Abdominal needling is contraindicated after 20 weeks gestation; upper abdominal needling should be done with care prior to 20 weeks gestation].
- 4. Specific points are forbidden to needle because of their location near vital organs or large blood vessels. It is important to know the needling cautions or contraindications for all acu points according to the literature.
- 5. Always visually check the condition of your needles.

- 6. It is recommended that needles used for electro acupuncture be used only once due to the weakening effect of electricity on metals.
- 7. Acupuncture for children requires the use of much shallower depths, usually 0.2-0.3 cun. It is important that children keep still during treatment to aid insertion & manipulation of the needles & to avoid bending needles during tx.
- 8. There are sources which state the following conditions are contraindicated: extreme emaciation, very unstable stage of diseases, extremely high fever, extremely high blood pressure, during extremes of emotions, immediately after a massive hemorrhage, violent mental illness, and during strong palpitations or dizziness.

Contraindicated/Forbidden Points

Sources vary considerably, from ancient to modern times, on contraindicated points. LI 13, ST 1 currently needled, ST 17, ST 30 currently needled, SP 11 currently needled, HT 2 currently needled, BL 8 currently needled, BL 9 currently needled, BL 9 currently needled, SJ 19 currently needled, SJ 20 currently needled, REN 8, GB 18 currently needled, (LV 12), DU 10 currently needled, DU 11 currently needled, DU 17 currently needled, DU 24 currently needled, REN 1 currently needled, (REN 5), REN 8, REN 9 currently needled, (REN 15), REN 17 currently needled. Points with conflicting information are ().

Do not needle into the spinal cord, the eyeballs, the testicles, DU 22 on children under 8, any artery or vein, and any internal organ. During pregnancy - LI 4, SP 6, BL 60, BL 67 except for malposition of fetus, (KID 18), GB 21; 8 liao (BL 31-34) during 1st and 2nd trimester. Points on the vertex of infants when the fontanel is not closed.

Preparation for Needle Practice or an Acupuncture Treatment

Students must develop good habits when learning techniques. It should not make any difference whether you are learning and practicing a technique or treating a patient.

- 1. Wash your hands with soap under warm water for a minimum of 10 seconds before. You can also wash your hands with waterless hand sanitizer in the treatment room or swab hands with alcohol, especially if you have touched non-sterile surfaces. You may need to wash your hands again after moving a patient's clothing or palpating a patient.
- 2. Prepare your equipment and make sure all needed equipment is on hand.
- 3. Always use proper positioning of the patient according to the area of the body to be needled.
- 4. Accurate point location is critical.

Clinical Complications with Acupuncture

Forgotten Needle

A practitioner in a busy practice may occasionally forget to remove a needle. Keeping a needle count will reduce the likelihood of leaving a needle in a patient. This needle count should be written down as a part of the treatment visit. Practitioners should not allow a patient to get up from the treatment table until all needles are accounted for. The patient may be injured by the unremoved needle or the needle may fall on the floor unnoticed.

Pain

Pain is almost always the fault of the practitioner. Pain can be caused by poor practitioner finger dexterity, finger weakness, too slow insertion, excessive needle stimulation, patient moving, improper withdrawal of needle, needle hitting a vein, needle entwined in fibrous tissue while the needle is rotated in a wide arc, etc. Points on the face, hands, and feet are more sensitive. Often pain is due to the needle being inserted through the surface of the skin, but not past the pain receptive area under the skin. Some patient's skin is actually "tough' and difficult to insert a needle. If a needle hits a tendon there can be pain. In this case or for any sore point, indirect moxa on ginger may be applied. If a patient still has an electrical sensation when the point is touched on the day following a treatment, lightly stimulate the same point with a needle, and follow with indirect moxa. After needling points near joints if the patient feels some tightness or pain in the joint, apply indirect moxa to the area. Developing good needle technique is the best way to avoid causing pain with acupuncture needles.

Stuck/Locked Needle

One of the most common clinical experiences in the practice of acupuncture is that of a needle that is difficult to remove, or a stuck needle. Muscle fibers around the needle can tighten up and hold the needle in place and make it impossible to twirl or lift and thrust. There are a number of reasons why this Stagnation could happen, such as:

- 1. Excessive force of insertion
- 2. Uneven manipulation
- 3. Muscle spasm
- 4. Muscle cramp which may occur if the patient is in pain or if the needle has been retained for too long in a muscle.
- 5. Muscle contraction caused by the patient moving suddenly, which may occur if the patient is tense, extremely nervous, or uncomfortable.

Management of a Stuck Needle

It is not difficult to remove a stuck needle and there are several methods to try. Remain calm, do not panic, and keep the patient relaxed.

- 1. Stay calm and do not inform the patient. Ask the patient to relax, wait a few minutes for the muscle to relax and the needle may loosen.
- 2. Lightly press into the muscle around the needle near the point with a fingernail for 2-5 minutes.
- 3. Apply a warm moistened cloth.
- 4. Insert another needle about 1/4" to 1" away from the stuck needle to "scatter the accumulation of Qi and Blood".
- 5. If needle was rotated in only 1 direction, rotate the needle in the opposite direction with small amplitude.
- 6. For a needle that has been bent beneath the skin:
 - a) Lightly shake the needle from side to side
 - b) Look at the direction of the handle to determine the direction of bend and pull in the same direction.
 - c) Never try to force the needle out.

To prevent a needle from becoming stuck during a treatment, perform careful insertions and manipulations. Explain to the patient the importance of remaining still while the needles are in place.

Bent Needle

Bent needles can be due to the method of insertion, patient moving, or the needle hitting a bone. When a needle bends beneath the skin, do not twirl or rotate it as it is withdrawn. The position of the patient should be changed or angle of the needle changed and the needle should be withdrawn according to its angle. Forcing the needle in or out may cause the needle to break.

Broken Needle

In the past, practitioners typically used re-usable acupuncture needles. Over a period of time, these needles were continually autoclaved, could become bent, dull, or develop burrs on the tip, and the metal become weakened by pitting. This often caused stuck, bent, or broken needles. This was more of a problem prior to the common use of disposable needles. With the use of disposable needles, this is less of a problem. However, there is still a risk of a needle breaking off in a patient, especially with needles thinner than 34 g. Some causes of a broken needle are: a strong muscle spasm, excessive forceful needle manipulation, using excessive force withdrawing a needle, manipulating a stuck needle too forcefully, poor quality needles, or the patient moving around excessively on the table while needles are inserted.

Management of a Broken Needle

- 1. Remain calm and do not inform the patient. If the patient is aware of the broken needle, keep them calm, and instruct them not to move.
- 2. Keep patient calm and still to prevent needle from going deeper into the body.
- 3. Extract with sterile forceps, tweezers, or hemostat if needle protrudes above the skin.
- 4. If needle is broken-off at the level of the skin, press down with the thumb and index finger against the skin surrounding the needle and grasp with sterile forceps, tweezers, or hemostat and remove it.
- 5. If the needle is broken deep beneath the skin, it will need an x-ray and to be removed surgically.

 Inform the patient and mark the site or insert another needle adjacent to the site of the broken-off needle. If a second needle is used, it may be bent down and taped in place.

Some sources say that if a very thin short piece of a needle is broken-off under the skin in the muscle, the needle can be left in without any adverse effects. Over time the needle curls into a tiny ball by the repeated contraction and expansion of the muscle. New connective tissue forms around the curled-up needle so that it becomes a harmless small mass imbedded between the layers of muscle. This practice is not advised.

To avoid having a broken needle, always purchase good quality needles and randomly inspect a few needles from the box. Explain to the patient to be still during the treatment and stay in the room with patients who are very nervous or in great

pain. Never insert a needle up to the root of the handle. It is recommended that 0.3-0.5" of the shaft of the needle be above the skin.

Hematoma

A hematoma results when capillaries are punctured by a needle and a small amount of subcutaneous bleeding occurs. If the needle completely pierces the vein, there will be some swelling. In general, blood accumulates in a small area producing a lump beneath the skin or causes bruising or discoloration of the skin. The symptoms of hematoma are: bleeding at the point, a lump, achiness or soreness at the site, a bruise.

Management

- 1. Normally a hematoma will resolve itself within a few days
- 2. If there is discomfort, apply a cold compress followed by a warm/hot compress or indirect moxa to stop the bleeding and disperse the accumulation of blood; local pressing or light massage to help disperse and absorb the local blood stasis.

To prevent bruising, examine the skin for local capillaries and blood vessels before needling and be careful needling elderly patients whose blood vessel walls have less elasticity and Spleen Deficient patients.

Small nodes can also form at the point after the needle has been removed. Sometimes massaging the node with one finger will help dissipate the nodule. Massaging the point with one finger prior to inserting a needle will sometimes prevent bleeding, hematomas, and nodules. If bleeding does not stop, a mung bean size piece of moxa can also be placed on the point (not ignited). When swelling has gone down, indirect moxa may also be applied to the point for a few minutes.

Patients should be advised of all possible side effects on a disclosure signed by the patient at the initial visit.

Fainting

Fainting during treatment can happen as the result of improper position of the patient, excessive nervousness, fatigue, weakness, hunger, too strong and excessive needle manipulation, receiving acupuncture for the first time, or a patient's medications.

This kind of loss of consciousness is called "psychogenic shock" and is a nervous system reaction (it is not neurogenic shock which is a failure of the nervous system to control the diameter of blood vessels as seen with spinal cord injury). In fainting, a sudden dilation of the blood vessels takes place and the proper blood flow to the brain is momentarily interrupted. This is a temporary condition and is considered a self-correcting form of shock. It is important to remember that the patient has not suffered an injury and will likely recover on their own in a few minutes. Don't panic.

Symptoms

The symptoms of fainting are: dizziness, vertigo, oppressive feeling in the chest, shortness of breath, palpitations, nausea, vomiting, pallor/pale, clammy hands and feet, irritability, staring eyes.

If severe, there may be: cold extremities, cold sweating, weak pulse, cyanosis, loss of consciousness, hypotension, incontinence, shock.

Management of Fainting

- 1. Stop needling when symptoms first appear
- 2. Immediately remove all needles
- 3. Have the patient lay down with the head slightly lower than the feet since this helps blood circulation to the brain.
- 4. Loosen tight clothing
- 5. Offer a warm water or beverage
- 6. Allow the patient to recover on their own unless signs of distress develop such as difficulty breathing
- 7. Remain with the patient until they have recovered (look for facial color, a stronger pulse, relaxed breathing, mentally alert and oriented)
- 8. If the patient has fainted:
 - a) Firmly press DU 26 or DU 25 or P 6 with fingernail, or needle DU 26 and P 6
 - b) Firmly press, moxa or needle ST 36 if needling has been done in the upper half of the body and LI 4 if lower half needling
 - c) Needle or press hard with the fingernail at DU 26, LI 4, KID 1
 - d) Moxa DU 20, REN 6, and REN 4 to revive patient
 - e) Use fingernail to stimulate DU 26, LU 11, P 9
 - f) Needle DU 26, ST 36

g) Use smelling salts to revive and allow the patient to rest

To prevent the likelihood of a patient fainting, treat patients lying down, especially if they are weak, tired, fasting, or in a nervous state. Needle manipulation on these patients should be gentle. Observe facial expressions and color for any unusual changes during the treatment. Hungry patients should eat before treatment. Discuss procedures with nervous patients before proceeding; the treatment room should have proper ventilation. If a patient is treated in a sitting position, give them support with cushions or blankets. Generally, the patient will respond to these measures, but if the symptoms are still unrelieved, call for emergency medical assistance.

Injury to Organs

Accidents do not happen very often, especially with qualified practitioners, but care must be taken to prevent them. Have emergency telephone numbers of a physician and emergency medical assistance on hand. If a clinical complication does arise, remain calm yourself and try to calm your patient. Make a sincere effort to remedy the situation and assure the patient's well-being. Keep in close contact with the patient personally to know what is being done and to offer your support. This will go a long way in preventing a malpractice lawsuit.

There have been various injuries associated with acupuncture published in medical journals over the past 30 years, ranging from pneumothorax to spinal cord injury to broken needles being removed surgically.

Lung

The danger of puncturing the pleura and lung by inserting a needle too deeply into the chest or upper back cannot be overemphasized. This is probably the most common injury associated with acupuncture needles. The most common point involved is GB 21.

Pneumothorax is a loss, resulting from trauma or puncture, of the negative pressure that allows for expansion of the lungs inside the pleural cavity. This is a condition that results when air enters the thoracic cavity and is trapped in the pleural space. Air can enter through an external wound opening or may escape internally from a punctured lung. In pneumothorax, the injured lung collapses. Air accumulates on the injured side and can force the heart against the uninjured lung.

Pneumothorax can occur if an acupuncture needle is inserted too deeply or in an incorrect direction in the region of the lungs, specifically the supraclavicular fossa, suprasternal notch, the thorax, points above the 8th intercostal space on the middle auxiliary line, above the 6th intercostal space on the midclavicular line, and the upper back, especially both sides of the 11th thoracic vertebrae. If an acupuncture needle punctures the pleura, air can enter the pleural sac; if it punctures the lung, air escapes internally into the thoracic cavity. The flow of air through a needle track may be slow and symptoms may not appear for several hours.

In treating cough or asthma, there is the risk of the needles moving during treatment when the patient's chest moves (from coughing or labored breathing) and special care must be taken not to needle too deeply. In slender patients, the apex of the lung may be as little as 2cm from the surface of the body. Caution is advised in treating the lung region in patients with a history of spontaneous pneumothorax in which the lung can, to some degree, collapse without apparent injury.

Special care should be taken with patients with a history of emphysema, especially if they are slender. These patient's lungs can be enlarged and closer to the surface. With these patents, even the recommended needling angle and depth may not be appropriate.

The symptoms of pneumothorax are: sudden pain or sensation of fullness in the chest, difficult breathing, increased respiratory rate, cyanosis, increased pulse rate, sweating, hypotension, angina, pallor, coma and other symptoms associated with shock, coughing-up bright red frothy blood indicated a punctured lung. On examination, the intercostal space of the injured side may become wider. A hyper resonance may be obtained on thoracic percussion. The vesticular respiratory sound becomes weak or disappears. The trachea may even be displaced to the healthy side. Further diagnosis of the condition is confirmed by a chest X-ray.

Management

- 1. Withdraw the needle immediately; the worst damage is tearing of tissue done by breathing or coughing while the needle is still in place.
- 2. Let the patient rest calmly in a half-recumbent posture.
- 3. Take the patient to the hospital or call for emergency medical assistance if needed.
- 4. In some cases the patient will show no signs of trouble until hours later when chest pain & breathing difficulties appear. Under these circumstances, if the call you to report breathing difficulty, refer them to the hospital emergency room.

Puncturing the lung is entirely avoidable if the acupuncturist adheres strictly to the recommendations for proper depth and angle of insertion. Slanted or transverse insertions are recommended for areas over the lungs. Patients with high risk include: those with a history of spontaneous pneumothorax, thin or emaciated patients, and patients with emphysema.

Caution is advised in needling specific points such as: REN 22, GB 21, BL 12, BL 13, BL 14, BL 15, BL 43, LV 14.

Many practitioners believe a pneumothorax cannot be caused by something as thin as an acupuncture needle, especially smaller than a 32g needle. This is definitely not true.

Brain and Spinal Cord

Needling too deeply or at the wrong angle at points between and beside the upper cervical vertebrae involves the risk that the medulla oblongata may be punctured. Improper needling of points between the thoracic vertebrae could present damage to the spinal cord. The symptoms of a puncture to the medulla oblongata are: post-treatment symptoms of headache, nausea, vomiting or disorientation may be the first indications, followed by convulsions, severe bleeding, paralysis, and coma. The symptoms of a puncture to the spinal cord are: an electric, flash pain that can be felt in the extremities.

Management

Needling must be stopped immediately to avoid continued pain after treatment. If symptoms are prolonged and severe, the patient should see a physician.

Again, proper use of needle angle and depth of insertion can prevent this type of injury. Caution is advised in needling specific points such as: DU 15, DU 16, GB 20

Heart, Liver, Spleen, Kidney

The use of points in the region of the abdomen requires the knowledge of the location of the internal organs. Needling too deeply could puncture the heart, liver, spleen, or kidney.

The symptoms of injury to the spleen or liver are: pain felt locally and often extending toward the back, abdominal rigidity. The symptoms of injury to the kidney are: pain around the waist, blood in the urine, if serious bleeding occurs there will be a drop in the blood pressure and shock may follow.

Management

- 1. If the damage is minor, it will usually heal itself with rest
- 2. If there is bleeding, the patient must be monitored for blood pressure, pulse, respiration, temperature, etc.; a cold compress may be applied to stop bleeding; hospitalization if serious

These kinds of injuries are preventable if the practitioner knows the anatomical locations of the organs and acupoints. Perform a physical exam of the patient before needling to determine if there are enlargements of the organs. A medical evaluation should identify any internal abnormalities.

Nerve Trunk - Neuritis

Damage to a nerve trunk can occur if a needle mistakenly punctures a nerve bundle or nerve plexus. Inflammation of a local nerve may occur.

The symptoms of inflammation or damage to a nerve trunk are: flash pain (a strong, distinct, jolting type of pain sensation) to the extremities, tinnitus, prolonged numbness, or motor weakness. If a nerve trunk is directly stimulated by a needle, a flash pain extending to the extremities will be felt. If stimulation is continued, damage to the nerve tissue could result in peripheral neuritis with symptoms of continued pain and numbness, or functional impairment along the pathway of the nerve.

Management

- 1. In superficial cases: light massage
- 2. In serious cases: vitamin B complex injections by a physician

This type of injury is preventable if needle technique is done with care. Be aware of the difference between a pain sensation and a Qi sensation.

Blood Vessels

Arterial puncture is more serious than venous puncture. Care should be taken to avoid puncturing large blood vessels, which can cause bleeding. This is especially true in elderly patients with decreased elasticity of their blood vessels. Always be aware of the anatomical location of blood vessels beneath acu points, and observe whether or not a hematoma is present when removing a needle. Always inform a patient when there is a hematoma and assure them it will go away. Arterial puncture can not only cause bleeding, but also an aneurysm may form at the site of the vessel puncture. For bleeding due to puncture of a small artery, 3-5 minutes of firm pressure may be required; 10-30 minutes for a large vessel. If a large artery is punctured, the size of the hematoma should be monitored, and the patient observed for signs of hypovolemic shock.

High Risk Patients

Patients with a cardiac history or abnormal cardiac valves.

Immune-compromised patients.

Patients receiving radiation treatment or chemotherapy.

Patients with diabetes mellitus, particularly those who are insulin-dependent or with late-stage disease: renal or opthalmic complications, ulcerations or amputations of the lower extremities.

Pregnant patients.

Patients with systemic medical diseases such as lupus (SLE).

Patents with high doses of steroids (cortisone, prednisone).

Asthmatics.

Patients with hypertension: points that move qi upwards should be used with caution, and moxa may be contraindicated. Patients with a history of CV A or TIA.

Patients who have had lymph nodes removed surgically.

Refer to (C) Pages 398 - 416; 508 - 528 & (CAM) Pages 337 - 358

Bloodletting

The Nei Jing, Simple Questions (Suwen) states: "When the flow of Qi and Blood is impeded and the channels are obstructed, bleeding/pricking should be effected by needling". Traditionally, the fourth needle, or "feng needle", of the Ancient Nine Needles, was used to "draw blood, disperse heat, and exhaust chronic diseases", and often used to treat heatstroke, as stated in the Spiritual Pivot/ Axis (Lingshu). Bloodletting is among the oldest of acupuncture techniques. It has been speculated that acupuncture started as a method of pricking boils, then expanded to letting out "bad Blood" that was generated by injuries or fevers, and finally allowing invisible evil spirits and perverse atmospheric qi (most notably "wind") escape from the body.

Bloodletting is a "stabbing" technique that causes bleeding at acupuncture points or superficial blood vessels so as to reduce Heat, activate the Blood and reduce swelling. The needle used in bloodletting is called a "lance", "prismatic needle", "pyramid needle", or a "three-edged needle" and has a triangular shape with sharp edges. Also used are thick filiform needles and a scarificator. Lancets are sterilized disposable bleeding needles that may have a plastic handle for gripping.

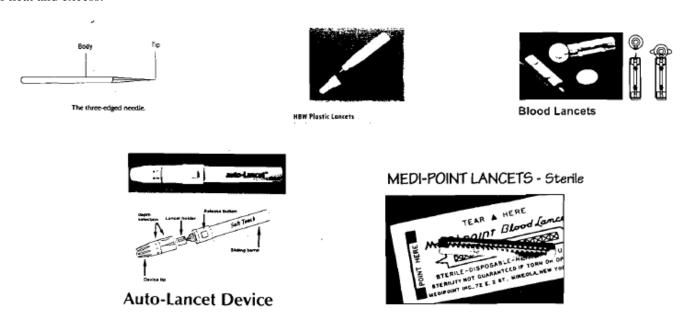
The most common points to bleed in modern times are on the fingers and toes. For example, at the tips of the toes are the extra qiduan points, which are used for emergency treatment for stoke, or for numbness of the toes, also for redness, swelling, and pain of the instep of the foot. Near the toe webbing, there is another set of points, the extra bafeng, which are used for swelling of the legs, toe pain, snake bite to the foot or lower leg, and swelling and pain of the dorsum of the foot.

Similarly, at the tips of the fingers are the extra shixuan points, which are used for coma, epilepsy, high fever, and sore throat. At the finger creases are the extra sifeng points, which are used to prick and let out plasma fluid that is yellowish white to treat malnutrition and indigestion in children, and whooping cough. The extra Baxie points between each pair of fingers at the top of the webbing are used to treat snakebite of the hand. Also, a common treatment for febrile disease, sorethroat, acute high fever, loss of consciousness, heat stroke, mental disorders, toothache, headache, etc. is to bleed the various 12 Jing/Jing Well points.

The ear apex can be bleed to treat heat and excess syndromes. Other body points are commonly bleed, such as LU 5 (cephalic vein) for sunstroke, acute vomiting and diarrhea; P 3 (cephalic vein) for sunstroke, suffocating feeling in the

chest, and fidgets; BL 40 (great and small saphenous veins of the popliteal fossa) for sunstroke, acute vomiting and diarrhea; Extra Yintang (branches of the medial frontal artery and vein) for headache, dizziness, red and swollen eyes, rhinitis; Extra Taiyang (venous plexus inside temporal fascia) for fever, tonsillitis, red and swollen eyes; DU 20 (anastomotic network of the left and right superficial temporal artery and vein and occipital artery and vein) for fever, tonsillitis, red and swollen eyes, and hypertension; Extra Jinjin and Yuye (lingual vein) for apoplexy, stiff tongue, and stuttering

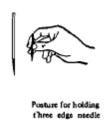
Bloodletting is a method of therapy that is difficult to explain in modern terms. Many practitioners, both ancient and modern, claim to get dramatic results from bloodletting. Today, we know that the peripheral blood has the same content as the rest of the blood that circulates in the body, and that there is no reason to expect that the blood let out by this method is "bad blood", other than in a purely symbolic role. One might ask if blood donors suffer substantially less from syndromes of heat and excess.



Types of bleeding lancets and 3-edged needles

Methods

1. Spot pricking - This method is used to treat fever, sore throat, heat stroke, apoplexy, etc.. It is often used on the back of the ear and upper back. Swab with alcohol, pinch-up the skin tightly with the thumb, index and middle fingers of the left hand, hold a three-edged needle with the other hand, prick/ stab quickly, withdraw the needle immediately, and then squeeze and press the area to force bleeding.



- 2. Clumpy-pricking/Cluster-puncture This method is indicated in carbuncles, arthralgia syndromes, soft tissue trauma, muscle inflammation with local redness and swelling, erysipelas, dermatitis, etc. Swab with alcohol, prick around the lesion several times, then squeeze and press the swelling gently or cup it to force the old blood out, in order to reduce swelling and pain.
- 3. Pricking This method is suitable for the hands, toes, chest, back, head, face, and for areas with thin muscle. Swab with alcohol, hold or pinch up the area and prick to cause bleeding. This technique is also used on the back of the ear.

Bleeding Technique

The use of gloves should be used for the safe practice of this technique.

- 1. Explain to the patient the technique you are going to use. Apply pressure to the area to increase circulation. If you are bleeding the Jing-Well points, for example, hold the finger firmly and press from the base to the end of the finger until it reddens slightly.
- 2. Clean the area with alcohol.
- 3. Insert the needle with a swift downward movement and withdraw the needle quickly. The depth of insertion is 0.1" or 3.5mm deep. The size of the puncture should be very small.
- 4. Allow a few drops of blood to escape. Have sterile cotton ready to absorb the blood. A small amount of blood is desired. If blood flow is minimal (less than desired), press gently 1-2" away from the puncture to encourage local circulation.
- 5. Press the point with sterile cotton to stop bleeding.
- 6. Clean the area with alcohol.

If you are using a prismatic needle, you may wrap the base of the needle with a small piece of cotton at the desired depth of insertion. Hold the needle at the base with your thumb and index finger over the cotton just above the desired depth of the puncture.

It is important to thoroughly clean the area of the puncture with alcohol both before and after bloodletting to avoid infection.

General Indications for Bloodletting

Tonsillitis Febrile diseases Lymphangitis
Neurodermatitis Phlebitis Hemorrhoids
Allergic dermatitis Coma Carbuncles
Heatstroke Acute sprain Headache

Eczema Abscesses Numbness of fingers or toes

Sore throat Headache Blood stasis

Mental disordersHematomaAcute conjunctivitis or keratitisRhinitisErysipelas(Promote smooth flow of Qi &

Blood in the channels)

Precautions

- 1. Patients with hemorrhagic diseases or vascular tumors should not have bloodletting performed on them.
- 2. Use extreme caution in applying bloodletting in the treatment of patients who are weak, anemic, hyposensitive, and in the treatment of pregnant or post-partum women.
- 3. The area must be cleaned first with alcohol. The technique must not be too deep and quick. Avoid injuring deep large arteries.
- 4. Patients should be clearly advised of the technique prior to treatment
- 5. A course of treatment would be once daily or every other day for 1-3 times.

Sample Applications

The following are examples of some uses of bleeding in treatment:

Acute Tonsillitis - Disperse Heat: Prick LU 11 to disperse Wind and Heat along the Lung channel; prick LI 1

Headache - For an overheating headache that presents with signs of a red face and a strong pulse due to Fire in the upper part of the body: Prick P 9, SJ 1; If severe, prick DU 20 If the headache starts at the same time every day, bleed the Jing-Well points on the fingers or toes according to which meridian is associated with that time according to the Chinese biological clock; ST 8, DU 20

High Blood Pressure - Prick DU 20 and P 9

Yang Madness - Prick the ling-Well points - The ling points are commonly used for bloodletting because they regulate the Qi of the 12 primary channels

Bronchitis - For dry cough, prick LU 11; cough with phlegm LI 11, LU 5 Heat Exhaustion or Sunstroke - Prick the ling-Well points and P 3 and BL 40 to drain Heat

Chronic Lack of Appetite in Children - Prick the middle creases of the 4 fingers and press out the liquid that is there (a glue or gum-like substance)

Influenza - For high fever, prick LU 11 and P 9

Epistaxis - Bleed DU 11 and DU 23

The above treatments would typically be part of a more complex treatment plan.

Refer to (C) Pages 429 - 430 & (CAM) Pages 353 - 354

Moxibustion

Many scholars believe moxibustion predates acupuncture. Many also say that acupuncture appears to have been adopted and used to supplement moxa after the second century B.C. The earliest use of moxa sticks is recorded in a book called Magic Remedy, published at a time when the mystical properties of the treatment were thought most significant. Other scholars have stated that there is evidence of cauterization being used in parallel with needling techniques using sharp stones (bian stones), over 5,000 years ago. Various materials were used to apply heat, ranging from dry leaves and twigs to charcoal and tobacco, chopsticks, and sulfur, but eventually, the dried leaves of Artemesiae vulgaris became the most popular. Moxibustion had its obvious, more practical use, however, for it is also recorded that burning dried moxa leaves was used against mosquitoes, or throwing ground moxa leaves into a cesspool or latrine as insecticide, have all been common practice since ancient times.

The Nei ling made only a few statements about moxibustion The Su Wen talks about the use of moxa by "people shut off from heaven and earth, and where high and mountainous areas are attacked by piercing cold wind". This insinuates that moxibustion originated in the North of China, probably in Mongolia. The Su Wen also states: one must remember the basic rule that needles transfer the energy, moxa adds energy in. This does not imply that moxa may not be used as a stimulus for energy transference. During the Eastern Han Dynasty (c. 25 A.D. to 220 A.D.) moxa cones were moderately large and several were used for a treatment. Later in the Tang Dynasty (c. 618 A.D. to 907 A.D.) and Song Dynasty (c. 960 A.D. to 1270 A.D.) up to 100 cones were used for a treatment. Indirect moxa methods were developed and became widespread during the Tang and Qing Dynasties. Widely popular today is the method that originated during the Ming Dynasty of using a cigar-shaped roll of moxa for treatment. Herbs were also finely ground and mixed with moxa to augment the therapeutic effects. Li Shi Zhen (1518-1593 A.D.) stated that moxibustion has the effect of driving away Cold and Damp. Taoist longevity methods recommended using large number of cones on particular points such as 100 cones on St 36 if 30 years old; 200 cones if 40 years old; etc. Japanese moxa techniques resemble the classical doctor Bian Que's method of using very small threads or cones.

Literature documents many various methods of cauterization. In the Tang Dynasty, a treatment for ear diseases was to place a hollow bamboo tube in the ear and moxa burned on the other end, which is a forerunner to the modern "warming cylinder" technique. In the Ming Dynasty, a branch from a mulberry or peach tree, which was dipped in sesame oil, lit, and blown out. The heated stick was then wrapped with soft paper and used like an iron over an area of the skin. Also in the Ming Dynasty, a stalk of the Medulla funcus efiusus (Dengxincao) was soaked, ignited, and then placed on the skin. Another method made use of a copper mirror to focus light rays of the sun for cauterization. In the Song Dynasty, references are made to natural or spontaneous cauterization, by which certain herbs known for their irritant properties were rubbed on the skin, producing a blister.

As early as the third century A.D., several books on moxibustion appeared. Some early physicians attempted to develop moxibustion as an independent system without any success, because of its simplicity.

In the West, there has been a preoccupation with the use of needles (acupuncture) to the exclusion of other modalities such as moxibustion, internal medicine and diet, and tui na. Moxa is regarded by some practitioners as being old fashioned and messy and does not fit the sterile image of modern medicine. In China, the more northern provinces, the higher areas, and colder areas have always used moxa more than other areas of China. Japanese practitioners used more moxa than Chinese practitioners. The therapeutic properties of heat have probably been known to man since his most primitive beginnings.

The term moxibustion is derived from the Japanese, "Moe kusa", meaning "burning herb". Moxibustion is a therapeutic technique in which the dried herb "Artemesiae vulgaris" (mugwort or Chinese Wormwood), is burned on or near the body, usually at acupuncture points. "Moxa", as the herb is known, is a small plant that grows abundantly on mountains and in

fields. The leaves are harvested, dried, the mid-ribs removed, leaves pounded, and cleaned in a sieve until rough debris falls away leaving a soft light-colored wool. The more the moxa is cleaned, the purer it becomes and the lighter in color. Good quality moxa will spring back like a sponge when compressed. Moxa has a unique characteristic in that it easily binds together. This plant grows throughout the Far East and much of Europe. The plant can reach 4-5 feet and grows on roadsides and poor barren land in clumps. Traditionally artemesiae was picked in the fifth lunar month (June in Western calendars) and dried for 2-3 years. Sun-dried moxa was considered as being more efficacious because of the sun's power. Other varieties of artemesiae in the TCM materia medica are also sometimes used. In modern times, the best quality Artemesiae vulgaris supposedly grows in Qizhou, China.

"Pure" moxa wool or punk of the highest grade is best for use in direct moxa techniques in which the moxa is in contact with the skin. The high-quality grades of moxa usually come from Japan and have the following characteristics: aged a long time, soft spongy texture, thin and long fibers, no impurities, white or light yellow color, low moisture, fast combustion, and a smaller amount of stimulation. Medium grade moxa is used for warming needle techniques. Coarse low-quality moxa is used in moxa poles/sticks and for indirect moxa techniques in which there is a medium between the moxa and the skin. This coarser, lower-quality type of moxa has not been aged as long, has a hard texture, has thick and coarse fibers, has impurities like ribs and stalks in it, is greenish or grayish brown, has more moisture, is slow to combust, and produces a larger amount of stimulation. Moxa should ideally be stored in a dry airtight container and can be periodically dried in the sun.

Moxibustion produces a penetrating heat and the fire and smoke is nontoxic. Many practitioners state that moxa smoke will not bother most patients with allergies. However, this is debatable. Moxa has antiseptic properties and was used in ancient times to heal burns. The older the moxa, the stronger are its medicinal properties. Moxa also can be mixed with other Chinese herbs from the materia medica like Hong Hua, Rou Cui, etc. to incorporate their properties and promote the penetration of the heat. Moxa can add new energy to the body, whereas acupuncture needles only manipulate energy. Moxa can manipulate energy in a direct way. It can be used for both Excess and Deficiency. It is often beneficial when a patient cannot do Chinese herbs due to a digestive problem and vomiting.

Crude green moxa can also be decocted in water and the liquid rubbed on the skin every 3-4 hours to produce somewhat similar effects to burning moxa.

In China, an additional impact of moxibustion was to help sterilize the atmosphere of hospital rooms. An incense made of artemesiae and atractylodis (cangzhu) would be used to reduce the bacterial count in the air; it also apparently inhibited viruses. The Chinese also used moxa in kindergartens and nurseries to reduce the transmission of diseases. A Journal of Traditional Medicine article reported that there are at least 50 different moxibustion techniques commonly used in China in modern times. Many of these are minor variations.

Current Neuro-physiological Research

Centuries of effective use to treat man's ailments have failed to bring us much closer to a precise rationale of why moxibustion works. Current neuro-physiological research is beginning to provide some answers to the acupuncture and moxibustion phenomenon. As Manfred Porkert states, "We should always keep in mind that Western science is not more rational than Chinese science, merely more analytical".

The body's response to moxa is the same as that of the body to any localized application of heat. Initially heat causes vasoconstriction followed by vasodilation. If the heat application is prolonged or repeated, there is a release of histotoxins and a counter-irritant effect. Supportive techniques make use of the heightened response & prolong the counter irritation.

A general or local stimulation of the reticulo-endothelial system increases the immune response and may have correlation in energetic concepts with the idea of reinforcing Wei Qi.

In China, research has recorded various physiological parameters during and after treatment such as respiratory activity not changing significantly; superficial blood vessels dilated; pulse rate remaining normal; systolic and diastolic blood pressure remaining normal; and differential count remaining normal. These suggest that the sympathico-adrenal system is not stimulated by moxa, although there has been significant increase in the activity of the uterus recorded.

A hormonal mechanism has been suggested, however, by pre and post-moxa measurements of hydroxycorticosterone and 17-ketosteroids. Both hormones were found to be higher in pregnant women than in non-pregnant women and moxa increased the level of these still further in pregnant women. Pre and post-moxa determination of plasma corticosterone revealed similar variations. These results suggest moxa stimulates the hypophyseal adreno-cortical system.

Some theories about acupuncture and moxibustion say that local tissue damage (twisting of tissue fibers when stimulating acupuncture needles, extended cellular damage by the intense heat of moxa) initiates a non-specific healing reaction that can have effects throughout the body. This healing reaction is stimulated by production of immunological mediators and neurotransmitters.

One of the frequently investigated functions of moxibustion mentioned in modem Chinese clinical literature is boosting the immune system. Findings suggest that the immunological and organ system changes may reinforce and contribute to one another, and that the immune functions are regularized by reinforcing the weak portion of the immune system rather than simply stimulating the immune system generally.

The ancient practice of burning moxa as an insecticide has been validated by modern research. Modern science has shown the volatile oil content of moxa leaves is effective against certain disease producing bacteria.

Recent research suggests the functioning of moxibustion is related to the meridians being like optical fibers that transmit infrared radiation. Moxibustion has been shown to actually cool-down hot painful areas. It has been shown to strengthen erythrocytic immunity; elevate ACTH and betaEP in mice; affect the pituitary and adrenal glands in mice; affects the inflammatory reaction and eliminates swelling in arthritic rats; had an analgesic action when used on rats. More recent moxibustion research on rats has also shown a profound effect on renal function, affects gastric mucosa, affects neurons and gene expression.

Functions

Moxa can supply energy, warms the channels, expels Cold, induces the flow of Qi and Blood, reduces swelling, disperses accumulation, and is drying. The technique of moxibustion is commonly used in the treatment of Cold disease patterns which are considered to be a Yin disorder. The nature of moxa is said to be "pure Yang". The heat from moxibustion penetrates deep beneath the skin into the acupuncture point and then into the meridian. Moxibustion has the following functions:

- 1. Restores/strengthens weakened Yang from collapse and expels Cold and Damp
 - a) Used in chronic weakened conditions where the Yang has become exhausted
 - b) Cold patterns (Yin disorder)
- 2. Warms the meridians, expels cold, increases the circulation of Qi and Blood through the channels
 - a) "Penetrates all the channels"; opens the 12 channels and removes Obstruction
 - b) Promotes the healing of injured muscles
- 3. Promotes the normal functioning of the organs, prevents diseases, maintains health
 - a) Warms the Uterus
 - b) "Courses through the 3 Yin"

Generally speaking, many ancient scholars believed moxibustion was most suitable for chronic disorders while needles were best for acute disorders. In energetic terms, moxa is essentially indicated for:

- 1. Yin Excess with Yang Deficiency
- 2. Yin Deficiency with Yang Deficiency
- 3. Yin Normal with Yang Deficiency
- 4. Yin Excess with Yang Normal

Therefore, moxa would be of greatest value for diseases due to Cold and Damp, those in which there is flaccidity, those with spasm when due to excess Yin, and those with empty Yang. In selecting the most appropriate treatment, it is necessary to consider the Eight Principles, determine the state of Blood, Qi, and the equilibrium of Yin and Yang.

For Deficiency and Excess, a patient's constitution is a good indicator. However, a distinction needs to be made between the relative states of the tendo-muscular and main meridians. In the Su Wen, the following advice is given: "When the tendo-muscular meridian is full/excess and the principal meridian is empty/deficient, it is necessary to moxa the principal meridian and puncture the tendo-muscular meridian. When the tendo-muscular meridian is empty I deficient and the principal meridian is full I excess, it is necessary to moxa the tendo-muscular meridian and puncture the principal meridian".

Fullness of the tendo-muscular meridian will manifest as spasms and contractions with acute sensitivity of superficial points. The pulse will show a relative deficiency of the principal meridian. In this situation the tendo-muscular meridian should be punctured on painful points and moxa applied to the tonification point of the principal meridian.

Symptoms of emptiness of tendo-muscular meridians would be weakness, numbness, and flaccidity. There will be tenderness on deep palpation, though not a sharp sensitivity to superficial touch. If this is accompanied by fullness of the corresponding principal meridian, its tender point should be punctured, while moxa applied to local points on the tendo-muscular meridian.

Perverse energy must also be assessed. For Wind, Cold, Heat, Damp, Dryness, and Fire, the Wind, Cold, and Damp, or their combined effects, are most likely to be treated with moxa.

Moxa can be useful in balancing the Five Elements on the basis of meridian symptomatology and, particularly, when there is insufficient energy elsewhere in the cycle upon which to draw.

A general Deficiency of energy in the channels may indicate a need for the use of the Eight Extra Channels, particularly the Yin Wei, Chong, and the Yin Qiao and Ren couple. Yin Wei and Chong are associated with organic deficiencies, in particular those in which ancestral energy (Yuan Qi) is poor. The key points of these 2 Extra Channels to moxa are P 6 and SP 4. Yin Qiao and Ren are implicated in conditions of female Yin, particularly those associated with disturbance of fluid metabolism. Fluid retention problems are treated by needling or moxa to the key points KID 6 and LU 7, and applying moxa to REN 9.

Other modern sources state the therapeutic effects of moxibustion are:

- 1. Regulating effect Applying of heat stimulation on the body arouses and promotes functions that are weakened or lacking and to sedate and reduce those functions that are abnormally excessive. The size of the moxa cones and number of cones are determined according to the functions of the organs and tissues being deficient or excess.
- 2. Induction effect The initial effect of moxa causes vasoconstriction and the delayed effect causes vasodilation. This effect can be used to draw blood from one part to another. For example, in cases of congestive headaches or cerebral hemorrhage, moxa is applied to the extremities to cause vasodilation in the peripheral areas and thus the circulation to the head.
- 3. Reflexive effect The heat stimulation of moxa has a reflexive effect which can arouse or sedate the functioning of organs and tissues, and this effect also enhances endocrine function. This reflexive effect is commonly used by stimulating corresponding organ points on the back to treat functional disorders.
- 4. Cardiovascular effect Moxibustion has been shown to increase blood cell count, especially red blood cells (other sources say white blood cells). An increase in red blood cells causes a marked increase in plasma hemoglobin. In addition, moxa can reduce blood clotting time and increase the contractile strength of the cardiovascular system.
- 5. Immunological effect Moxa can produce immunogens which stimulate and strengthen the immunological response. This increases the body's resistance to disease and helps prevent illness. Moxa was commonly used in ancient times to prevent illness.

Generally speaking, to tonify use a more steady and prolonged heating; to drain or reduce use a more rapid and more intense but shorter duration heating of the point. To reduce, the Sparrow pecking method is most often used, with the end of the moxa stick being brought very close to the skin and repeated "pecking" to get more intense heating of the skin.

Methods of Application

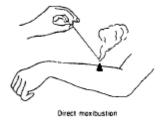
There are 2 basic techniques of moxibustion therapy: direct and indirect

Direct Moxa (Aizhu fiufa)

Traditionally, all moxa used was direct. Direct moxa involves burning a small cone of moxa wool directly on the skin. There are 2 methods of direct or open moxibustion: pustulating (blister forming) and non-pustulating.

1. Scarring/Festering/Pustulating (Yu banzhen jiu) - Small cones of moxa are placed on the skin at the acupoint and are burned out completely. This does cause the patient some pain. If desired, you can start off with a smaller cone to get the patient accustomed to the feeling and progressively increase the size of the cones. Subsequent cones must be placed over the exact same spot as previous cones in order to avoid a potential larger blister than needed. Some sources say to place some garlic juice to the point and then place the moxa cone on the point. This method is to increase the blistering effect. A wheal or erythema will appear immediately and can be cleansed and cooled with clean water and covered with an ointment like Calendula or other antibiotic ointment. After a few days, a blister forms and must be treated daily with ointment to guard against infection. A small scar will finally replace the blister after about 30-45 days. This technique is used for asthma, pulmonary tuberculosis, prevention of apoplexy, etc. Scarring moxa should never be applied to the face, precardiac region, near large blood vessels, and near muscles and tendons. After scarring moxa, the patient should not do heavy physical exercise or labor and must keep the skin area clean to avoid infection. Some sources say moxa has a

germicidal effect, so burns are less likely to get infected. Because this method of moxibustion is painful, presents the danger of infection, and causes scarring, it is generally not used much in clinical practice for legal liability reasons.





2. Non-scarring/Non-festering/Non-Pustulating (Wu banhen jiu) - This method provides strong stimulation without burning the skin, forming a blister, or scarring. This method is the same as the scarring method, only the burning cone is quickly removed with tweezers when it begins to cause pain but before it burns the skin. Generally, 3-7 cones of moxa wool are applied. After removing the cone if the patient complains of excessive hot pain, you may place your fingers over the point to relieve the heat. This method of placing your fingers over the burning moxa of a half or full rice grain is called cowling in some Japanese sources which is covering the burning moxa to reduce its burning intensity. The goal is burn the moxa at an overall lower temperature. When done skillfully then the patient will feel the heat as very moderate and never burning. Subsequent cones must be placed over the exact same spot and ideally leaving the previous burnt moxa ash as a buffer from previous cones in order to avoid a potential larger blister and ideally no burn at all. This non-scarring method could be used to describe either direct or indirect moxa. This is the most commonly used technique in Japanese acupuncture. This technique is used for chronic, mild Deficient Cold patterns. A variation of this method is to burn tiny cones, called grain of wheat", "rice grain", or "thread" cones, on a thin layer of burn cream such as Ching wan hung or a Japanese ointment called Purple Cloud Ointment also called shiunko. The ointment affixes the moxa at the site and protects the skin from blistering.

Various Traditional Sizes of Moxa Cones (zhuan)

Thread - Sesame seed - 1/2 Rice - Millet seed - Green Bean (Mung bean) - Red Bean - Yellow Bean (Soy bean) - 1/2 Peanut - Lotus seed - 1/2 Olive





Some traditional sources say that there are only 3 sizes of cones recommended: rice grain (small), date stone (medium), and thumb nail or broad bean (large). The amount of moxa punk in the cone is known as "zhuan" which is a measure of the time it takes for a cone to burn.

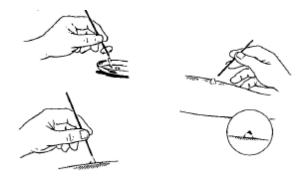
Some sources say for direct moxa, the smaller the cone, the better the tonification effect. For tonification, cones should not be larger than a grain of rice or even slightly smaller, often ½ rice grain size. Cones larger than this will sedate energy. This moxa should be of the highest quality and light color such as high quality gold moxa. These small cones are not pressed onto the skin but placed as if the cone was "floating on the point". An odd number of cones would be burned. Small cones do not generate as much heat and are suitable for children and weak deficient constitutions.

Some scholars believe moxa must be continued for a long time to be effective. They believe this because the Chinese character for moxibustion is composed of 2 parts. The top portion means a long time and the bottom portion means fire. To form a moxa cone, place a small amount of moxa wool in your hand and roll it between the first two fingers in one direction. The cone should be round in shape, tight, uniform, and broader at the base depending on the size of the cone. Another method is to take a small amount of moxa about the size of the end of the thumb, and roll it between both hands to form a long circular piece. Then lightly roll the end of this piece of moxa back and forth between the thumb and index finger so that it becomes the desired diameter. After forming a thin string of moxa, take small pieces off the end to create tiny cones the size of a rice grain or any other desired size. The more tightly compressed the moxa wool is, the greater the

heat developed and the depth of penetration. When ignited, moxa tends not to crumble but a loosely rolled cone will be less manageable to work with. Rolling the cone in one direction is more effective than rolling it back and forth.



Generally, 3-7 cones are used for each point. For an emergency with very deficient patient, you could burn 50 cones. Moxa cones are often ignited with a small incense (akabane) stick. Knock the ash of the stick before using it to light the moxa cone.



To make the cone burn hotter, blow on it. To offset the burning sensation of direct moxa, it is useful to press the skin on either side of the moxa cone as it burns. This can also raise the base of the moxa cone slightly off the skin to moderate the heat stimulation. After the moxa cone is finished burning, either remove the ash and put another cone in its place or put another cone directly on top of the ash.

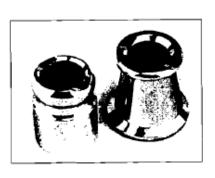
Larger moxa cones may be cone-shaped, or pyramid-shaped. To form them, place the moxa wool in the palm of one hand and pinch it into a cone with the thumb and index finger of the other hand so that it is uniform and tight. Smaller cones are used for direct moxa and larger cones are suitable for indirect moxa.

While older texts and many modern authorities make specific recommendations as to the number of cones to be used at each point, these serve only as approximate guidelines and moxa should always be adapted to the sensitivity and tolerance of the patient. It is more typical in modern times to moxa a point until a palpably distinct heat is retained by the skin for several minutes. With both scarring and non-scarring moxa you must encourage the patient to constantly dialogue with the practitioner on what they are feeling. Do not cause a patient more pain than necessary.

Indirect Moxa

The date of the invention of indirect moxa is unknown, probably sometime between the Jin & Tang Dynasties (265-907 A.D.). For indirect cauterization, moxa is burned above the skin, on a needle, or on a heat-transfer medium for 5-20 minutes.

1. **Moxa Sticks/Poles** (Ai juan jiu) - These were developed as a more convenient method of indirect cauterization in the Ming and Qing Dynasties. They were known as "Magic Sticks of Thunder and Fire" or "Tai Yi Magic Sticks". A moxa stick/pole is a cigar-looking stick about 3/4" by 8" shaped from moxa and will burn for about 10 minutes total. Traditionally, the thin inner wrapping was of mulberry skin paper secured with egg white and the outer layer, of thicker paper, applied and sealed with an adhesive. The moxa stick is lit at one end and is held about 1/2"-1" above the skin so that the heat warms the area below. The patient should always be comfortable and the skin reddens but does not burn or blister. Normally, this requires at least 5-10 minutes or more. Moxa sticks are useful in places where it may be difficult to place a moxa cone, including areas covered with hair. The end of the moxa stick is ignited to give an even red glow. The thicker outer paper may need to be peeled back. Moxa rolls can also be cut into pieces to use on needle moxa. Smokeless moxa rolls are also available.







Regular moxa rolls, smokeless moxa rolls, and loose moxa.

There are 3 basic methods of applying moxa sticks:

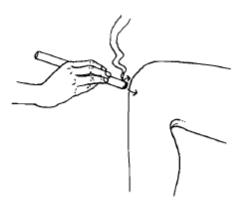
a) Warm cauterization (Wenhe jiufa) - The burning red end of the stick is brought slowly nearer to the skin over the point to about 1/2" to 1" above the skin. This method is used for about 5-10 minutes. Always knock the ash off the moxa roll before using it. If needed, you may blow on the end of the stick to make it hotter before applying the technique. Always place the moxa stick in an extinguisher when finished. The patient feels a pleasant warmth but should advise if the heat becomes too much. This technique is often used for sedation.



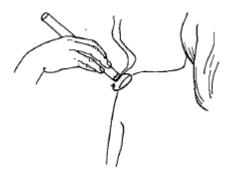




b) **Spreading/Rotation** - The ignited moxa roll is brought within 1/2" to 1" above the skin and then moved slowly and evenly back and forth across the area. Always knock the ash off the moxa roll before using it. If needed, you may blow on the end of the stick to make it hotter before applying the technique. This is suitable for chronic disorders where a general reinforcement is required over an area affected by Cold or Damp, such as the knee.



The rotation method is applied in a circular motion to spread the focus of heat over a large area by increasing the size of the circle. Two rolls may also be held side by side to heat a larger area. Always knock the ash off the moxa roll before using it. If needed, you may blow on the end of the stick to make it hotter before applying the technique. This is generally applied around a point which might be too sensitive for the more direct or sustained application of heat. This is especially effective where there is pain due to Obstruction, soft tissue injuries, and skin disorders.



c) **Sparrow-pecking** (Quezhuo jiufa) - The lighted end of the moxa stick is brought (closer and farther away) slowly near to and then away from the skin so that the patient feels a pleasant warmth to facilitate heat penetration and when strong stimulation is required. This is like a "sparrow pecking at rice". Always knock the ash off the moxa roll before using it. If needed, you may blow on the end of the stick to make it hotter before applying the technique. This is used mostly for tonification and takes a shorter time than the warming method, usually 2-5 minutes.





Smokeless Moxa

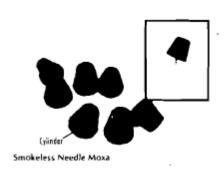
Though not widely used in China, an increasingly popular method in the West is the use of smokeless moxa. Smokeless moxa is a rod of charcoal impregnated with moxa. It burns hot, but slowly, at an average rate of just 2.7" per hour; the rods are about 4.5" long, so the total burning time is about 90 minutes before the rod becomes too short to use. The moxa stick is not easily lit. Once lit, it burns consistently.

The smokeless moxa pole produces ash at the burning end which tends to stick to the rod. When trying to safely remove the ash, the stick should be tapped against the ashtray. The tapping can crack the charcoal stick and a piece could fall off onto the floor, possibly burning the floor or treatment table. The burning end of the moxa stick can also be gently rubbed against the top inside edge of a moxa extinguisher. The moxa extinguisher can be then carried away in an ashtray.

At the end of the treatment, the moxa stick may be carefully retained while still burning for use with another patient (if it is to be used within a few minutes). It is important to check from time to time that all moxa sticks are stored in moxa extinguisher so that none are left burning where they can cause damage.

Two rolls may also be held side by side to heat a larger area. Smokeless moxa sticks can be used pretty much in the same way as regular moxa sticks. Smokeless moxa has become popular in the U.S. because many office buildings do not allow the use of moxa, especially buildings with no windows and those that have HVAC ducting that runs throughout the building. Practitioners, who believe moxa is critical to their practice of TCM, should avoid these types of buildings. Other buildings will allow it only if the practitioner has a way of exhausting the smoke and smell out a window. When leasing

an office, this topic should be discussed with the landlord before signing a lease. Practitioners have designed many elaborate exhaust systems and have used ionizers to remove the smoke and smell with varying results. Many practitioners have resorted to using smokeless moxa with varying results. However, many practitioners say this type of moxa is not as effective.





Smokeless Moxa

Ancient Moxa Rolls

Medicinal Roll - Combine 24g of medium-grade moxa with equal parts (6g) of powdered Rou Cui, Cui Zhi, Hong Hua, Mu Xiang, Du Huo, and Xi Xin. Roll and use as moxa stick.

Tai Yi Spiritual Moxa Stick - Combine equal parts powdered medium-grade moxa, Liu Huang, She Xiang, (? exudate of pistachia lenticus, L.), Mo Yao, (? Colophonium), Clli Zhi, Du Zhong, Chen Pi, Zao Jiao Ci, Xi Xin, Chuan Xiong, Du Huo, Chllan Shan Jia, Xiong Huang, ? Angelica Dang Cui, Quan Xie. This mixture was rolled into firecracker-size sticks with about 1 cun open on each end. The area is covered with several layers of cotton cloth, one end of the stick is ignited, the other end is applied to the cloth for the heat to penetrate. If it gets too hot, it is raised and re-applied repeatedly. Another stick should be ready if needed.

Thunder Fire Moxa Stick - Combine equal parts: powdered moxa, Liu Huang, Ru Xiang, Mo Yao, (? Colophonium), Jue Ming Zi, Du Zhong, Zhi Ke, Zao Jiao Ci, Xi Xin, Chllan Xiong, Du Huo, Xiong Huang, Bai Zhi, Quan Xie, Chen Xiang, Mu Xiang, (? exudate of pistachia lenticus, L.), Yin Chen Hao, Qiang Huo, Cui Zhi, Chuan Shan Jia, She Xiang. Powder and roll and use as moxa stick. Apply same as Tai Yi Stick.

General Considerations

- a) For tonification of individual points with moxa sticks, the most suitable method is similar to sparrow-pecking. If the stick is held in a pen grip, the ulnar surface of the practitioner's hand should rest on the patient's skin for stability. This is important in order to minimize the possibility of accidentally touching the patient's skin.
- b) The moxa stick should be constantly tapped into an ashtray to remove surplus ash during the treatment when using any moxa roll method. Always place the moxa stick in an extinguisher when finished.
- c) Communication with the patient is extremely important. In order to avoid misunderstandings, instruct the patient to simply say "Hot" when the heat is nearing an intolerable limit.
- d) The moxa roll needs to be withdrawn for 3-5 seconds and applied again as often as necessary to obtain a palpable heat retention. It will normally take 3-10 seconds for a properly ignited roll to achieve a tolerance limit when first applying the moxa roll to the skin and this will reduce to 1-2 seconds as the heat accumulates at the point.
- e) With the moxa roll method, it is possible to apply moxa to points which are covered with hair, like DU 20. The point should be located and the hair parted as much as possible with the fingers and held flat against the skin. The burning end of the roll would then be used as with any other location. Extreme caution must be taken so as not to burn the hair.

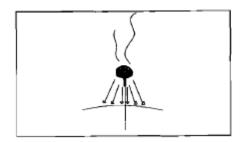


f) Certain precautions must be taken when using moxa for hemiplegia. In spastic paralysis there will usually be a delayed but exaggerated response to the moxa. If sensory response is diminished, the practitioner should place a finger close to the point being heated and try to assess the tolerance limit by the fingers sensation to the heat.

The most cost-efficient way to use moxa sticks is to roll your own with a moxa rolling board. An advantage of this method is any diameter of stick may be rolled at any density. Moxa may also be mixed with other herbs to make herbal moxa sticks. You can be very creative with herbal moxa mixtures; using individual herb knowledge to create herbal moxa sticks to use for a variety of problems. These moxa sticks and herbal moxa sticks may also be cut with a cigar cutter to use for the warming needle technique.

Moxa sticks are very useful for patients to treat themselves at home. The patient would be given detailed practical and written instructions for using a moxa stick at home. A marker can be used in the office to show a patient exactly where the point(s) are to moxa. Be sure the patient understands the technique. There is some legal liability with this practice.

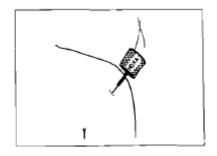
2. **Warming Needle** - Some scholars' say this technique first appeared in the Han Dynasty classic the Shang Han Lun. There are 4 warming needle techniques in which the heat from the moxa is transferred to the point through the needle. These are useful when there are many needles to be heated. The needles must have metal handles and not plastic handles; inserted deep enough and be of a large enough diameter to support the weight of the moxa on the handle. Usually a lower grade of moxa is used for this technique when the pieces of moxa are cut from moxa rolls. Wakakusa moxa is used when using the technique of pressing a ball of moxa around the needle handle. The piece of moxa should be at least 1 inch above the skin.

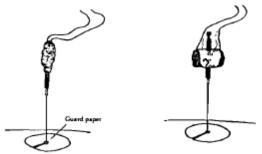


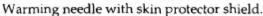


a) A ½ to ¾ inch slice of a moxa stick is cut off and is pushed (either vertically or horizontally) onto the handle of the already inserted needle. The moxa sticks made on moxa rolling boards are ideal to cut pieces off for this technique. You must hold the needle handle with the thumb and index finger with upward pressure when pushing the moxa onto the needle with the other hand, so as not to push the needle deeper. Pre-cut needle slices may also be purchased which are made especially for needle moxa. These slices are sold on a stick which is poked through all the slices. Pushing the moxa slices on a needle is a little more difficult with Chinese filiform needles and the slice may need to have a small hole pressed through the center of the slice before pressing it onto the needle. This is less of a problem with Japanese and Korean needles which do not have the curl at the end of the handle. The slice of moxa is ignited and let burn. Some sources say that the moxa should be ignited from below so that the thermal conduction is not impeded by unburned moxa. A small piece of cardboard, tinfoil, or suede leather (the piece is cut half-way through so it can be placed around the needle on the skin) serving as a "skin protector shield" may be placed around the base of the needle to catch any moxa ash that might fall. However, this technique can detract from the heat transferring to the skin around the point. If subsequent pieces of moxa are to be placed on the needle, the ash is knocked off into an ashtray (3-5 inch sea shells make good ash trays) without removing the needle and another piece is placed onto the handle. The needle may need to be held with tweezers if it is too hot to hold with the fingers. When ready to remove the needle, either knock the ash off first into an ashtray or carefully remove the needle & moxa ash with tweezers so as not to drop the ash on the skin. This technique is good for deep pain in the joints, stiff pain in the shoulders & knees, abdominal masses or tumors, and to treat Deficiency.











Commercially purchased needle moxa.

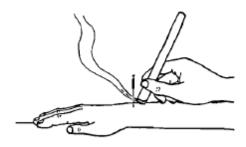
b) A small amount of moxa wool is rolled and formed in the palm and is then wrapped around the handle of an already inserted needle and ignited. This can also be done by pressing 2 pieces of moxa on each side of the handle. A skin protector may be used. Japanese use a green-yellow moxa that is semi-pure called "wakakusa" for this method. This technique is good for deficiency and Cold and Dampness in the joints causing pain and stiffness.



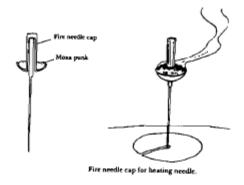


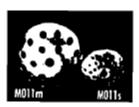


c) A moxa stick is held close to the handle of the needle transferring heat to the needle, into the point, and thus into the meridian. This technique is good for any of the same conditions as the previous 2 techniques.



d) Fire needle caps may also be purchased. These are small metal caps (actually cups), designed to hold moxa punk, which fit over the handle of a Japanese or Korean needle. Because of their weight they are only suitable for needles with finer handles and of a thicker gauge.





Needle Caps

General Considerations for Warming Needles

- 1. The needle must be thick enough to withstand the weight of the moxa to stand upright perpendicular to the skin. Ideally, Japanese or Korean needles work best.
- 2. The needle must be inserted perpendicularly and deep enough (1/2 to 1 inch) to stand upright with the weight of the moxa. Usually at least a 1.5", 34g / #4 needle works best, especially in fleshy muscular areas. For less fleshy areas or points where deep insertion is prohibited, a 1" needle may be used, however care must be taken to not have the moxa too close to the skin which might burn the patient.
- 3. Moxa placed on the handle must be the proper type to avoid the ash falling off onto the skin & burning the patient.
- 4. Usually, all moxa needles would be ignited at one time.
- 5. When using some type of skin shield, you can wait to place the shield until the patient says it is getting warm. Placing the shield around the needle too early can detract from the heat radiating to the skin if this is desired. Have the shields ready to apply if needed.
- 6. When the moxa has completely burned and cooled, the ashes should be removed carefully with tweezers to knock the ash into an ashtray and another slice or ball of moxa placed on the needle.
- 7. When placing moxa on the handle of the needle, care should be taken to not push the needle deeper while placing the moxa on the handle.
- 8. A metal saucer or a shell and tweezers should be available close-by for removing the moxa and or needle. Never try to lift the moxa slice/ball off with your fingers. When the warming needle technique has been completed, the needle will be hot and should be removed with tweezers.
- 9. Typically, you would never fan or blow on the moxa as this can cause ash to fall and excessive heat to burn the patient.
- 10. Considerable practice on inanimate objects should be performed to develop sufficient warming needle skills before using the technique on the skin.

Moxa Instruments and Other Miscellaneous Forms of Moxa

A metal container / canister (warming cylinder) with a screen at the bottom is used to hold loose moxa. The moxa inside is ignited and the instrument is held over the point or moved over a large area until redness appears. A piece of protective gauze may be placed on the skin and the moxa instrument rolled/moved on the gauze.

This method is applied when large areas are to be warmed. For example, to warm the abdomen in the treatment of Cold in the Lower Burner, the moxa instrument would be moved/rolled over the Ren channel from REN 3 to REN 8.





BRASS BURNER

There are moxa frames/boxes made of wood with a fine wire mesh up about 1" from the bottom. These boxes are usually about 3" deep and can vary in size from about 3" by 3" and as large as 8" by 8". Either loose moxa or several large pieces cut off a moxa roll are used. This device also is used for large areas like the abdomen or back.

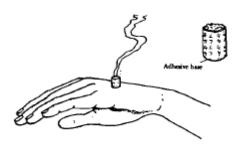


There are many other type moxa devices such as warming devices consisting of a small electrical element capable of generating radiant heat. These devices are not as good as using moxa because of the unique warming property of moxa.

The Japanese have developed various devices for holding moxa. They also developed Akabane Sticks which is a type of incense stick made from finely ground combination of herbs and minerals. The sticks are about 1/8" in diameter. The thinner sticks are usually green and the thicker sticks brown. Akabane sticks are so named because of their use in the Akabane Test. They have the advantage of applying a more localized heat. Japanese also commonly use these joss-sticks to light moxa cones.



Various types of adhesive cones are another form of indirect moxa. These are small cardboard tubes containing sufficient moxa for one application. The bottom end of the tube has an adhesive with a peel-off paper to attach the tube in almost any location. Sometimes these adhesive devices do not have a hollow cone, but are solid moxa with adhesive on the bottom. These various types of adhesive moxa are suitable for patient self-administration.







Self-heating moxa pads have been available in Korea for over 20 years. This technology involves having a bag of mugwort and charcoal with an oxygen-sensitive system (iron that reacts strongly with oxygen), so that when the sealed package containing the bag is opened and the bag of material is vigorously shaken for a moment, it heats up. Within 5 minutes, the pack is heated and it maintains a temperature of 60-75 degrees C or 140-165 degrees F for hours. This is the same technology as the popular hand and toe warmers sold in outdoor equipment shops. These moxa pads are used for the same applications as indirect moxa sticks are used. Also a belt to hold the pad over the abdomen is available. Moxa pads should not be applied to skin that is broken or to areas that have red inflammation or areas where the application of heat is uncomfortable.

Heat Transfer Mediums

Some scholars say this method originally appeared during the Tang Dynasty. With this technique, a medium is placed between the burning moxa and the skin. The medium can be lifted from the skin to control the amount of heat during treatment and immediately placed back on the skin, or lifted and moved to another point to treat 2 points at the same time. This method is not painful and presents little risk of infection. However, with some techniques there can be blistering, but usually not. Several kinds of mediums are used. Most heat transfer mediums have a reinforcing effect to the heat stimulus of the moxa. Where the therapeutic property of the medium is desired to be lessened, the medium may be placed on several layers of gauze.







Bean Cake (Gehing jiufa) - A cake is prepared with crushed bean, pepper, ginger, salt, and onion, 0.2-0.3 cm thick, and a cone placed on the bean cake. If the patient feels too hot, it may be removed for a while and then replaced. Keep it on until the patient feels "hot inside" and skin becomes red. Do not use in cases of suppuration.

Ginger (Gejiang jilt/a) - Slice fresh ginger root to a thickness of 0.2-0.5 cm (about the thickness of 2-3 quarters), about 1" by 1.5", and you may or may not perforate it with several needle holes. Use a large moxa cone. Several cones may be burned as needed. Ginger is a hot herb and the liquid from the root can cause blistering. During treatment, the ginger should be lifted and the skin examined for redness or irritation. A blister can form even though the patient does not feel too much heat on the skin. Moxa on ginger is good for warming and treating vomiting and diarrhea due to Deficient Spleen/Stomach and Cold, Middle Jiao Deficiency, Cold abdominal pain, arthralgia due to Wind Cold, painful joints, and Yang Deficiency and Deficient Cold conditions in general. It is usually best to purchase the largest ginger roots you can find at the grocery store.

Garlic (Gesuan jiufa) - The garlic can be sliced from a large single clove in the same manner as ginger, with or without perforated holes. The garlic slice can be exchanged with a new slice every 3-4 cones. Also garlic can be pounded into a mush and used. Garlic has an irritant property so a blister may easily form if the moxa is allowed to burn too long. Check for redness and temperature. Moxa on garlic is good for detoxification, relieving swelling, drawing out pus to stop pain, scrofula, early stage skin infections, poisonous snake bites, pulmonary tuberculosis, abdominal masses, non-ulcerated carbuncles and furuncles, and chronic paralysis. For early stage carbuncle, place a piece of wet paper on the carbuncle, and on the spot where it dries out from the underlying inflammation, one places a slice of garlic about 0.2-0.3 cm with a moxa cone on top. Change the garlic slice after 5 cones. If the carbuncle is painful, cauterize until the pain disappears; if not painful, cauterize until it becomes so. If no suppuration occurs, one can apply long-lasting cauterization. If the carbuncle has several heads, spread squashed garlic over it before applying the cone. Purchase garlic with the largest cloves you can find at the grocery store.

Long Snake Moxibustion - This method uses 500g of garlic, with the dry skin removed and pounded into a paste. The patient lies face down and a layer of the paste is applied about 2 fens thick and 2 cun wide over the space from DU 14 to DU 2. A mulberry skin paper is used to surround the area. Medium sized moxa cones are placed on the paste, ignited, and replaced when the patient senses a garlic taste in their mouth and nose. Warm water is used to remove the garlic paste, many blisters may appear on the mid-line of the spine. This method was popular to treat "deficient tuberculosis". There are many other prescriptions with various herbal ingredients for making the paste.

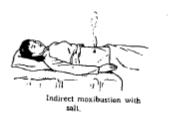
Aconite (Fuzi jiufa) - Aconite carmichaeli is an acrid and hot herb that warms the Kidneys and strengthens the Yang. A slice of aconite root (Fu Zi/Aconitum Carmichaeli) or a paste of ground aconite and yellow wine is placed on the point and moxa is burned on it. Herb cakes consisting of aconite and similar hot, aromatic, drying herbs can also be used as a heat-transfer medium. Also just powdered aconite can be used. A thin layer of gauze is sometimes used between the cake and the skin to minimize irritation. Moxa on aconite is good for warming the Kidney, impotence, infertility, Deficient Yang conditions including skin ulceration that resist healing, or Yin abscesses and carbuncles where pus will not disperse.

Pepper - A paste made of white pepper mixed with flour can be used. Powdered herbs such as cinnamon or cloves can be added to the center of the paste. Moxa on pepper is good for arthritic pain, local numbness and stiffness.

Mud/Clay Plasters (Huangtu fiufa) - Mud or yellow clay can be used as a heat-transfer medium also. Moxa on mud plasters is good for localized eczema and other skin diseases associated with Damp.

Salt (Geyan fiufa) - Salt is used only in the umbilicus. The navel depression is filled to the edges with fine salt and a moxa cone is placed directly on the salt. The salt absorbs the heat from the moxa and warmth spreads slowly outward from Ren 8. If the moxa becomes too hot, it may be removed with forceps or tweezers and the handle of the forceps may be inserted into the salt. The metal handle will absorb the heat from the salt. Generally, 3-9 cones would be burned. Moxa

on salt is good to treat, cold, acute abdominal pain accompanied by vomiting or diarrhea, dysentery, and restore Yang from collapse with symptoms of excessive sweating, cold limbs and no pulse especially after severe vomiting and diarrhea (abandoned stroke). A slice of garlic or ginger may also be placed on the salt and the moxa cone placed on the slice. Explain the procedure to the patient before starting.



Other not so commonly used heat transfer mediums are: onion, leeks, miso, and pieces of gauze saturated in a salt solution.

General Precautions for Moxibustion

- 1. Avoid inadvertent burns and treat those which do occur. Be extremely careful with diabetic patients.
- 2. Moxibustion is contraindicated for patients with febrile diseases, over areas of ulceration, surgical incisions, varicose veins, and phlebitis; and must not be used on the lower back or abdomen of pregnant women.
- 3. Do not use in the areas of the sensory organs or mucous membranes. Direct moxa should not be used on the face, breast, testicles, over large blood vessels or varicose veins, prominent tendons, or major creases in the skin.
- 4. Extreme care must be taken when performing moxa on patients with a loss of peripheral sensation such as the elderly, in post-CVA, in diabetics, and in patients with edema. Be careful over areas of numbness or on patients who are unconscious to avoid too much stimulation and also burning the skin.
- 5. Some ancient sources say: that moxa should be applied to the upper part of the body first, and then to the lower part.

 Treat the back first, the abdominal region second, the head first and the 4 extremities second; it is applied to yang channels first, then yin channels. Initially less cones are burned and then more.
- 6. Small blisters usually heal by themselves. Large blisters may be punctured with a sterile needle and drained, then dressed with an antiseptic ointment and gauze. Larger blister area than is desired can be prevented by placing subsequent cones precisely on the spot of the previous cones.
- 7. The likelihood of fainting while undergoing moxa treatment is much less compared to needles, but fainting is always a possibility.
- 8. Patients must be given detailed instructions on proper care of blistering to prevent infection. Instruct patients not to rub or scratch the blister.
- 9. Scarring moxa can cause permanent de-pigmentation on dark-skinned people and therefore not recommended.
- 10. With each subsequent cone that is burned, the heat or pain threshold will be reached more rapidly.
- 11. When treating abdominal points, remember that the muscles can move towards the moxa roll as the patient reacts to the heat. By resting the knuckles on the abdomen of your hand holding the moxa roll, you will feel the muscular contractions.
- 12. Do not allow ash to accumulate on the end of the moxa roll. Always have a non-flammable ashtray near and a moxa snuffer where you are working.
- 13. Use extreme caution near clothing, especially nylon, and near treatment table sheets and towels. Always hold lighter away from patient when lighting moxa stick or incense/akabane stick.
- 14. Note forbidden points
- 15. Traditionally, patients were told to not eat immediately after treatment, rest, abstain from sex for 24 hours, avoid cold wind, avoid cold foods, and if the blister is inflamed avoid eating ginger.
- 16. The risks of exposure to moxa smoke are probably similar to that for any smoke, and total exposure time, particularly when it involves prolonged exposure, is the key concern. Venting or filtering should be done when moxa is used regularly.
- 17. Direct moxa is often an exclusion in malpractice coverage. Practitioners may wish to use a separate consent form for moxibustion and an instruction sheet for patients prescribed to perform any type of moxa at home.

Positioning of the Patient

The patient should be positioned comfortably either sitting or, preferably lying. The points or areas to be treated must be accessible and the patient positioned in such a way as to permit the use of whatever method of moxa is to be used. For

example, if using moxa cones, you would want the cone sitting upward, stable, and not near any clothing. Make sure the cone will not fall off and burn the patient, clothing, or the treatment table. If an ideal position is not attainable, you can use adhesive moxa cones. For the warming needle method, the patient's body position may be with the moxa needle either vertical with or without a skin shield or the patient's body position allowing the moxa needle to be more horizontal with an ashtray on the table under the moxa burning on the needle.

Traditional Forbidden Points

Many ancient points were forbidden due to cosmetic reasons (face points, near eyes, etc.). Other points were forbidden due to the strong effect they can have on the body's energies. Some, such as SJ 4, though forbidden to ordinary moxa, can be effective with needle moxa. REN 4 though traditionally forbidden, is actually commonly used. Points with conflicting information are ().

Traditional forbidden points are:

LU 3, LU 8, (LU 10), (LU 11 except for mental disorders) (LI 1), LI 19, LI 20, ST 1, ST 2, (ST 7), ST 8, ST 9, ST 17, (ST 32) (HT 6) SI 18 BL 1, BL 2, BL 3, (BL 4), BL 5, BL 6, (BL 7), (BL 8), (BL 9), (BL 10), BL 30, (BL 36), (BL 37), BL 40, (BL 62) (SJ 4), (SJ 16), (SJ 18), SJ 23 (GB 5), (GB 9), (GB 15), (GB 22), GB 33, GB 42 DU 6, (DU 7), DU 15, DU 16, (DU 17), (DU 18), (DU 23), DU 25, (DU 26), (DU 27), (DU 28) (REN 4), (REN 15), (REN 23) (ST 36 during pregnancy or on children) Ancient sources and modern sources vary widely in opinion on forbidden points.

Traditional Applications

Moxibustion is indicated in a wide range of disorders. The following are examples of some of the most common and some not so common clinical applications of moxibustion. This is a very brief outline of conditions and is not a full description of the etiology or treatment of these conditions. These applications should be used in the context of being a part of a total treatment plan.

Abdominal Pain

Etiology - Due to Cold Tx - Moxa REN 17, 21 thread cones

Abdominal Pain or Vomiting

Etiology - Obstruction of Stomach Qi which may arise from Cold in the Stomach, or Phlegm and Dampness in the Spleen/Stomach causes food or liquids to obstruct the Stomach.

Tx - For Deficiency and Cold in the Spleen/Stomach (with symptoms of pain which diminishes with warmth and pressure but increases if cold food or beverages are consumed, vomiting of clear fluids and undigested food, and loose stool) use moxa at BL 20 and BL 21 (to warm the Middle Burner) and at REN 4 (to warm the Kidney Yang, the basis of the transformative and transportive functions of the Spleen/Stomach). For Phlegm and Dampness (with symptoms of frothing vomit dizziness, palpitations, and a lumpy feeling in the chest region) use moxa at REN 14 to facilitate movement in the Middle Burner and needle ST 40 and SP 9.

Arthritis and Rheumatic Pain

Etiology - Circulation of Qi and Blood through the channels is obstructed by Wind, Cold, and/ or Dampness. Treatment is focused on restoring balance by opening the channels to promote the flow of Qi and Blood.

Tx - For arthritis associated with Cold or Dampness, a combination of needling and moxa is recommended. Select both local and distal points on channels which traverse the area of pain. For chronic cases of Cold or Damp arthritis, moxa should be used daily. Moxa is contraindicated for arthritis associated with Heat.

Asthma

Etiology - Wind and Cold invading the lungs causing Obstruction by Phlegm and Damp

Tx - Moxa is used between asthma attacks. Direct moxa applied to DU 14, BL 12, BL 13, REN 17; "grain of wheat" size or small cone, 3-5 times at each point. BL 13 is usually sore to touch on all asthmatics. Those patients who have received acupuncture at BL 13 with no results may be cured if moxa is used on the point. For shortness of breath and asthma in the elderly moxa REN 4, 300 cones.

Bladder Problems - any type

Tx - Tip of the spinous process of DU 3 and BL 28, 3-9 cones

Constipation

Tx - Moxa REN 7, 3 cones, or moxa HT 7, 3 cones

Diarrhea

Etiology - Spleen Deficiency or Cold or Spleen Dampness

Tx - Direct moxa at ST 25, REN 4, REN 8; 5-7 cones at 2 of the 3 points, rotating points used and treating daily or on alternate days. For any type moxa P 8, 3-5 times

Gynecological Disorders

Moxibustion is applicable in a number of gynecological disorders, including irregular menstruation, dysmenorrhea, amenorrhea, leucorrhea, and abnormal uterine bleeding. Refer to a text for discussion of specific treatments such as irregular menses, moxa REN 3, 3 cones daily. For malposition of the fetus, warm BL 67 with a moxa stick for 30 minutes daily until fetus is correctly positioned. For insufficient lactation due to Deficiency of Qi and Blood or Depressed Liver Qi causing Obstruction, use a moxa stick at REN 17 and ST 18 for 10-20 minutes; also direct moxa at REN 17 and SI 1.

Hiccough

Tx - REN 17, REN 12, REN 4, 5-9 cones on each, could add BL 23

Indigestion

Etiology - Overeating or food in general

Tx - Moxa LU I, 50 cones

Longevity

Tx - Moxa LI 14, 7 cones; REN 4 according to age, if in 30s, 35 cones every 3 years; if in 50s, 100 cones every 2 years; if in 60s, 300 cones annually

Malposition of the fetus

Tx - BL 67, moxa for 30 minutes daily

Respiratory - general chest conditions including bronchitis and pneumonia

Tx - Moxa the line from BL 42 across DU 12 to BL 42 on opposite side for 15-20 minutes using a spreading technique

Vomiting

Tx - Moxa LU 5, 3-7 cones; Due to Cold damaging the Stomach, moxa REN 12, 50 cones

Special Moxa Points

SP 17 - any Spleen related problem

BL 23 - general weakness or Kidney deficiency

DU 2 - low backache

ST 36 - patients beginning to loose eyesight, knee problems,

GB 18 - migraines, 21 cones

Points most often mentioned in literature on moxibustion

ST 36, REN 4, 6, 8, 12. 17; DU 4, 14, 20; BL 13, 23; KID 1

Having a patient's cooperation and involvement can speed and facilitate the healing process. Providing methods for home therapy can be an effective way of accomplishing this goal. If a patient's condition cannot be easily or quickly resolved with clinical treatment alone, home therapy can be extremely beneficial. This could be diet and lifestyle modifications, exercise like Tai Ji or Qi Gong, Chinese herbal medicine, etc. Moxa, when appropriate can be an excellent home therapy. Appropriate uses may be on extremely deficient patients, an intractable disease like degenerative diseases, or central nervous system damage. Home moxa therapy is very common in Japan and China. In China, it is common to see inpatients in the hospital treating themselves with moxa. In the U.S., home moxa therapy can be risky due to patient's unfamiliarity with moxa and the fear of them burning themselves. However, patients should be able to be taught to use indirect stick moxa. You might want to have patients sign a release.

Japanese Moxibustion

As previously mentioned, there are some differences between Chinese and Japanese use of moxibustion. Moxa is used extensively in Japan and China and the basic applications are the same, the main difference being that, where moxa cones are used, the Japanese favor smaller cones, usually rice size. The Japanese also use larger cones on various heat transfer mediums similar to the Chinese. Another Japanese variation of using moxa rolls is a technique known as Oshi Gyu. The

points are covered with 8-ply bleached linen, with a sheet of paper on top and the tip of the moxa roll is applied until the patient feels the heat.

Some examples of Japanese treatment formulas with moxa are:

Diarrhea - BL 22, BL 25, BL 27, REN 12, ST 25, ST 36, choose a few points & apply up to 5 half size rice grain cones on each point

Epilepsy - BL 10, DU 11, BL 13, DU 21, GB 34, 5 cones, treat daily for 20 days, rest 14 days & then start a 2nd course **Impotence** - REN 2, REN 3, REN 4, KID 12, DU 3, BL 23, BL 32, BL 33, 5 half rice size cones daily at each point **Insomnia** - GB 2, GB 17, BL 14, BL 18, GB 34, REN 12, REN 4, moxa 5-7 times daily

Nausea & Vomiting (Deficient) - REN 12, ST 36, direct or indirect moxa

Whiplash - SJ 4, LI 4

Office Issues

Some people say that burning moxa smells like marijuana. Some practitioners worry about this smell on their clothes and in their office. The smoke and smell are usually not a problem for most patients and practitioners. Many practitioners who burn a lot of moxa often advise new patients about the smell in their office. There are many buildings that do not allow moxa to burned, especially ones with no windows and HVAC ducting that runs throughout the building. Practitioners, who believe moxa is critical to their practice of TCM, avoid these types of buildings. Other buildings will allow it only if the practitioner has a way of exhausting the smoke and smell out a window. When leasing an office, this topic should be discussed with the landlord before signing a lease. Practitioners have designed many elaborate exhaust systems and used ionizers to remove the smoke and smell with varying results.

Many practitioners have resorted to using smokeless moxa with varying results. However, many practitioners say this moxa is not as effective.

Akabane Test

Japanese also developed Akabane Sticks which is a type of incense stick made from finely ground combination of herbs and minerals. The sticks are about 1/8" in diameter. The thinner sticks are usually green and the thicker sticks brown. Akabane sticks are so named because of their use in the Akabane Test. They have the advantage of applying a more localized heat. Japanese also commonly use these sticks to light moxa cones.

The test is named after its Japanese originator, Dr Kobei Akabane. The test is a method of determining the energetic equilibrium of the individual meridians by comparing their response to the application of heat at their Jing points (K 1 is located at the medial corner of the nail of the fifth toe nearest the fourth toe.

The heat is applied by a glowing green akabane stick with a technique of moving the stick in a regular sweep from the center of the nail out over the Jing point & back again, each complete return sweep being counted as one application. The glowing end should be maintained about 1/8" from the skin for every application & the patient must say "Hot" at the same degree of sensation throughout every application. This consistency of the technique is critical to the test being accurate.



The patient is requested to accept the heat until it suddenly starts to near the limit of tolerance, and the number of applications required to reach this limit is counted and recorded. Ideally, inform the patient to just say "Hot" when the tolerance is reached. It is best to perform every test in the same manner, starting with the left hand & continuing with the same meridian on the right hand, then the next meridian on the left hand & so on, in the order of the 24 hour cycle, and to write the results down with the left hand on top, as in LU -left 7 applications/right 8 applications, LI - left 9 applications/right 11 applications, ST - left 14 applications/right 11 applications, etc. It will be realized that the point having the highest reading (i.e. requiring the greatest number of applications to reach the tolerance limit) will be the point most deficient in energy, and vice versa for excess.

In practical usage, one can safely assume that the number of applications required in the average patient will be about 10. A highly sensitive patient will give a reading of between 3 and 6, while a hypoactive patient will show readings of

between 12 and 18. A quick glance at the overall picture will determine the patient's degree of hyper or hypo activity, and the state of the individual meridians will be obvious on slightly closer inspection. The greatest usefulness of this test is that (unlike pulses) it can show imbalances between left and right side meridians. Research has shown that the akabane test can be very different from the pulse. Some practitioners have hypothesized that the pulse gives the state of the organ and aka bane test the state of the meridians. But, this is purely an opinion.

Attempts to make the test more precise have resulted in the development of a special spring device which is supposed to keep the tip of the akabane stick at a controlled distance above the skin. However, frequent adjustment is required to overcome the build-up of ash and the shortening of the stick, together make the use of this device questionable.



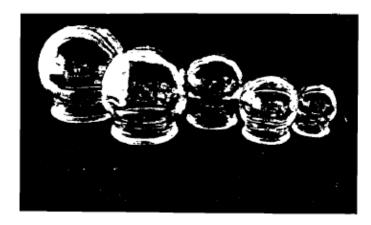
Refer to (C) Pages 398 - 403; 430 - 431; 438 - 443 & (CAM) Pages 361 - 368

Cupping

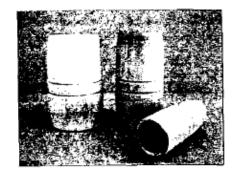
Cupping (Bahuo Cuan or Xifong) is a method of treating disease by causing local congestion. A partial vacuum is created by fire in a jar, or cup, which is then applied to the skin. The negative pressure causes the underlying tissue is drawn up into the cup causing a type of blood stasis. Cups are left in place for 5-15 minutes or until there is local congestion. Cupping often leaves a purplish mark that will disappear in a few days without special treatment. However, patients should be advised prior to performing the technique that this mark will be visible for a few days. Cupping usually causes less subcutaneous bruising than guasha. Traditional cupping, with the use of heated cups, also has some similarities to moxibustion therapy.

The earliest use of cupping that is recorded is from the famous Taoist alchemist and herbalist, Ge Hong (281-341 A.D.). Cupping was described in his book, "A Handbook of Prescriptions for Emergencies", in which the cups were actually animal horns, used for draining pustules. As a result of using horns, cupping has also been known as jiaofa, or the horn technique. In a Tang Dynasty book, cupping was prescribed for the treatment of something like pulmonary tuberculosis. More recently, during the Qing Dynasty, a book had an entire chapter on "fire jar qi" (huoquan qi). In the book, cups made of bamboo or pottery were placed over needles for treatment of wind and wind cold diseases.

Cupping warms and promotes the free flow of Qi and Blood in the channels, reduces swelling, relieves pain, and can dispel Cold and Dampness.



Fire Cup Glass Jars

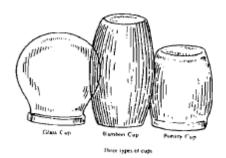


Bamboo Cupping Jars

There are a great variety of cups. There are 3 common traditional types of jars / cups:

- 1. **Bamboo** These cups are cut from a section of thick-walled bamboo 3-5 cm in diameter and 6-10 cm in length, to form a tubular cup. One end (solid joint in the section of bamboo) is used as the bottom, and the other end is open. The middle part of the section of the cup is often a little thicker. The open end rim has been smoothed by sanding. Bamboo cups are light, economical, and non-breakable, but can crack due to dryness and can also leak. When used they are more often used for cooking the cups in herbal solutions and then applying the cups once they are cool enough. This transports the energetics of the herbs via the bamboo cup because of their permeability and retention of the herbal solution.
- 2. **Pottery/Porcelain** These cups are made from clay and baked in an oven. The mouth of the cup is smooth with both ends slightly smaller than the middle. This type of cup can produce a lot of suction but also is heavy and can break easily.
- 3. **Glass** These cups are made of glass and were developed in the 20th century. The mouth is smooth and much smaller than the larger body of the cup. The cup is transparent, so the skin in the cup can be seen so as to control the desired effect. This cup also can break. Glass cups range in size from about 1 1/2" to 3". Common drinking glasses have even been used. Cups have also been made of brass, copper, or iron. These cups have the advantage of being durable, but conduct heat rapidly and can burn the skin. These cups are rarely used any more.

Some practitioners have also used very large jars (6-8" in diameter) in order to create a suction over a large area. In modern times, pharmaceutical vials, like penicillin have been used for cups. The bottom is cut off, rough edges on the vial sanded, and the rubber left on the other end. Air is withdrawn using a needle and syringe.





Another modern style of cupping involves sets of plastic cups varying in size, with a nipple and valve on one end, and a detachable mechanical hand pump to create a vacuum. The cups have a small valve on the top to connect the pump.

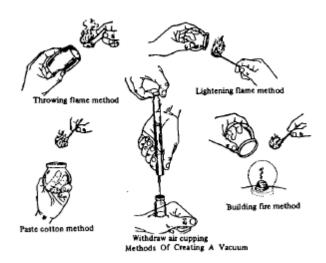


Glass cups are the most appropriate as they can be placed in a disinfectant solution after each use. Cups should never be simply washed with soap and water or even alcohol.

Fire

There are 2 fire methods to create a vacuum in a cup:

- 1. **Fire-throwing/Throwing-flame** Place an ignited alcohol-soaked cotton ball (or in ancient times a piece of ignited paper) into the cup, then rapidly place the mouth of the cup firmly on the skin. With the burning material being left in the cup when it is applied, this technique has a higher risk of burning the patient.
- 2. **Fire-twinkling/Lightening-flame/Flash-fire** Clamp a cotton ball with forceps, soak the cotton ball with alcohol, ignite, move the ignited cotton ball around the inner wall of the cup, and immediately take it out and rapidly place the cup on the skin.



Other methods that are not as commonly used are the Paste cotton method where an alcohol-soaked cotton ball is attached to the upper-third of the cup, light with a match, and while cotton is burning, place cup on the desired area, Another method is the Building fire method where and alcohol-soaked piece of cotton is placed on a 2-3cm piece of flame resistant material on the skin, ignite the cotton ball and cover with the cup. For the best suction, 180 proof denatured alcohol works best or 91%, but it is highly flammable. However, 70% alcohol is also commonly used.

Indications

Cough Dysmenorrhea Asthma
Abdominal pain Pertussis in children Arthritic pain
Stomach ache Low back pain Nausea
Indigestion Dizziness Non-ulcerated furuncle
Headache Eye disorders Arthritic pain due to Wind Damp

Common Cold Hypertension Poisonous snake bite

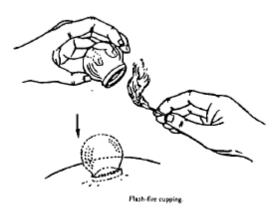
Example Treatments

Abdominal Pain - REN 12, ST 25 Asthma - BL 11, BL 13, DU 12, REN 12, REN 6 Headaches - Extra Taiyang Menstrual pain - REN 6, REN 3, REN 4, ST 25, BL 23 Lumbago - BL 23, BL 52 Rheumatism - Local points

Method

- 1. Advise the patient that Cupping often leaves a purplish mark that will disappear in a few days without special treatment. However, this mark may be very visible for a few days.
- 2. Have all cups, alcohol, cotton balls, and forceps you will be using set up near the patient. Clean the area with alcohol.
- 3. Hold an alcohol-soaked (not dripping) cotton ball with tweezers and ignite it. 180 proof denatured alcohol works best. Hold the lighter away from the patient when lighting the cotton.
- 4. With the other hand, hold the cup near the body.
- 5. Quickly insert the burning cotton ball into the cup and out again and quickly place the cup onto the skin. The flame creates a partial vacuum in the cup which will draw the skin upward into the cup. A good seal is obtained when the cup attaches firmly onto the skin and the suction holds it in place. The suction can be tested by slightly tilting one edge of the cup upward. The vacuum should not be lost.

- 6. If applying a second cup, position it at least 5cm distal to the first cup.
- 7. Cups should be left in place until there is local congestion, usually 5-15 minutes.
- 8. Single cups can be used on smaller areas or at specific points of tenderness; several cups may be used over a wider area such as over a strained muscle.
- 9. To remove cups, press with a finger on the skin at the base of the cup while holding the cup in the other hand to break the seal, and then lift the cup. Do not try to directly pull a cup off.
- 10. Clean the area with alcohol to remove any moisture or blood.



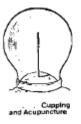
Cupping is also classified as dry cupping, wet cupping, and sliding cupping. Dry cupping involves placing the cups directly on the skin. Wet cupping involves first gently tapping the skin with a plum blossom or seven-star and then applying the cup. Sliding cupping involves first applying an ointment over the area to be cupped, and then, sliding the cup over the area.

There are 4 main variations of cupping:

1. **Sliding/Migrating** - This method of cupping is used over large, muscular, flat body areas such as the back or thighs. The rim of the cup is lubricated with an oil; insert the burning cotton ball into the cup and out again and quickly place the cup onto the skin; the cup is moved by holding the cup at the base, slightly lifting the front edge in the direction of the movement and pressing the back edge without breaking the seal in a sliding motion. Continue back and forth until the skin has reddened. With this technique, avoid bony prominence. Glass cups are best for this method.



2. **Cupping over a needle** - This technique of cupping is often used for treatment of rheumatism and is considered by some practitioners more effective than cupping alone in the treatment of this disease. The point is needled; the Qi obtained; the needle is retained (left inserted); the cup is prepared and placed over the needle on the skin. This method can also be combined with medicinal cupping for arthritic pain.



- 3. **Cupping with bloodletting** This method of cupping is used in the treatment of soft tissue injury, neurodermatitis, pruritus, neurasthenia, and gastrointestinal nervous dysfunction. First, bleeding is done (or cutaneous acupuncture with a Plum Blossom); then cupping.
- 4. **Cupping with a medicinal solution** This method of cupping involves boiling a bamboo cup in a medicinal solution and then applying the cup or filling the cup with a medicinal fluid and applying.

Application of various methods, techniques, and cupping variations include:

- 1. Simple cupping A small cup is placed over small lesions or sensitive points.
- 2. Multiple/Row cupping This method is used for several sites. If a bundle of muscles is involved, several cups may be placed in a row along the involved muscles. This is also called "row cupping". For internal organ blood stasis, several cups may be placed according to the internal anatomical position of the organs.
- 3. Lightening or Flash cupping As soon as the cup adheres to the skin, remove it immediately. Repeat several times until the area is red and moist. This method is often used for local skin numbness or pain.
- 4. Retention cupping This is the most common method used. Cups are retained from 5-15 minutes. If an extremely large cup is used, the retention time should be less. Generally, retention time is less in the summer and over areas where the skin is thin.
- 5. Medicinal cupping Another technique for medical cupping involves placing 5g of the following herbs in a small cloth bag: Ma Huang, Qiang Huo, Du Huo, Fang Feng, Long Dan Cao, Mu Gua, Mo Yao, Chuan Jiao, He Shou Wu, Fu Zi, (? Flos Stramonium), (? Siphonostegia Chinensis Benth), (? Exudate of Pistacia lenticus, L). The cloth bag is boiled. Bamboo cups are placed into the solution and boiled for 15 minutes. The cups are used for treating arthritic pain.

Precautions

- 1. During a cupping treatment or immediately afterward, the patient should avoid drafts
- 2. It is normal for the patient to feel a tightness or slight burning sensation where the cup is applied. Extreme sensations should be examined immediately
- 3. If the patient is burned, the cup should be moved to another location and the burn treated
- 4. If there appears to be indications of possible fainting, remove cups immediately. This can be equivalent to needle shock
- 5. Always choose the appropriate cup size and use appropriate patient positioning
- 6. Do not use an excessive amount of alcohol on the cotton where it is dripping and avoid alcohol on the rim of the cup
- 7. When cupping over needles, muscles might contract and potentially bend the needle
- 8. When using "row cupping", the cups should not be too close together, since the pulling of many cups can be painful
- 9. When using "sliding cupping" do not pull or push over a bony prominence
- 10. Some sources say to never use more than 6 cups at once
- 11. Some sources say never cup over the heart
- 12. Never cup the breast or abdomen during pregnancy
- 13. Never cup in any area of skin disease, edema, tumors, swollen lymph nodes, or pox eruptions
- 14. Never cup where the skin is extremely dry and parched, or has lost all elasticity
- 15. Do not use cupping in cases of high fever, coma, or convulsions
- 16. Do not use cupping in cases of violent cramps of the limbs
- 17. Do not cup over large blood vessels, or on people with hemorrhagic tendency (low platelets)
- 18. Do not use cupping where the marks from previous cupping have not yet completely disappeared

Contraindications

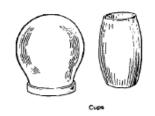
Cupping is not indicated in the following situations:

- 1. In the presence of high fever
- 2. If there are convulsions or cramps, or over muscle atrophy
- 3. For allergic skin conditions or ulcerated sores
- 4. With edema

Cupping should not be done in the following areas:

- 5. Over thin musculature, bony or angular prominence or depressions
- 6. On the abdomen, lower back, or sacral regions of pregnant women and on the breasts
- 7. Near very loose skin
- 8. Over the heart

Refer to (C) Pages 444 - 447 & (CAM) Pages 368 - 369



Cutaneous Acupuncture

Cutaneous acupuncture is a technique that treats the surface of the body. "Cutaneous" means "of, or pertaining to, the skin" and the cutaneous needle stimulates the skin superficially, without puncturing deeper tissues. Cutaneous needles are classified as "Seven Star", "Plum Blossom", "Cluster", and "Roller". According to the Su Wen "All vessels of the twelve meridians belong to the skin'. Therefore, the origin of various illness begin from the skin".

The application of Plum Blossom needle therapy has a long history of more than one thousand years. The earliest Chinese medical classic the Ling Shu, part of the Huang Di Nei ling, compiled 475 B.C. - 23 A.D., recorded that there are 2 kinds of "tapping": one was a superficial tapping merely on the skin; the other was a superficial tapping in the center and 4 tappings on the periphery. The Plum Blossom needle therapy has evolved and developed on the basis of the method of ancient tapping therapy.

Indications

The indications for using cutaneous acupuncture are:

HeadacheNeurastheniaDizziness and vertigoDysmenorrheaMyopiaGastrointestinal disorders

Hypertension Local skin diseases Insomnia Intercostal neuralgia

Function

"Tapping" or 'hammering" the skin stimulates the tissues in the local area as well as the channels which traverse the area. Through the stimulation of the Qi in the channels, the Organ systems associated with the channels are also affected.

- 1. For treatment of internal diseases
 - a) Tap along the channel associated with the Organ. For example, tap along the Lung Channel to treat Lung disorders.
 - b) Tap the cutaneous regions above sites of internal diseases. In the example above, the intercostal spaces in the lung region.
 - c) Tap the areas along the spine on the DU and BL channels that are horizontal to the segment of the spine associated with the Organ system (i.e. the area around BL 13 for diseases of the Lung) with special emphasis on the Organ's associated point.
- 2. For treatment of local areas of pain
 - a) Tap in the local area (with emphasis on principal acupuncture points), for example, in the neck region for a stiff neck, the occiput area for occipital headache, the lumbar region for low back pain, etc.

Examination and Diagnosis

Both sides of the spinal column are often examined for diagnostic purposes and tapped, but other regions of the body may also be used. Ancient texts said "If an ailment is in the inner body, it must present itself on the outer surface of the body". Therefore, both sides of the spine and their relation to the Shu points are regions which may show signs of diseases of the internal organs. Exam could be done by observation, positive reactions, percussion, palpation, pressing, kneading, etc. There may be abnormal changes on the skin such as nodules, cords, masses, soreness and numbness, abnormal temperature changes, and even deformity of the spine. Some ancient examples of treatment would be: stomach and digestive problems tap both sides of T 5-12; respiratory problems tap T 1-5; metabolic problems tap T 7 downward to lower back; etc.

Locations for Stimulation

- 1. On the back parallel to the spinous processes
- 2. Tap around local areas of abnormalities (masses, nodules) in a circle, on points or in a circle around point
- 3. Tap over reactive spots occurring parallel to spinous processes
- 4. Tap on points according to the properties of the points of course of the channel

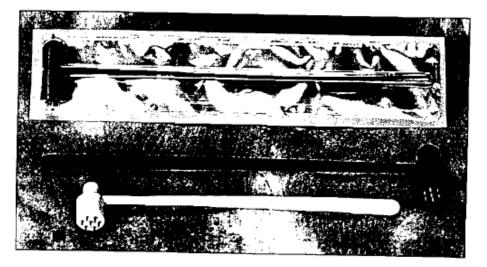
Position of the Patient

- 1. Sitting, leaning over, with both arms resting on the table or facing the back of a chair leaning over Most commonly used for either side of the spine and the scapular regions
- 2. Sitting upright Mostly used for tapping in the head region, lower part of the mandible, both sides of the trachea, and thoracic regions
- 3. All recumbent positions Mostly used for tapping at the thoracic, back, and coccyx regions

Method of Application

An instrument called the "Seven Star Hammer" is used in cutaneous acupuncture. This consists of a bullet-shaped piece of stainless steel or plastic attached to a 6-7" handle. 7 short needles are evenly spaced on the flat end of the head of the hammer and 7 needles are in a cluster on the rounded opposite end of the head of the hammer. This instrument is "tapped" over the surface of the body. Another type of cutaneous needle is the "Plum Blossom/Flower" needle in which 5 needles in a bundle are attached to a 10-12" handle. The points of both type of needles are even and not too sharp to avoid causing bleeding and pain. There are many shapes of the Plum Blossom needle. Needles can also differ in quantity. Rollers are good for stimulating a wide area and produces uniformity in the amount of the stimulus over the area. In ancient times, they gave the name of Plum Blossom needle to the 5 needles in a bundle, and of the Seven Star needle to the 7 needles in a bundle. Down through history, many practitioners made their own Plum Blossom needles. They even sometimes used sewing needles attached with fine-spun thread to a bamboo stick 20-30 cm in length. In modern times, they were given names like "pipe type" and "hammer type" of Plum Blossom needles.





- 1. Clean the area with alcohol
- 2. Hold the needle by the end of the handle about 1-2/1 above the surface of the skin and begin tapping with a light flex movement of the wrist, gradually increasing the strength of the movement to the desired level. Hold the needle head level with the skin so that all needles in the head touch the surface of the skin evenly.



Move the needle over the area in sequence from above to below and from medial to lateral distributing pressure evenly. This can be light, moderate, or heavy tapping depending on the desired effect

- 3. Bleeding is generally to be avoided with the exception sometimes with heavy tapping
- 4. Clean the surface with alcohol when finished. Mild stimulation shows a slight redness. Mild stimulation is indicated over areas on the head and face, for chronic or deficient disease, or when treating patients who are very weak, elderly, or young children. Cutaneous needling is especially good to treat children

Medium stimulation shows local moist redness but no bleeding and is the stimulation most often used. Stronger stimulation may be given to patients with strong constitutions and whose diseases are acute or excess in nature. The skin should become moist and red and sometimes slight bleeding. Tapping is completed when the skin becomes the desired redness (bleeding is generally avoided) and pain should be minimal.

General Guidelines for a Course of Treatment

For chronic diseases, treat once daily or every other day, 4-7 treatments is a course, afterward treat once every other day, 7-8 treatments may be considered a strong course. After a strong course of treatment, the patient may rest for 2 weeks, then continue the treatment as before. For acute diseases, there are no fixed courses, you may treat once every few hours until the condition is improving and then once daily or every other day.

Precautions

- 1. Different manipulations of the Plum Blossom depend on the severity of the symptoms, constitution of the patient, and areas in which the tapping occurs
- 2. Children, nervous patients being treated for the first time & patients in poor health, light stimulation should be used
- 3. In average constitution patients with excess type symptoms, heavy stimulation is used
- 4. Fainting may occur, especially with heavy stimulation, with fatigued or hungry patients, etc. Fainting should be managed with standard protocols
- 5. Disposable cutaneous needling devices are best for treatment due to sterilization and legal issues
- 6. Always maintain all tips of needles perpendicular to the skin. Do not tap obliquely or press needles into the skin
- 7. When using a roller, do not roll over irregular bony areas

Contraindications

- 1. Do not apply this technique over areas of ulcerations or traumatic injuries
- 2. Cutaneous acupuncture is contraindicated in cases of acute infectious diseases or acute abdominal disorders

Refer to (C) Pages 417 - 421 & (CAM) Pages 354 - 355

Gua Sha Therapy

"Sha" therapy or "Gua Sha" is a technique of "scratching or scraping" the skin with a smooth edged instrument (often a Chinese soup spoon) in order to elicit a redness of the skin. "Sha" means "sand" and, in this context, it refers to the sand-like appearance of the skin when scratched. The skin of a shark is also sand-like, therefore Chinese call them "sand-fish". The presence of "sha" indicates Stagnation of Qi and Blood causing local obstruction. A sign of "sha" is that, when the painful muscle is firmly pressed with the thumb, the skin will appear white and will remain this way for a time. The Barefoot Doctor's Manual also said this could be combined or done simply with the fingers by a pinch-pull method.

Indications

A sign of "sha" is whiteness of the skin when pressed firmly. The symptoms that indicate "gua sha" are pain and fatigue in the muscles. "Sha" is often present in people who do a lot of physical labor in their daily life, overworking specific muscle groups and causing muscle contraction and the obstruction of circulation. The "Sha" is a sign of abnormal circulation of blood in a certain part of the body, especially obstructed in the muscles or joints.

Sha therapy can be used in cases of high fever. The Barefoot Doctor's Manual states: "Scrape" the back downward along both sides of the spine from T 1 to the coccyx until the skin becomes dark purple. This has a definite effect on lowering fever".

The most common areas to do gua sha are: neck, arms, legs, and close to joints that feel tired and painful.

Technique

- 1. Describe the procedure to the patient. Advise the patient the technique will leave the skin red and/ or bruised looking
- 2. Wipe the Clean the area with alcohol. Apply a thin film of oil or ointment (like Po Sum On or other lubricants) over the area to be scrapped. Some practitioners insert and remove a needle at the most sensitive point of pain in the muscle before applying gua sha, in order to reduce the pain before the scraping technique
- 3. Using a smooth-edged instrument (a Chinese porcelain spoon), begin to scrape the skin in a downward movement and in the same direction. Use a firm pressure, increasing slightly as you continue to scrape. Move over different areas of the muscle (angle left, angle right) following the direction of the muscle fibers
- 4. Ask the patient how they are feeling, the patient should feel comfortable
- 5. Look for "sha": Sha appears as red dots that come up to the surface of the skin as it is scraped.

 If there is a lot of "sha", there may appear dark purple or black slots. This will have a beneficial effect on the patient since it will relieve the muscles of the tired, sore feeling that was present
- 6. Check that the oil or ointment is still lubricating the skin. Another application of lubricant may be required (but apply thinly). If the oil is scraped away, the skin will feel pulled and irritated and the patient will feel discomfort
- 7. Discontinue treatment when the skin is red or darkened
- 8. Wipe the area with gauze or cotton and alcohol to both clean off the oil and disinfect the area
- 9. Advise the patient that the redness is normal and should disperse within a day or two. Tell the patient that this is a treatment for tired, sore and painful muscles and that they should feel more comfortable immediately. Also advise the patient to avoid starchy, fried (oily), or roasted foods for 24 hours to give the body a chance to heal properly

Contraindications

- 1. Do not scrape directly over joints or bony areas. Scraping is done over muscle fibers. To elicit a "Sha" in the area of a joint, scraping may be done on the tendons surrounding the joint and on their muscles
- 2. Do not apply gua sha over areas of the skin that are inflamed (red, hot, swollen), nor over areas of skin that are broken (abrasions, cuts, injuries, or sores that are weeping).

TDP Lamp - Infrared Lamp

TDP Heat Lamp/TDP Electromagnetic Health Lamp

This is a variant of the infrared lamp. It is also sometimes called the "Miracle Lamp". It was invented in 1980 by a group of scientists and physicians headed by Dr. Gao Wenbin at the Chinese Medicine Institute in Chongqing. Unlike conventional infrared therapeutic devices, the TDP device features a round rare earth plate coated with a proprietary mineral formation consisting of 33 elements (a low conductance metal with diverse composition) beneficial to the human body. When heated by its electric heating element, the mineral plate emits waves, a special band of electromagnetic waves coinciding in intensity & wavelength with similar waves released by the human body itself. This allows the absorption of these waves by the body with dramatic benefits beyond those of conventional infrared lamps. The lamp is about 250w.

In natural sun rays arriving at the earth's surface, the infrared spectrum is about 5-8 microns and that beyond 13 microns are attenuated to very low intensity due to atmospheric absorption. On the other hand, the human body tends to have a higher energy absorption efficiency in the spectrum ranges of 3-4 microns, 6-11 microns and 13-15 microns due to absorption characteristics of its biochemical elements such as amino acid, etc. The TDP lamp, unlike other infrared devices, emits the spectrum that are weak in natural sunrays and yet the human body can most effectively absorb. Research shows the TDP to be more effective than other infrared devices.

The TDP's special band of electromagnetic waves are in the 2-50 (microns) in wave length and 28-34 mw / sq.cm in intensity that coincide with the wavelengths released by the human body and are consequently absorbed by the body (so-called selective absorption). It produces a uniform heating that makes it more useful than ordinary infrared glass bulb lamps. To increase the heating of a region by the lamp, a medicated oil can be rubbed on the skin; the oil helps retain the heat and its herbal constituents may contribute to the improvement of local circulation.

Research has shown the TDP lamp effective in treating such aliments as muscular soreness, pain, soft tissue injuries, arthritis, and various skin conditions. The lamp has also been shown to promote circulation, promote metabolism, regulate

physiological deficiencies, diminish inflammation, help generate various beneficial biochemical stimuli that the body may lack due to illness, accelerate the decomposition of dead cells, and enhance immunity. It has effects on cardiopulmonary, digestive, nervous, circulatory, urinary and reproductive systems. Indications include: various soft tissue injuries, burns, frostbite, bedsores, chronic skin ulcers, prostatitis, male sexual dysfunction, secondary sterility, vasculitis, wound infection, cytospasm caused by interstitial cystitis, rheumatic arthritis, diarrhea, bronchitis, angina, dysmenorrhea, pelvic infection, irregular menstruation, secondary infertility, infant diarrhea, children's pneumonia, scleroderma, parotitis, auricle perichondritis, otitis media, nasosinusitis, periodontitis, Bells' Palsy, neurasthenia, sequela of stroke, eczema, seborrheic dermatis, herpes zoster, neurodermatis, alopecia.

Typically, the plate/head of the TDP lamp should be kept at least 10"-18" from the body. The localized treatment area is about 8". Typical exposure time is 20-40 minutes. Some brands of TDPs have a built-in timer. The best results are obtained when the local skin temperature is maintained at 40C or 104F degrees. Too low skin temperature will diminish the therapeutic effects and too high will burn the skin. Always monitor the patient's skin reaction. Caution should be taken not to burn the patient. The TDP is registered with the FDA for being marketed in the U.S. TDP lamps come in table-top models, floor models with 1 or 2 heads and a small disc-shaped 2" x 6" model which can be placed on the abdomen.





Contraindications

High fever, open pulmonary tuberculosis, serious arteriosclerosis, bleeding tendency, on a patient with hypertension avoid lamp exposure to the head.

Caution

- 1) Do not touch the lamp head. It can get very hot
- 2) Never clean the plate with any kind of liquid
- 3) Always monitor the patient's skin reaction. Do not burn the patient's skin with the lamp
- 4) Lamp should not be aimed at the eyes
- 5) The metal plate should be replaced every 1000-1500 hours
- 6) The TDP is not to be used as simply a heat source like an infrared lamp. It is a therapeutic device

Infrared Heat Lamp

The infrared lamp has the significant property of heat. Typically, a 250w infrared bulb is used in a lamp and placed 18-24" from the skin. The therapeutic dosage depends on the warmth and comfort of the patient without causing a burning sensation. A treatment should last about 15-20 minutes, once daily or every other day, for 15-20 times as a therapeutic

course. During the treatment, note the sensation of the patient and local reaction. Adjust the distance of the lamp according to the reaction of the patient and the skin.

Infrared lamps are commonly used for pain, sprains, chronic bronchitis, chilblain, acute eczema, etc. Some practitioners simply use infrared lamps to heat up a treatment table or warm a patient. This is not the best idea, due to the cost of infrared bulbs. Infrared bulbs can cost \$7 - \$15 dollars each, depending on where you purchase them.

Caution

- 1. Stop the use of the lamp if the patient feels fatigue, vertigo, etc.
- 2. Not suitable for patients with fever, active pulmonary tuberculosis, malignancies, cardiovascular insufficiency, sensory impairment, hemorrhagic tendency, and hemorrhagic diseases
- 3. It is extremely easy to burn a patient with an infrared lamp by having it too close to the skin. Ultraviolet light is another therapy that is used

Refer to (C) Pages 435 - 437

Electroacupuncture

The earliest recorded uses of electricity for pain relief were transcribed by Scribonius Largus in ancient Rome. His narrative explains how Roman doctors fished the Mediterranean for torpedo fish, creatures that had electrical organs that can deliver 220-volt shock when in danger. These fish were put into buckets of water, and suffering gout patients placed their feet in the bucket to agitate the torpedo fish and get shocked. Apparently this technique was credited with the relief of pain, although it was far from a non-invasive approach.

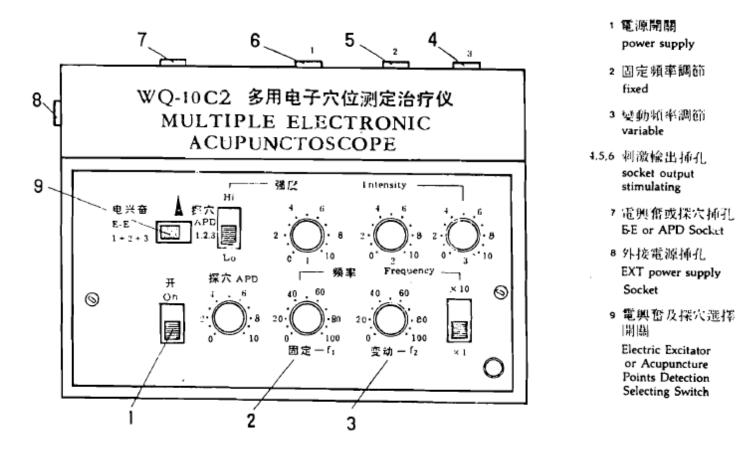
In the U.S., Ben Franklin left writings about healing his neighbor's shoulder pain with shocks from a crude electrical battery he constructed. In the U.S. in the 1800's, new technology brought about the creation of many electro-therapy devices. In 1910, many of the so-called alternative therapies were being discredited in favor of allopathic/pharmaceutical medicine, and led to creation of laws against the practice of homeopathy and prejudice against electro-therapies. It was mainly chiropractors that kept the use of electro-therapy alive between the 1930's to 1960's. In the 1960's, chronic back pain research by Norman Shealy and others led to the creation of implantable spinal column stimulators. The invasive nature and irregular effectiveness of surgically implanted devices then led to the popularization of TENS units that used surface patch electrodes. There have been many improvements on the TENS units over the years.

The combination of modern electro-therapy and acupuncture produced Electroacupuncture (EA), which is a technique of stimulation in which an electric current is passed through acupuncture needles. First developed in China in the 1930s as an alternative to hand manipulation of acupuncture needles, this technique gained recognition as a pain-suppresser through research on acupuncture anesthesia in the 1950s. Some scholars say that after the Second World War, experiments were carried out in Japan, Korea, West Germany, and the Soviet Union attempting to measure the electric potential at specific impulse points and to stimulate these points with an electric current flowing through an electrode or a conventional acupuncture needle. Mass-produced electric machines first came onto the market in the late 1950s in the People's Republic of China and elsewhere. Over the years, much research has been done. Among the most well-known sources are Voll (Electro acupuncture According to Voll, or EAV) from Germany. Y. Omura (Acupuncture & Electro-therapeutics research) from Japan, and research from the People's Republic of China.

There are many types of electrical stimulators. Electro machines are classified as AC or DC stimulators. Some types are low-frequency scillating, high frequency oscillating, intermittent impulse current, buzzer-type, electronic tube or semiconductor electric stimulator. In some direct current devices the polarity of the two leads can be switched back and forth. In alternating current devices, both leads are similar in terms of polarity. There are some devices which provide both direct and alternating currents. Generally, when a direct current device with fixed polarity is used, the negative lead must be connected to the point which is in most need of stimulation and the positive lead is connected to another point to complete the circuit.

There has been very little written in English over the years about the use of EA machines. This introduction to EA is based on information from mainland China and involves the use of the inexpensive Chinese WQ series EA machine. Another good reference for the Chinese WQ series EA machine is an out-of-print book titled The WQ-I0 Electro-Acupuncture Machine, by Jake Fratkin, 1984. The WQ-10 (WQ-IO-B, WQ-10C, WQ-10C2, WQ 6F) machines are one of the first generation EA machines and still available today in various models. The machine measures about 51/2" by 3 3/4"

and comes with a carrying case. The machine is equipped with 3 sockets for wires which each have 2 leads, a positive and a negative. Therefore, each wire will connect to 2 needles or 6 needles total. Each set of needles connected by the wires is controlled by an intensity knob. These electro-machines were actually of very poor quality compared to today's electromachines. Their circuitry often malfunctioned and the wires and clips were of very poor quality. The newer G6805 or G6805-2 are examples of more commonly used devices in China today.



The advantages of using EA are: frees hands, increases stimulus and length of time of stimulus, easier to regulate stimulus, can relax muscles, and important for anesthesia.

Modern electro-acupuncture devices are not intended to provide a significant current between the acupuncture needles: they deliver less than a milliampere (most modern devices usually have an upper level of 0.6 milliamperes), about the same as that produced by a wristwatch battery. But, they will provide a significant voltage: 40-80 volts (with spikes as high as 130 volts), which is the basis for the patient response. In the commonly-used portable battery devices, this is accomplished by boosting the voltage output of the battery, such as raising the voltage from 9 volts to 45 volts. Thus, there is virtually no current transmitted through the body, but there is enough of a local voltage stimulus for the patient to feel an evident reaction at the point where the needle is inserted.

Theory

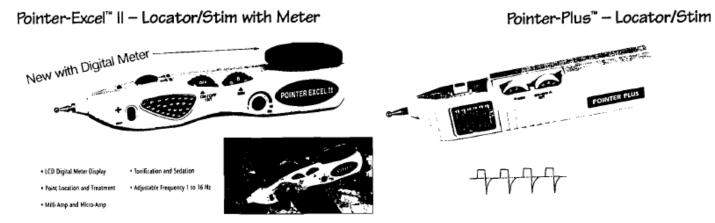
The basic principle of EA is that stimulating impulses act on meridian points or muscle tissue through acupuncture needles or through electrodes placed on the skin for therapeutic effect or anesthetic effect.

The stimulus from EA can be regulated to produce effects similar to those produced by needle manipulation and even stronger stimulation when needed. The use of EA frees the practitioner to treat other patients while the electric stimulus is applied to the needles for several minutes. EA is comfortable to the patient and is easily tolerated, possibly easier tolerated than hand manipulation of the needles. The main disadvantage is the lack of direct practitioner participation in the acupuncture therapy and the limited opportunity for the practitioner to respond to changes that are taking place during the treatment if not present with the patient.

The most common use of EA is in the treatment of pain. By applying a wave form called the constant wave or disperse wave form, a regulating effect is produced along the affected meridians. For the treatment of severe or chronic pain, a

variable wave form known as the intermittent or dense-disperse wave form is used. To increase the level of the pain threshold or to produce anesthesia, a high frequency setting of the dense-disperse wave form is applied. Acupuncture anesthesia (AA) is used very successfully in certain surgical procedures such as thyroidectomy & brain surgery in China.

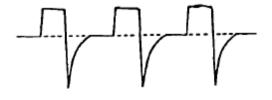
Another application of EA is in the location of acupuncture points. Acupuncture points are sites of lowered electrical resistance. Some EA machines have a function called the" Acupuncture Point Detector" (APD) which uses an instrument that is sensitive to changes in electrical resistance. When the point detector registers a drop in normal skin electrical resistance, it emits a sharp sound signal. This is the actual acupuncture point. You can also purchase instruments that are only a point finder and those that are point locators and stimulators.



Other sites on the body will cause the APD to trigger a signal. These are sites that reflect the occurrence of pathological changes in an organ or its meridian. These "reactive sites" have a lowered electrical resistance. The EA machine can be used to diagnose these pathological changes.

Therapeutic Applications of Electroacupuncture

The typical output from most alternating current EA machines is a square wave with a sharp negative pulse. This wave is found in the WQ machines. The electric pulse used in EA has a specific shape that is best for use on the body because of its quick spike wave and return. It is known as the Biphasic Square Wave (see diagram). By changing the frequency pattern (the pattern of repetitions of the wave form), different stimulus will result producing different therapeutic effects.



Biphasic Square Wave

Frequency Patterns

There are 3 types of frequency patterns (wave forms):

1. Continuous 2. Intermittent

3. Dense-Disperse

Continuous

This is a wave form of continuous frequencies without a gap. Begin all treatments with the continuous wave form because it is very comfortable to the patient. The body adjusts very easily to this pattern and within 3-5 minutes, the patient will be unable to feel the sensation. Increase the intensity every 3-5 minutes to the desired level. This form of stimulus is most similar to what Chinese acupuncturists in China attempt to administer by hand.



Functions

- 1. Inhibits the activity of the nerve which results in a reduction of pain
- 2. Improves the circulation of Qi and Blood
- 3. Relaxes the nervous system

Indications

- 1. Pain acute or mild pain
- 2. Impaired circulation symptoms of muscle spasm or venous spasm due to poor circulation
- 3. Nervous disorders symptoms of tension, stress or anxiety especially is associated with sweating

Intermittent

This is a wave form of intermittent frequencies that last for 1.5 seconds with a gap of 1.5 seconds. This wave form is the strongest pattern of the 3. The body does not adapt/adjust to this pattern. It provides a strong stimulus to the points at regular intervals. It usually is not used to relieve pain.



Functions

- 1. Excites the activity of the nerves, causing muscle tissue to contract
- 2. Improves the growth of connective tissue

Indications

- 1. Muscle atrophy for a weakened muscle condition that presents as lack of strength or motor function or a degenerative tightening or hardening of muscle tissue
- 2. Paralysis, including facial paralysis, hemiplegia, and post-CVA syndrome
- 3. Neuralgia
- 4. Hair loss technique of surrounding the area of hair loss with 2-6 small needles hooked up to the intermittent wave; Kidney, Lung, Liver, Spleen ear points added
- 5. Chronic fatigue for the patient who is always tired, use the intermittent wave form to stimulate the muscles and to prevent energy form leaving the body

Dense-Disperse

This is a composite wave of alternating frequencies with a gap of 0.5 seconds between the 2 different wave forms that each last for 1.5 seconds. The dense-disperse wave form is a very important wave for pain relief. For more severe pain and for chronic pain, this wave form has a stronger effect than the continuous wave form. The body does not adjust to this pattern, so the patient will feel the stimulus for the duration of the treatment.



Dense-Disperse Wave Form

Functions

- 1. Pain Relief for severe or chronic pain; often used if the symptoms have been unresponsive to other treatment
- 2. Metabolic Function improves overall function
- 3. Improves Blood Circulation for Stagnation of Qi and Blood

Indications

1. Pain - any kind of pain including sciatica, headache, trigeminal neuralgia, arthritic pain

- 2. Chronic illness with weakness and decreased metabolic function
- 3. Poor circulation
- 4. Hypertension or Hypotension 4 Point Tx for hypertension with EA, needle Ear High Blood Pressure points and apply EA with the dense-disperse wave to LV 3 and LI 4 For hypotension, needle P 6 and SP 4 bilateral with dense-disperse wave to strengthen blood circulation, during Tx, warm REN 8 with moxa

Safety Precautions for the Use of Electroacupuncture

- 1. EA is for external use only
- 2. Keep out of the reach of children
- 3. Suspend therapy immediately in the event that anything abnormal occurs with the patient's physical condition or with the equipment itself.
- 4. Acupuncture needles used for EA should be made of stainless steel and if re-usable, should be used only once and discarded. The effects of electrolysis can cause the needle to weaken and be susceptible to breaking. Do not clip electrosimulator wires to the handle of a needle that has been used for needle moxa. The wire is always best clipped to the needle body. Usually, thicker needles (#5 Japanese or 32g Chinese) are best for EA.
- 5. Always turn all controls to zero before making any wave or polarity changes during operation of the EA machine.
- 6. Always turn all controls to zero before connecting or disconnecting wires from the needles. The wire clips should always be hooked to the shaft of the needle and not the handle.
- 7. Special care is advised in the treatment of the elderly or the extremely weak patient with EA. These patients should be monitored closely.
- 8. EA can be applied to points on the face, however the settings used are within the low ranges of frequency and intensity. The high settings can be irritating to the facial nerves.
- 9. The difference between a patient first noticing a sensation and extreme pain can be only a fraction of a turn of the dial. Students need to practice EA on themselves numerous times before using it on someone else in order to understand the sensation and the range of possible intensities.
- 10. Always observe carefully for muscle spasms. Muscle pulsation is a natural reaction to electrical stimulation, but in extreme cases it may cause severe discomfort or even bend or break a needle. It is usually best to allow a certain amount of muscle pulsation.
- 11. All patients should be monitored closely when using EA, especially patients who have not had EA before. Always monitor for needle shock and excessive muscular spasms.
- 12. Some older model WQ machines have been known to have intensity control problems. These problems included the patient feeling a sudden shock or stimulation when the machine is turned "On" even though the intensity dial are at "0".

Contraindications for the Use of Electroacupuncture

- 1. Do not cross wires (a positive/negative circuit) over the heart (chest) or over the spine (some scholars debate the spine), over the uterus or testicles. Attach clips to points on one side of the spine only. (i.e. do not attach a pair of clips to BL 25 bilateral, rather attach one pair to BL 25 and BL 60, for example, on the right and the second pair of the same points on the left
- 2. EA should not be used in the area of the heart or on patients with arrhythmia
- 3. EA should not be used on patients who have pacemakers. EA can adversely affect the operation of cardiac pacemakers
- 4. EA may not be safe during pregnancy due to the risk of causing uterine activity
- 5. EA should not be used directly over, through, or near recent or nonunion fracture site, over scar tissue or new skin, on warts, or over abrasions or cuts
- 6. EA is usually not used on the fingers or toes
- 7. Never cause pain

Discussing Electroacupuncture with Your Patient

It is not unusual for a patient to feel more nervous about EA, so it is important that you explain your reasons for choosing to use this procedure. Explain that it is a comfortable procedure and that they will feel an increased sensation at specific places. The sensation will feel like a mild buzzing (bees buzzing under the skin) or tingling with the continuous wave setting. If you are using the dense-disperse wave setting, it will feel like a pulsation. With the intermittent wave setting, the sensation is like an "on" then "off" contracting sensation. The treatment should be comfortable to the patient at all times. Some patients actually enjoy EA.

Explain that the EA is a way of controlling the effects of needles in a way that is comfortable and easily regulated. In simple terms, state why you think EA is indicated as a treatment. Ask if the patient has a pacemaker or is pregnant.

Discuss what you doing as you proceed. Inform the patient when you are starting to turn on the intensity dials and ask them to tell you when they feel something at the points. Increase the intensity dials slowly. Monitor the patient while the EA machine is on.

Needle & Lead Placement

Generally, it is recommended that 2 leads from one socket (positive & negative) are bilateral placed, on opposite sides of the body. For example, using LI 4 and ST 36 on both sides, put one set of leads from one socket to LI 4 (positive on one side and negative to the other side), put another set of leads to ST 36 the same way. However, never cross the heart or spine with a positive and negative lead.

Other sample needle placement techniques can involve something like treating sciatica using positive on GB 30 and negative on GB 34; treating low back pain using positive on a low back ashi point and negative on BL 60; treating upper toothache ST 7 positive and LI 4 negative.

General Uses

Basically electro-acupuncture can be used for:

- 1. Stimulation of muscle tissue to facilitate circulation and promote relaxation.
- 2. Stimulation of peripheral nerves to reduce their excitation or sensitivity
- 3. General physiological regulation to enhance the body's functioning

Electro-acupuncture Treatment Examples

Sciatica - Nerve Root Type - Extra Jiaji Points, LU 4 & LU 5, GB 34, BL 40 Nerve Trunk Type or Primary - BL 54 or GB 30, GB 34 or BL 40

Intercostal Neuralgia - SJ 6 GB 34, Corresponding Extra Jiaji Points

Acute Appendicitis - LI 4, P 6, LI 11, ST 25

Trapezius muscle causing stiff neck and shoulders and occipital tension - BL 10, SJ 15

Levator scapulae muscle causing stiff neck and shoulders - SJ 16, GB 21

Chronic nasal congestion, rhinitis, and sinusitis - LI 4, P 6

Operating Instructions Example Using the WQ-IO Electroacupuncture Machine

These general principles can be applied to any EA machine

- 1. Place the machine on a level surface near the patient so that the wires reach from the machine to the needles
- 2. Set all the dials to "Off" and "Low" settings and the "APD /E-E" switch to "E-E" for electrical stimulation
- 3. Insert the plug of the lead wires into the socket at the back of the machine
- 4. Attach the clips securely to the needles at either the handle or the body of the needle. Be certain that the clip is not lying loosely at the base on the needle (slide down the needle) on the skin
- 5. Set the frequency dials to the correct setting. In general, begin all treatments with the continuous wave form for 5 minutes and then change to another setting
- 6. Tell your patient that you are ready to begin and that they should tell you when a stimulus is felt. The difference between a patient first noticing a sensation and extreme pain can be only a fraction of a turn of the dial. When first using EA on a patient, the initial surprise/shock can be assumed to be pain. You would turn down the intensity and immediately slightly increase the intensity again
- 7. Turn up the intensity dials slowly, one pair of wires at a time. When the patient tells you that the sensation is distinct and comfortable, begin timing the treatment
- 8. To change the wave form during the treatment, turn the intensity dials to "0" before changing the settings of F 1 and F 2 dials. Then slowly turn up the intensity dials
- 9. To finish a treatment, in the following order: Slowly turn the intensity dials to "0"; Turn the frequency dials to "0"; Turn the machine "Off". Never turn the machine "Off" without first turning the intensity "Off"
- 10. Disconnect the wires from the needles
- 11. Remove the needles and dispose of them in a Bio-Hazard container
- 12. Store the EA machine in a cool, dry place. If the machine will not be used for an extended period of time, remove the batteries for storage

Ideally, when purchasing an older style WQ machine, the wires with clips should be replaced with higher quality wires and clips which do not break as easily as the original ones. These replacements also have coded red and black leads for

positive and negative. These can be found at most suppliers who sell EA machines. The majority of journal articles from China on electro-acupuncture are devoted to laboratory animal studies, mainly with mice and rabbits. Those studies have very little relevance to humans.

Other Applications

Some EA machines can be used as point finders, needless therapy with a TENS-type electrode or magnet electrodes, and some have needless stimulators. Also inexpensive Piezo stimulators are available. They look like an over-sized pen. These stimulators produce an individually pulsed, high volt/low current, mono-phasic wave form. The pulse is generated when pressure is applied and released to the tuned solid state ceramic quartz crystal in the device. They require no batteries or external power source. The output is not adjustable. Also small magnets are available made to attach EA machine wire clips to.



Treatment Visit Notes

When using EA., it is a good idea to always make detailed notes about the EA treatment. This would include noting which exact points the positive and negative wires were clipped to (i.e. BL 32 +, BL 60 -). When treating pain with EA it is also a good idea to draw a diagram in the patient file with the labeled positive and negative wires, especially if some ashi points are used. The wave form should be noted and the highest intensity dial number used and the model of EA machine if you use more than one type.

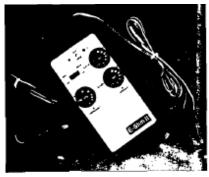
Microcurrent Electrical Stimulation

Microcurrent devices use microcurrent (micro amps) instead of millicurrent (milliamps). With microcurrent the patients feels almost no sensation. Some sources say micro current has more of an effect on the cellular level. Microcurrent is used in TENS devices and in Ryodo Raku devices. [See following opinion.]

With Timer

Micro-850 - Micro-Current





E-STIM II" - Dual Channel Milli-Amp/Micro-Current

Modern Controversial Opinions on the Shortcomings of Electroacupuncture

Many researchers claim that clearly positive results with electro acupuncture occur only about 30-50% of the time with emphasis on local stimulation. They state the following reasons: 1) pain is often perceived in areas of referral, not the actual area of injury; 2) the area of pain is often inflamed, which is associated with excess energy and concentration of electrons; adding further stimulation to that area may be the equivalent of pouring gasoline on a fire; appropriate distal acupoints in a sense are escape valves for this excess energy and stimulating them is a far more reliable way to reduce the excess at the injury or pain site. It is true that the release of ahshi or myofacial trigger points in the local area can also provide relief, and so it is often a combination of local & distal points that yield the most balanced & effective relief.

Often, the use of "overkill" stimulation current can inhibit healing and carry-over of relief. The innate electrical activity of the human body has been measured in the pico, nano, and microcurrent levels. Picoamps are measured in trillionths of an amp, nanoamps in billionths of an amp, and microamps in millionths of an amp. Therefore, even applying microcurrents to the skin surface is an introduction of currents generally far in excess of our innate biological electrical activity. Yet the resistive and capacitive qualities of bodily tissue greatly reduce and modify the actual current that penetrates to the target tissues, and so it is rare that the target tissues actually receive the level of stimulation set on the electro-stim device. Apparently one of the ways therapeutic currents benefits the body is by stimulating somewhat above the normal level, thus creating an intervention that can move "stuck" Qi and tonify, or add energy, to areas lacking sufficient energetic charge to heal themselves. So, although microamps are rarely felt by the patients, in fact they are much stronger than most of our innate currents. Research has shown that micro currents in the range of ten to several hundred microamps can accelerate healing of wounds and fractures.

With this understanding that microcurrent stimulation is already stronger than our innate currents, it is easy to see why the milliamp currents used in most modern electro-stimulators are often way too much current for our bodies. Milliamps are measured in the thousandths of an amp range, 1000 times more intense than microamps. By the time our sensory nerves can clearly feel treatment currents, they are already at levels that can significantly disrupt our subtle bio-electrical systems, thus slowing down the healing process. The common practice of running milliamp currents directly through acupuncture needles has several dangers in addition to its benefits. The first is electrolysis of the metal of the needles, which is the process of breaking down a substance with electrical currents. Potentially toxic metal ions can migrate from the needle into the tissues, an undesirable effect. This type of electro-acupuncture can also literally burn the tissues the needles are in contact with, and there is also a danger of needle breakage when muscles it is inserted into are twitching. The practice of attaching leads from a milliamp stimulator directly to acupuncture needles is derived from surgical anesthesia practices developed in China. While often quite effective for surgery and acute pain, this practice can likely be too intense for most sub-acute and chronic pain patients.

Because the body responds so well to gentle micro currents, one can conclude that it is rarely necessary or desirable to use milliamp stimulation on patients. It is suggested that you start to use microcurrent stimulation as the first and primary treatment, and only use milliamp if necessary after that if the patient's pain is not relieved.

There are some exceptions, however. When a patient is presenting acute pain, inflammation, muscle spasm, and edema these symptoms can greatly reduce blood and lymph circulation to the affected area. Because of this impaired circulation, it is hard for the body to eliminate waste products from the area, which is essential for the reduction of inflammation and healing. In cases like this, it may be appropriate to use milliamp stimulation to in effect force the body to relax its tension and to stimulate local muscles to pump out excess fluids. This can help restore proper circulation, which can carry off the toxic waste products, thereby promoting healing.

These types of practitioners do not believe in the overkill use of milliamps and always begin an electro-acupuncture treatment with microcurrent and only resort to milliamps when necessary in some acute conditions.

The next shortcoming is when a repetitive stimulation of any kind is used, it stops being effective very quickly as the body accommodates, or adapts, to the stimulation. Most electro-stimulators deliver repetitive stimulation. There is a greater clinical value in applying therapeutic currents that have variable frequency, intensity, and timing, as these will tend to create longer lasting pain control and other healing effects. The solution to adaptation is the use of modulated and multistep protocols.

Another shortcoming is incorrect choice of polarities to the body leading to inappropriate treatment of extremities and radiculopathies. The Law of Polarity is an all-important, all pervading reality of our physical and energetic existence. This is also totally applicable to electrotherapy. The healthy human body has an electrically positive orientation on the head and central spinal area, and a negative orientation at the extremities. By following this pattern with electrode placements, we are working with the body, and it is much easier to bring about pain relief, healing, and homeostasis. Unfortunately, most electro-therapeutic devices, offer most treatments only in biphasic, or alternating polarity, and this is not what is needed. Biphasic currents are generally more successful for treatment of the neck and trunk of the body, but are rarely very effective for problems of the extremities and radicular pain. In the realm of meridian balancing work, only properly polarized current will be effective. The solution is the use of properly polarized treatment currents for treatment of extremities, radiculopathies, and meridian balancing.

The last shortcoming is the use of passive electro-stimulation. Some practitioners believe critical stimulation is much more effective if applied while the patient is in motion, as with the use of TENS devices. This is not typically used for acute pain, but after there is some pain relief. An important objective should be restoration of normal movement and function. However, this can be painful and difficult for the patient as guarded and sore areas are exercised. When micro current stimulation is applied during exercise, it makes the whole process easier. The patient feels less discomfort during movement, and the muscles and tendons often become more flexible and capable of re-education with less stress. There is also a strengthening effect on some weak muscles that assists in rehabilitation.

Studies have shown that microcurrent stimulation increases ATP concentrations in the cells, and this can promote muscle softening. The meridian blockage-clearing properties of microcurrent work in a similar way as acupuncture, increasing Qi flow in the area, freeing-up available energy & promoting ease of movement. Proprioception is the feedback system between peripheral muscles, tendons & sensory nerves and the central nervous system that adjusts muscle tone to allow smooth movement. Microcurrent stimulation during movement in some way augments proprioception, accelerating the reducation process of injured muscles & joints. Because microcurrent stimulation often immediately reduces pain during exercise, patients can increase their range of motion with less resistance. This expanded movement helps the neuromuscular systems of the body to adapt to fuller and easier movement patterns. However, caution should be taken to prevent patients from over-extending their range of motion during stimulation and having post-exercise soreness after under-used muscles and tensions are activated. Patients should extend their range of motion in gradual increments over a series of treatments. Massage, hot packs, analgesic plasters, and hot baths may help alleviate soreness after therapy.

Refer to (C) Pages 431 - 433

TENS - Ryodo-Raku Therapy

TENS

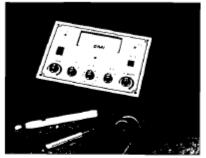
TENS (Transcutaneous Electrical Nerve Stimulation) is the use of electrode pads instead of needles for applying electrical stimulation. Most commonly used in the U.S. by Western medicine practitioners for the control of pain. They emit higher voltage, sensory current (1-80 rnA). Patients are taught to use these portable devices at home.





Ryodo Raku Therapy

Electro-acupuncture came into practice in Japan in the 1950s. Ryodo Raku is the most widely used electro-acupuncture method in Japan. In this system, resistance measurements are taken at all the source points as a way of diagnosing the condition of the 12 main meridians. The main treatment modality used in Ryodo Raku is electrical stimulation through needles inserted in acupuncture points. The most widely used electrical stimulation in Japanese clinics is low frequency alternating currents.



EMI-201 - Measurement & Treatment

Ryodo Raku machine.

Ion Cords

Ion cords were developed by Dr. Yoshio Manaka of Japan for a special use of the Eight Ancestral meridians (Eight Extraordinary Meridians) to control pain and other symptoms along the corresponding pathway controlled by each "Ancestral" meridian (Extraordinary Meridian). Dr. Manaka originally developed "Ion Pumping" therapy for relieving pain caused by burns. Each 11 Ancestral Meridian" has a specific line of influence on which it is capable of reducing or eliminating pain.

Dr. Manaka first trained as a surgeon and also obtained a Ph.D in biology. In the 1940's he started studying acupuncture, moxibustion, and Chinese herbal medicine. He has been one of the great innovators in the development of acupuncture since the second world war. He also was an innovator in the use of abdominal palpation for diagnosis and diagnosis associated with the use of Ion Cords Dr. Manaka's work has been popularized by Kiko Matsumoto and Stephen Birch. In their teaching and books.

"Ion Pumping" treatments control the ion balance in the body or areas where it is applied. Ion N are Yang (+) and Ion C are Yin (-). The use of the "Ancestral Meridian" with "Ion Pumping" exchanges the sodium and potassium balance on a cellular level. Sodium being the cation most abundant outside the cell, and potassium is the cation most abundant inside the cell.

Dr. Manaka originally applied "Ion Pumping" to treat burn pain, with tin or aluminum foil placed on the skin over the burn area, he activated the "Ancestral Meridian" via "Ion Pumping" to normalize the ion imbalance in the damaged tissue.

Both Master and Coupled points are needled on the same side and on the side where the pain is located. If the pain is bilateral, then both sides are needled. However, the wires are attached on the same side, from left Master to left Coupled points, and from right Master to right Coupled points. The wires are not connected across the body (i.e. left to right). The Master point of the "Ancestral Meridian" chosen receives the negative end of the wire, the black clip side.

This same treatment has been found to be highly effective for any pain along the course mapped out as an area of influence of the "Ancestral Meridians". Pain could be superficial on the skin or deep, felt only by deep palpation. It has been found to be effective in the treatment of paralysis. For any usage except that of burn pain, the metal foil is not used.

"Ion Pumping" is a method whereby a wire with a positive (red) and a negative (black) pole are attached to needles at the Master and Coupled points or other specific points of the associated "Ancestral Meridian". The wire is equipped with a germanium or silicone diode, which is a simple device to keep the current flowing in one direction. The only electricity is that which is created by the body itself. Also the wire itself can be a special composition of Germanium and other special alloys. Some sources say regular copper or iron wires will not work with this technique.



Caution

If the point location is not accurate or the wires are connected backwards, the pain can be increased, or the patient may start feeling weary and heavy, agitated, or flushing.

Sample symptomatology for the application of "Ion Pumping":

Yang symptoms - inflammations, burns, pain, tension (due to nerves, muscles, vessels, etc. having too much tension)

Cause - Yang Ion excess / Yin Ion deficiency

Tx - The negative black lead is connected to the Master point

Yin symptoms - spasms, numbness, lethargy, dullness (due to nerves, muscles, vessels, etc. are too relaxed)

Cause - Yin Ion excess / Yang Ion deficiency

Tx - The red positive lead is connected to the Master point

Ion Pumping Cord Ancestral Meridian Treatment

		Diagnostic reactive
Black (-)	Red (+)	Areas of Palpable Pain
SI 3	BL 62	SI meridian & between DU 1 - 20
LU 7	KID 6	LU meridian & between REN 1 - 22
BL 62	SI 3	BL meridian & between GB 29 - BL 36
KID 6	LU 7	KID meridian to KID 8 & between ST 9 - ST 12
SJ 5	GB 41	GB meridian & between GB 29 - GB 21
P 6	SP 4	KID meridian, especially with abdominal
		pain & between REN 22 - KID 9
GB 41	SJ 5	GB meridian & local REN 8 area
SP 4	P 6	SP meridian & between SP 6 - ST 11
	SI 3 LU 7 BL 62 KID 6 SJ 5 P 6	SI 3 LU 7 KID 6 BL 62 SI 3 KID 6 LU 7 SJ 5 GB 41 P 6 SP 4 GB 41 SJ 5

Example - The Yang Qiao is used where there is pain in the GB meridian or pain along a line from BL 36 to GB 29. BL 62 is connected to the black negative lead and SI 3 is connected to the red positive lead.

Other symptomatic treatment examples:

Allergic rhinitis - LU 1 and ST 21 sensitive; treat LU 5 & ST 44 bilateral with ion cords, black on LU 5 and red on ST 44 Chronic pancreatitis with daily stomach pain - ion cords, black on left SP 7 and red on right LU 6

There are other techniques/treatments used with Ion Pumping Cords such as: He-Sea points coupled with the "Ancestral meridian" using 4 wires and 8 points; and using the Luo point and the Yuan point.

Magnet Therapy

Aristotle (3rd century BC) was the first person in history to talk about the therapeutic properties of magnets. In the first century AD Pliny spoke of the use of the magnet for diseases of the eyes. Galen, in the third century, talked about magnets for curing constipation. Marcel, a French philosopher and physician of the fourth century, recommended wearing a magnet on the neck to relieve headaches. Alexander of Tralles in the sixth century used a magnet in the treatment of joint pain and Avicenna in the eleventh century used magnets for melancholy. Magnets appeared to be used continuously into the sixteenth century when Paracelsus talked about their use. There were also many books and other writings proclaiming the benefits of magnets in the seventeenth and eighteenth centuries.

Scientists in many countries have researched the effects and use of magnets on the human body. Americans have been mostly interested in magnetism related to astronautics and aerospace. Since 1948, Russian Army doctors have used magnets to reduce the pain in limbs after amputation. Japan is the country where most attention has been paid to the therapeutic uses of magnets. Research has been performed in hospitals and the Japanese Ministry of Health has approved several types of bipolar bracelets or necklets containing magnets to be sold through chemists (pharmacies). Much of this magnet research was performed during 1975 to 1980. In general, most of the research involved treating pain with promising results, but also included treatment of tumors and cancer. Researchers in most countries had varying but similar theories. They regard the living cell as a "system in electrical equilibrium". Any change in the cell's electrical equilibrium will tend to deform or damage it. It is possible to measure the volts on the external surface of a blood cell and the first sign of trouble is an increase in the negative voltage. The change on the blood cell in bioelectric ions is the result of the changes represented by sodium and potassium ions. This charge and its level depends on the selectivity of the cell membranes. Any change in the bioelectric charge on the membranes modifies the charge on the cell itself, so affecting its balance and health.

Researchers have noted after prolonged investigation that in every case, whether animal or human, where "internal repair" was occurring, there was an increase in the negative bioelectric potential on the external surface of the affected region. Upon recovery of health, the negative potential drops and returns to normal. Should it fall below normal, this is always a sign that the part affected has not succeeded in regaining its equilibrium. In cancerous cells, for example, the negative potential is much less than normal. The same applies whenever there is some physical injury, such as a broken limb. The body's own healing processes are variably accompanied by a temporary rise in negative potential.

With the U.S. exploration of space in the 1960's, there came increased awareness of the importance of magnetism in maintaining health. It was found that astronauts, beyond the protective magnetic field of the earth, often returned with symptoms of psychiatric disturbances, calcium and mineral deficiencies, and other physiological disturbances. Since that time, an integral aspect of space flight research has been to study the effects of magnetic fields on living organisms in space travel.

One of the fields of application where magnet therapy appears to be important is in the suppression or alleviation of pain. Researchers have explained that tissue cells and blood cells carry an external negative charge due to sodium and an internal positive charge due to potassium. On the other hand, the nerve fibers carry an external positive sodium charge and an internal negative potassium charge. This is exactly the reverse of the charges in the other tissues and in the blood.

When the nerve terminals are affected by an abnormal situation such as pressure, infection, burns, etc., they inform the brain of the danger. If negative magnetic energy (that coming from the North pole is applied, there is a reduction in the external positive potential on the outer envelope of the nerve fiber, and this has a sedative action produced by the diminution in the sensitivity potential of the positive ions. Therefore, in general, the application of the negative magnetic potential reduces nerve sensitivity (thus acting directly on the pain) at the same time as it assists self-healing which always involves an increase in the negative bioelectric potential.

Whatever the mechanism, magnets have been determined to: Relieve pain, Treat infections, Steady the nerves, Increase metabolic activity, Heal bones and scar tissue, Rejuvenate cells, balance the body's energy, and Treat a wide variety of ailments. In a TCM way of thinking, the magnetic field itself affects our biochemical electromagnetic energy or our "life force". Many researchers and practitioners believe the presence of magnets on the human body restores the balance of the individual's magnetic field and becomes less vulnerable to external factors.

Materials for magnets are those whose atoms can be permanently or semi-permanently lined up. Of all magnetic materials, an alloy comprised of one-fifth boron and four-fifths Neodymium makes the most powerful magnet. Other materials used for magnets are Alnico magnets comprised of an alloy of aluminum, nickel, iron, cobalt and copper. Ferrite magnets are comprised of carbonates of barium and iron.

Magnetic field energy flows from North to South. In so doing, this energy field influences other energy fields it comes in contact with, such as meridian and points. In practice, this means that a pair of opposite poles attached to a meridian at specific points can be utilized either to tonify or to sedate that meridian, depending on the arrangement of the poles. It also means that as energy is drawn to a South pole it has a tonifying effect, and as energy is drawn from a North pole it has a sedating effect, as long as the magnets are within the same influential energetic system. These basic principles can be used in diagnosis and treatment.

Magnets have the advantages of being non-invasive, ease of use, can be used on areas too sensitive to needle, inexpensive to use, patients can learn to use at home, no side effects, and good for patients who are afraid of needles. Some sources say that a notable clinical advantage of using any polarity agent is the greater control gained over the therapeutic effects.

Generally, a magnet's North pole is negative, cooling, soothing, inhibiting, slows down cellular metabolism, and sedates; and the South pole is positive, heating, stimulating, and tonifying. A magnet's South pole has been shown to increase protein metabolism, body function, and energy, and promote growth. The positive and negative poles would be used the same way acupuncture needles are used to tonify and reduce and harmonize. The North pole is used to treat painful or inflammatory conditions such as arthritis, spondylitis, prostatitis, headaches, bruises, injuries, bacterial infections, dysentery, skin problems, etc. North energies over 7000 Gauss have been shown to retard bacterial growth as well as cell and tissue regeneration. The North pole should not be used for Deficiency conditions, coldness, low metabolism, or weakness. The South pole is used to treat paralysis, asthma, tingling and numbness, to strengthen weak muscles and tissues, scars, etc. The South pole should never be used for acute inflammatory conditions, bacterial infections, cancers and tumors, or with Excess Yang.

Magnets can be used for a harmonizing effect by alternating the application of North and South poles every 15 minutes or by applying a number of both North and South (bipolar) acu-magnets simultaneously over an area. This technique would be for conditions which are both Excess and Deficient. In modern times a variety of magnets are used for therapeutic purposes and are commercially available including stores such as Radio Shack. Magnets are measured/classified according to the strength (Gauss), the ratio of strength to mass, and the resistance to demagnetization. For example, the earth's magnetic field strength is about a half gauss. While seemingly small the magnetic field strength of gauss as a measure is in proportion to the total mass of the magnet.

To find the North or South pole of any magnet it is necessary to have a test magnet available with known polarities marked. The easy way to do this is to buy a batch of 800 Gauss magnets, the type with the North side marked with a small raised dot. Once you have a known polarity it is easy to find the unknown. North is attracted to South and vice versa. With a known polarity, simply let the unknown magnet stick to the known to determine the polity of the unknown. The North side of one will always stick to the South side of the other. Another method of determining polarity of a magnet is to align the needle of a compass to point North. Bring one side or end of your magnet near the compass. The side of the magnet that attracts the North end of the compass needle is marked South.

In the book Magnetic Healing, the author recommends the use of 600 Gauss magnets for all treatments. Other sources recommend never using magnets over 1000 Gauss.

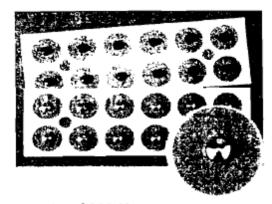
Scientific Research on Biomagnetic Therapy

- 1) Effects increased blood and oxygen circulation along with nutrient carrying potential of the blood.
- 2) Able to effect pH balance (acid-alkaline) which is often unbalanced in diseased tissues.
- 3) Speeds-up the migration of calcium ions to facilitate the healing of nerve tissue and bones (usually at least half the time). Because of this it can help remove pathological buildup of calcium associated with arthritic joints.
- 4) Influence the production of certain hormones from various endocrine glands.

5) Stimulate and foster enzyme activity and other related physiological processes.

If we consider that all functions of the body are essentially biomagnetic, we can understand how each body cell, down to the DNA, has a positive and negative biomagnetic field and that cell division is fundamentally a magnetic process that occurs throughout the various tissues and organs of the body. Physiological biochemistry that utilizes various amino acids appears to be helped by biomagnetism.

Magnets used for therapy related to TCM theory and principles are usually referred to as magnetic pellets. The oldest and largest producer of these pellets is Japan. They vary in appearance, size/diameter, and strength (Gauss). The magnetic pellets are attached to an adhesive plaster to affix a pellet to the skin. The South pole is usually attached to the plaster and the North pole is facing upward away from the plaster. Occasionally, magnets can be reversed, so it is always wise to test each magnet before use. Testing is also good if you want to reuse the magnet and attach it to a new replacement plaster. Some of the magnets come with pre-marked polarity. The magnetic pellets come in stainless steel (balancing), 24K gold plated stainless steel (tonifying), silver plated stainless steel (sedating), titanium (balancing), ferrite plated and non-plated (balancing), and with nickel/copper and gold/ aluminum inserts. Smaller magnetic pellets on plasters are also available for use in the ear.



Accu-Band 800 Magnets

Methods of Using Magnetic Pellets

- 1. Duration Generally, pellets are worn 3-5 days. Longer can cause skin irritation. After 2-3 days rest, the pellets can be replaced. Sometimes the period of use can be shorter, especially if results have been achieved.
- 2. Quantity Variable 2-15 pellets
- 3. Distribution Typically symmetrical points on each side of the body. With pain they could be in a precise region
- 4. Reutilization Pellets should be used no more than twice consecutively and then thrown away.
- 5. Local reaction Reactions are rare but can appear as red spots or eruptions surrounding the pellet. If this occurs, remove pellets and disinfect the skin.
- 6. Contraindications Use with caution on patients with skin problems. Avoid using pellets on cutaneous eruptions (rash). Do not use pellets on areas where the skin is clearly unhealthy, distal points may be used. Pellets should not be used on areas to which have been exposed to radiation or other areas near metallic prostheses. Avoid using pellets near electromagnetic equipment inside or outside the body (i.e. hearing aids, pace makers, etc.).
- 7. Some sources say the patient should remove battery-powered wristwatches, other magnetic objects, all jewelry and nylon clothing touching the body surface, in order to avoid mixing electromagnetic signals. Patients should always be advised to wear loose-fitting natural fabric clothing. This is also true when using ion cords.
- 8. Cautions Some practitioners believe that for every North pole that is applied, always apply a South pole also to maintain balance in the system. The same precautions should be taken with the use of magnets as with the use of acupuncture.
- 9. Contraindications Some sources say that magnets should not be used during pregnancy, on those who have a history of epilepsy or those wearing pacemakers. Strong magnets should be used with caution on small infants and children, on the eyes, the brain, or over the heart.

- 10. Magnets should be carefully handled. Magnets should not be dropped, banged, or exposed to temperatures in excess of 500 degrees F. Larger magnets should be stored in a symetrical single row and not "balled-up" in any way with other magnets of various sizes.
- 11. Magnets should be kept away from homeopathic remedies, computer hard drives, recording tapes, credit cards, videos and CDs.

Treatment

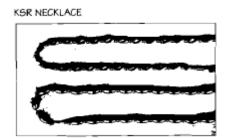
The easiest method and most widely practiced is the use of pellets on pain. This pain could be due to trauma or arthritic. Pellets are generally placed on the most painful points when palpated (ashi points) or a points where the skin or area is more tense than surrounding areas. Also distal points relating to the area of pain can be used.

When treating a symptom/disease, choose appropriate points the same as when using acupuncture. Hand magnet therapy is also commonly practiced using the principles of Koryo Hand Acupuncture. Dr. Tae-Woo Yoo suggests magnets effect hemoglobin in the blood.

The book Extraordinary Vessels by Matsumoto and Birch says "When treating extraordinary vessels, the master point receives copper, gold, or the North magnet; the coupled point receives the zinc, aluminum, or the South magnetic pole. On the 12 meridians, when treating a painful or sensitive area, zinc, aluminum, or North magnetic pole is used. A distal point, or a Deficient meridian, takes the copper, gold, or South pole magnet. Thus, the polarity reverses when not using the extraordinary vessels".

As mentioned in the electro-acupuncture section of this manual, magnets are also available with a small piece of metal attached for electro stimulator wire clips to be fastened to. This technique is often used on areas that are extremely sensitive where acupuncture needles are too painful. An example might be their use on carpal tunnel syndrome.

The popular Japanese magnetic necklets consist of 8-12 rare-earth magnets arranged longitudinally around the neck and individually supplying a bipolar flux of about 1,300 Gauss per magnet. Each magnet is a cylinder about 10-13mm long and about 3mm in diameter.





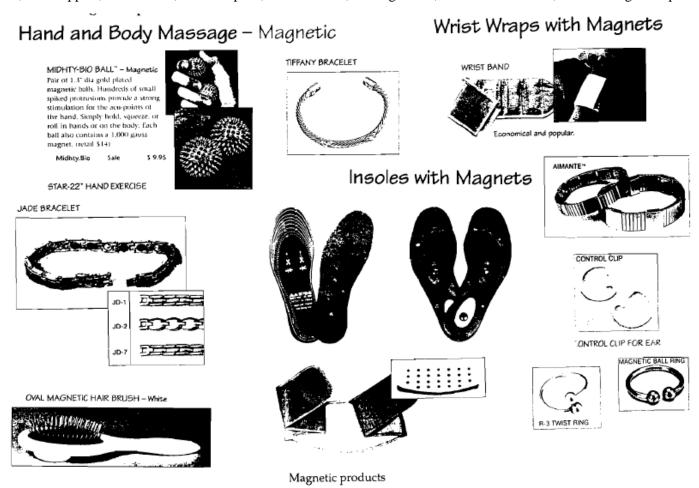
Other Concepts

Though not talked about very often, imbued with their own unique cellular subatomic electromagnetism, plants are also capable of carrying positive and negative charge. These are described as "heating" or "cooling" energies and correspond to their therapeutic properties and flavors/ tastes.

The mystic founder of Theosophy, Madame Blavatsky, states: "matter is spirit at its lowest level and spirit is matter at its highest level". It is said that what may be described as matter, the nucleus of an atom, is so infinitesimal that if we were to gather all the nuclei of a human body, it would be no larger than a period at the end of a sentence. Thus, modern physics theorizes that what we call matter may not be particles at all, but the presence of an impenetrable electromagnetic field. Life, comprised of a complex chain of biochemical and physiological processes is activated and animated by an invisible biomagnetic force such that it finds expression in the food we eat and the herbs we use for medicine. Others have described life as an "infinitely intelligent interaction of electromagnetic energies carried by chemical substances". Modern medicine has come to depend upon such high-tech diagnostic procedures as the electrocardiogram (EeG), the electroencephalogram (EEG), and the electromyelogram (EMG) to measure the electrical activity in the heart, the cerebral cortex and the skeletal muscles respectively. These tests show there must be electrical energy in the body. From the perspective of biomagnetics, health is based upon the individual cells of the body vibrating at a characteristic normal frequency and represents an abnormal change in cellular vibration. The therapeutic application of magnets and

herbs, at the deepest level, is based on the principle of restoring normal cellular vibration. Thus, holistic mind-body therapies, including magnet therapy is very understandable.

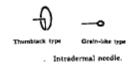
Magnetic therapy has become very popular all around the world over the last 15 years. Many magnetic products have become commercially available. These magnetic products include back belts, wrist bands, thumb support, elbow band, carpal tunnel/thumb wrap, acupressure motion-aid with magnets, elbow tubes/wraps, arm/leg wraps, knee tube/support, ankle wrap, bell boot foot wrap, shoulder pad, power bands for wrist and arm/leg and head, head band, eye mask, hair brush, arch support, foot insoles, mattress pads, seat cushions, massage balls, hand exercise balls, and ear magnet clips.



Intradermal Needles - Pellets - Seeds

Intradermal Needles

Intradermal needles are based and used on the ancient principle of retaining a needle. Intradermal needles are tiny needles (3-6 mm) which are imbedded in the skin and left in place ("burying of needles"). Intradermal needles are also commonly used in the ear.

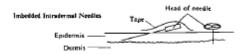


There are 2 types of intradermal needles:

1. **Granular/Pin** - The tiny needle has a ring on one end. The needle is held and inserted transversely / subcutaneously under the skin with tweezers or forceps. The needle is covered with a piece of tape. Another method involves placing a small piece of tape next to the point, inserting the needle, and then placing another slightly larger piece of tape over the

imbedded needle and exposed head or ring. The ring is sandwiched between the 2 pieces of tape. This type of intradermal is commonly used on the back and limbs.

2. **Press/Button/Thumbtack** - A small needle with a ring on one end comes attached perpendicular to a piece of tape (some manufacturers do not attach the needle to tape). Hold the needle or corner of the tape with tweezers or the fingers and press the needle into the point. If the needle came not attached to tape, cover it with tape. Needles which do not come already attached to tape can be placed on tape prior to insertion. Also commercially available are pre-cut plasters. Press type intradermal needles are generally the easiest to insert and most commonly used in the ear.



Indications for Use

Typically, intradermal needles are used most often for pain which would require the retention of a needle or for auricular points. However, intradermal needles are also used for headaches, migraines, digestive problems, hypertension, asthma, menses problems, etc.. Intradermal needles are also commonly used in the Korean acupuncturist, Tae Woo Yoo's, style of hand acupuncture.

Ordinary acupuncture needles can also be retained in the patient. These needles would usually be a needle moderate thickness like a 32g-36g. The needle would be inserted normally, stimulated, and withdrawn leaving about 1/2" horizontally under the skin. The handle is then bent down to the skin and a taped in place. The "sandwiching" between 2 pieces of tape can also be used. Locations for use could be similar to intradermal needles.

Duration of Retention

The length of time an intradermal needle is retained depends on the location, technique being used, severity of the symptom, etc. Typically, needles are retained for 1-3 days and occasionally up to 7 days. In hot humid weather the retention time should be for a short duration.

Caution

- 1. Be careful not to press excessively hard when inserting the needle so as not to cause the patient pain.
- 2. The points used for intradermal needles should be chosen so as not to interfere with the patient's daily activity. Pin type intradermals should be inserted at right angles to the direction of skin stretch (parallel to the direction of skin folds). An example would be when using an intradermal needle in P 7, the needle point should be towards the radius or ulna, not towards the hand or forearm. Also, muscle tissue should be avoided, so the needle will remain immobile even as the patient moves. An exception would be in areas of less movement, like more areas of the back. Always have the patient move around to see if the needle causes ant pain or discomfort. If there is discomfort, move the needle.
- 3. Caution should be used with this technique to avoid infection, especially in hot humid climates. When using intradermal needles, there is always a concern that the patient will not return to the clinic or will not remove the needle in the recommended time stated. Patients need to be advised of the potential for infection. Instruct patients to remove needle or come in if there is a sensation of heat, itching, pain, etc.
- 4. Typically, only 1-2 needles are retained, usually unilateral or alternately on each side.
- 5. Carefully clean/ sterilize puncture site with alcohol.
- 6. There have been reported cases of needles, intentionally left in place as part of a treatment, migrating via the lymph system to lodge in the spinal canal or muscle tissue. Retained needles in the body can also cause infection. A practitioner must make a decision from a legal risk perspective as to using this technique.

Pellets

When you don't want to use too many points in a treatment or when patient self-treatment at home is appropriate, Keptone pellets with a spiked dome can be very useful. The use of pellets is more common in Japanese acupuncture. Pellets are often used on ashi points for the treatment of pain, especially due to muscle tension.

Magrain silver or gold plated or ion pellets are used similar to Keptone pellets. Because they are smaller and plated with either silver or gold, they are less dispersing and used when there is more deficiency. They are also used for ear points and in treating children.

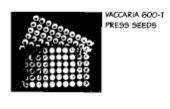


Seeds

Vaccaria seeds (Wang Bu Liu Xing) are also commonly used in the ear instead of intradermal needles. The seeds can be purchased bulk and attached to plasters or already attached to plasters on sheets of seeds. The patient would periodically press/stimulate the seed by using the thumb and index finger to squeeze the seed. There is much less risk of infection with seeds.

Vaccaria Ear Seeds



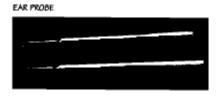


Refer to (C) Page 423 & (CAM) Pages 355

Auricular/Ear Acupuncture

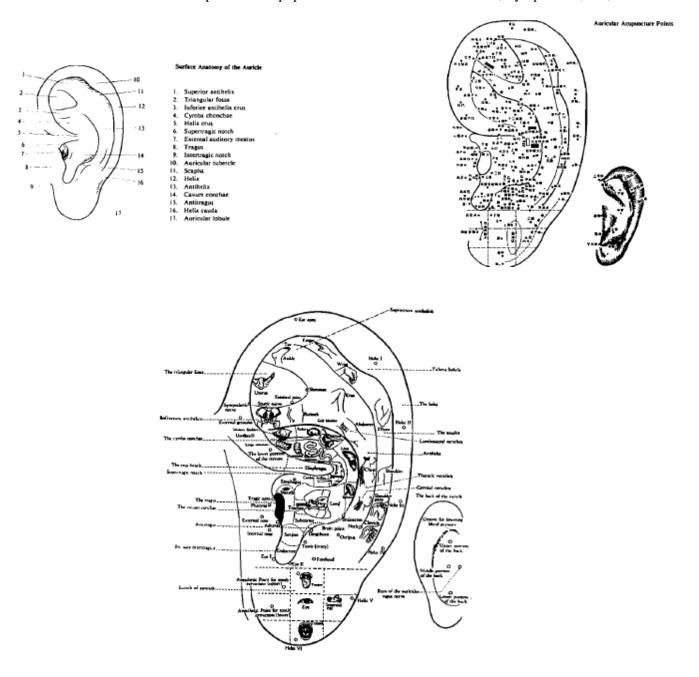
The Neijing Su Wen mentioned the use of ear points as well as many other texts of the Tang and Ming Dynasties. In 1957, Paul Nogier, a French physician, wrote his treatise on auricular acupuncture. Some Western scholars even give Nogier credit for discovering auricular acupuncture. Nogier and the Chinese differ somewhat in their map and points in the ear. Both describe an inverted fetus, with the ear lobe as the head and face. However, the details of the internal organs locations differ. Both systems make substantial claims of success. After Nogier's treatise, extensive research was done in China on the neuro-physiological relationship of the ear and the 200 points. A modified human fetal position is projected onto the face of the ear in an upside down position with the head at the ear lobe. Auricular acupuncture is based on the Ling Shu concept that the whole body is reflected in the ears. Just as regular acupuncture points can be reactive or sensitive and used for diagnosis and treatment, ear points are used the same way. Auricular acupuncture could be thought of as a type of microacupuncture and is a good adjunct to almost any treatment plan.

The ear points can be probed for sensitivity with an "ear probe" and some practitioners use an electrical point location device that checks for low electrical resistance, as described in the electroacupuncture section of this manual. Some of these devices can also be used to stimulate the points. A popular such device from Japan is the Hibiki. Also, alterations in the color or morphological changes on the surface of the skin may indicate a pathology and may be used for diagnosis and needling. Both ears should be examined.



The outer ear is known to be densely supplied with nerve endings from the somatic nervous system as well as the autonomic nervous system. Auricular acupuncture is considered to have a reflexive effect on various organs by regulating the function of the autonomic nervous system and by stabilizing the homeostatic function of the body. Auricular acupuncture is widely used for various symptoms/diseases, as well as weight control and withdrawal symptoms from smoking & substance abuse. The ear should be cleaned with alcohol & allowed to dry. Typically, a 1/2" to 1" needle is

used, inserted perpendicularly only .05 to 0.1". Intradermal needles, moxa needles, pricking, seeds, electroacupuncture, & injection are also used in auricular acupuncture. A popular acu-detox tx. is Ear Shenmen, Sympathetic, LU, KID & LV.



Refer to (C) Pages 472 - 491 & (CAM) Pages 511 - 530

Scalp/Head Acupuncture

Distribution of auricular points.

The importance of the head has been recognized since ancient times. The Suwen states, "The head is the seat of the Essential Brightness". A famous doctor in the Ming Dynasty, Zhang Jiebin wrote, "All the Essential Qi of the Yin and Yang Organs rises to the head." Scalp acupuncture is a relatively modern technique. The origin of scalp acupuncture is debatable among scholars. In one documented example, Fang Yunpeng, a doctor in Henan Province was given credit for discovering scalp acupuncture in the 1950s. He was a Western medical surgeon who began studying acupuncture in 1948.

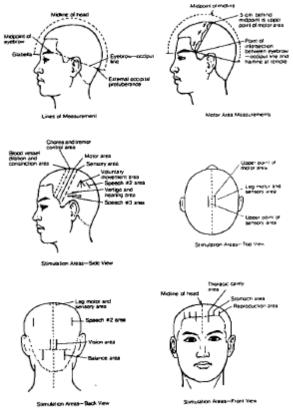
He began treating diseases combining Western medicine and acupuncture and began researching a new method called scalp acupuncture and published a book on it. During his clinical practice, he discovered some areas which could be needled but were not explained by meridian theory on the scalp. Through the treatment of thousands of patients & the observations on 150 different diseases, scalp acupuncture areas were gradually developed & mapped, including 7 areas, and 21 projective areas for treating cerebral diseases.

The scalp areas were a type of hidden pictography placed on the coronary, sagittal, and lamboid sutures. There was a head and neck region, upper limbs region, trunk region, and lower limb region, each with specific indications. There were areas for the "hidden zang organs" lying transversely on the anterior hairline: upper jiao, middle jiao, lower jiao, each with specific indications. The "reverse zang organs" area were located over the cerebral cortex sensory and motor centers and used for sensory and motor dysfunction. The "21 points" referred to speech, thinking, writing, memory, signal, motor-balance, vision, balance, respiration and circulation, auditory, olfactory and gastric areas over the cerebral cortex. Scalp points were chosen correlating to the dysfunction: e.g. leg problem choose lower limb area points; or gastric pain choose stomach/middle jiao areas; or for tinnitus or deafness, choose the auditory area point.

Dr. Fang stated the following aspects of needle technique should be followed:

- 1. Quick and perpendicular penetrating (fly needling) should be applied and the needle should reach the periosteum. However, this method is only for patients who can stand strong needle sensation.
- 2. Needling before the onset of a chronic illness can achieve preventive action or alleviate the symptoms. For symptoms like epilepsy or bronchial asthma, needle immediately when the attack occurs. For treating hemiplegia, needle immediately after coma.
- 3. Needling scalp points on the affected side is better than needling the opposite side.
- 4. He stated several specific points and needle manipulations for various diseases/ symptoms.
- 5. He stated there are 3 layers in the scalp: skin layer for skin problems such as itching; muscular layer for gastric spasms and muscular problems; periosteum layer for acute and severe diseases and various kinds of pain.

Other scholars say scalp acupuncture was not developed into a complete acupuncture system until the 1970s. Along with Fang Yunpeng, Jiao Shunfa and Tang Songyan each proposed different diagrams and groupings of scalp acupuncture points. Also different methods of needling were proposed. A standard nomenclature for scalp acupuncture points was developed (adopted in 1984 and reconfirmed in 1989), indicating 14 therapeutic lines or zones based on a combination of the thoughts of the different schools of scalp acupuncture.



lead Acupuncture Areas

Professor Zhu Mingqing (associate professor at Beijing College of Acupuncture, Moxibustion, Orthopedics, and Traumatology before emigrating to the U.S.) developed a popular version of scalp acupuncture (Zhu's scalp acupuncture). Dr. Zhu's father was also an acupuncturist who had researched scalp acupuncture. This style became very popular in China, Japan, and in the U.S. This style has 8/9 therapeutic zones and the needle manipulation is characterized by forceful, small-amplitude lifting and thrusting, associated with massage of the affected body part, and physical and breathing exercises. In 1991, Zhu established the Chinese Scalp Acupuncture Center in San Francisco, and in 1992, published an English-language book on his methods. Dr. Zhu traces the origins of modern scalp acupuncture to the work of Huang Xuelong, who in 1935 introduced the concept that there is a relationship between the scalp and the cerebral cortex. Dr. Zhu believes DU 20 is the basis for all of the scalp points, using statements in the Neijing Lingshu as the basis for his theory.

In China, typically 26g-30g needles are used. Dr. Zhu recommends a finer needle size than is used in China, because of the needle stimulation technique he uses. He recommends using a 1"-1.5", 32g-34g needle in most cases. The needle should be inserted 1" and must be long enough that it is not inserted up to the handle. The angle of insertion is 15-25 degrees. The patient should not feel excessive pain. The needles should remain in the scalp for a minimum of 4 hours (except for treatment of acute symptoms, in which case, 0.5-1 hour is sufficient) & up to a maximum of 2 days. However, for children and weak adults, the time of retention should be shorter. Dr. Zhu generally prefers long-term needle retention of 1-2 days; this is in contrast to the method of Jiao Shunfa, who advocated removing the needles after the basic manipulations.

For insertion of the needle, Dr. Zhu recommends inserting along a fingernail pressing the skin. Press beside the treatment zones with the nail of the thumb of the left hand, hold the needle with the right hand, and keep the needle tip close against the nail. By avoiding the hair follicle, one can minimize pain during insertion. The direction of needling is usually based on the mapping of the body within the zone being treated: the needle is aimed (along the line of the zone) toward that portion of the zone most closely corresponding to the area of the body that is affected by the injury or disease (opposite extremity). Head and neck problems are needled on the same side of the scalp as the disorder.

Although the distance from the skin surface to the skull is very short, there are several tissue layers: the skin, hypodermis, galea aponeurotica, and occipito-frontalis muscles, subaproneurotic space, and pericranium. The subaproneurotic space is a loose layer of connective tissue that is ideal for penetration during scalp needling: the needle slides in smoothly and does not cause pain, yet the desired needling sensation is strong. If the angle of the needling is too shallow, the needle will penetrate the skin and muscle layers and it will be difficult to get a smooth insertion.

Dr. Zhu recommends 2 basic needling methods that are based on ancient techniques:

- 1. Jinqi Tonifying and thrusting method. The needle is thrusted quickly with force, but the body of the needle hardly moves. Mostly for neurological disorders.
- 2. Chouqi Forceful movement and a lifting motion. Lift the needle quickly with force, but the body of the needle hardly moves. Draining method mostly for pain syndromes.

He recommends repeating this method many times until the arrival of Qi is achieved. He doesn't talk about how long to manipulate the needle, but rather bases it on observation of the patient. Subsequent reports state stimulation for 1-2 minutes & again after intervals of 10-15 minutes, for 1-2 minutes each time. He claims the small-amplitude manipulation (which differs markedly from the twirling method used by many Chinese doctors), has the advantages of "large amount of stimulation, saving effort, less pain, and strong needle sensation", yet the therapeutic effects are achieved quickly. He believes the affected body part should be moved during needle stimulation. If the patient cannot move the affected body part, they should visualize moving their breath to the affected body part.

Before withdrawing the needle, he recommends manipulating the needle again while the patient performs breathing exercises. When removing the needle, press the skin around the point with the thumb and index finger of the left hand, rotate the needle gently, and lift slowly to the subcutaneous level. From there, withdraw needle rapidly and press the point with a dry cotton ball to avoid bleeding.

Dr. Zhu says the main applications for scalp acupuncture are a wide range of neurological problems, cerebral palsy, epilepsy, MS, stroke, paralysis, and emergencies. For best results in treating hemiplegia due to stroke, scalp acupuncture should be performed twice per day. For other chronic conditions, daily treatment or every other day is recommended initially, followed by less frequent treatments once progress has been made. Dr. Zhu rarely prescribes Chinese herbs, but primarily relies on scalp acupuncture and a few body points.

Dr. Zhu says contraindications for scalp acupuncture are: very high blood pressure (220/120), heart disease, infection, post-operative scars in the acupuncture zone, some cases of pregnancy, persons who are extremely nervous, and infants whose fontanels have not closed. In reviewing Chinese literature, most authors suggest that scalp plus body acupuncture together is recommended. The recommended frequency of treatment is high, from twice per day to once per day, to once every other day, with a course of treatment typically being 10-12 consecutive sessions, followed by a break of 2-4 days, sometimes 5-7 days. It is extremely important to minimize the patient's needle sensation pain. Rapid insertion of the needle can reduce the pain and electrical stimulation is sometimes applied to needles instead of twirling. It is important to obtain appropriate needle sensation, but do not cause pain. Needles should be manipulated at least 2-3 times in the course of a single session for 2-3 minutes each time. The manipulation is usually rapid with frequent twirling. Total duration of needle retention in most cases is 20-45 minutes, though some patients are even sent home with needles in place, for retention of several hours up to a maximum of 2 days.

There are 3 basic features of scalp acupuncture that differentiate it from body acupuncture:

- 1. Treatment zones mapped onto the scalp that are associated with body functions and broad body regions.
- 2. In scalp acupuncture, the needles are to be inserted within a layer of loose tissue beneath the scalp surface, at a low angle of about 15-30 degrees, involving an insertion distance of about 1 cun.
- 3. For scalp acupuncture, the needles are stimulated rapidly, which can be done by hand or electro-stimulation.

Refer to (C) Pages 497 – 501

Acupuncture Anesthesia/Analgesia

Acupuncture anesthesia (AA) was actually developed outside the theoretical framework of traditional Chinese medicine. Acupuncture anesthesia uses acupuncture before and during a surgical procedure for the purpose of analgesia. Hence, various operations can be accomplished in the regions of the head, chest, abdomen, and extremities. Acupuncture anesthesia uses strong stimulation and counter irritation to produce anesthetic and analgesic effects. In the book Chasing the Dragon's Tail, cowboy movies are used as an example. When a cowboy was shot, his friend would give him whisky, and then apply an upper cut to the jaw. Then the doctor could remove the bullet lodged in his body. Acupuncture anesthesia is a little bit like this cowboy example.

A doctor in West Germany developed a procedure that combined electro acupuncture with conventional anesthesia and used it for the first time in an open-heart surgery in 1973.

The advantages of acupuncture anesthesia are: the patient is conscious and can cooperate, the pain threshold is increased, other physiological functions are maintained in a normal state, anesthetic drugs are not needed and therefore no side effects, post-op recovery is quicker. Acupuncture anesthesia can be used on patients where traditional anesthesia should not be used such as: patients with abnormal liver, kidney, and lung function; elderly or debilitated patients; patients in shock; and patients with allergies to anesthesia drugs.

Before acupuncture analgesia is used on a patient, one or more points should be used for a preliminary test to see if the patient can stand the intensity of the stimulation required. The patient should be instructed in deep breathing. The needles are stimulated continuously for 10-20 minutes prior to surgery and stimulated intermittently during the operation, either by hand or by electro-stimulation.

Acupoints are selected using the following principles:

- 1. Select points according to the theory of meridians
- 2. Select points according to syndrome differentiation
- 3. Select points according to segmental innervation
- 4. Select auricular points

Some examples of acupuncture anesthesia prescriptions are:

Dental Extraction - Upper incisor - LI 4, LI 20, DU 26, ST 6

Upper molar - LI 4, ST 6, SI 18

Lower molar - LI 4, REN 24, ST 7, ST 5, ST 6

Cranial operation - ST 43, GB 41, LV 3, SI 18, all on affected side

Cataract operation - LI 4, SJ 5 through to P 6, both on affected side, or SJ 6, Ear points Frontal through to Eye

Frontal sinus operation - GB 14 through to BL 2, ST 3 through to ST 2, LI 4, SJ 6

Excision of thyroid adenoma - LI 4, P 6; LI 18, Ear points Shenmen, Lung, Neck, Endocrine

Tonsillectomy - LI 4 both sides; LI 4, SJ 6 or P 6; Ear points Throat, Tonsil, both bilateral

Cesarean section - ST 36, SP 6, Extra Neimadian, GB 26, LV 3 both sides; Ear Uterus, Abdomen, Shenmen, Sympathetic, Nerve, Lung; or Ovary

Hysterectomy - DU 2, DU 4, DU 26, ST 36, SP 6, BL 32 or BL 33

Electroacupuncture is commonly used for analgesia/anesthesia. Usually the dense-disperse wave form is used; 160 Hz to 200 Hz; strong intensity. Some non-surgical anesthesia points are: Upper teeth LI 4, ST 6, ST 7, ST 44; Lower teeth LI 4, ST 5, ST 6; Childbirth LI 4, P 6, SP 9, LV 3, LV 6, ST 36, ST 44 and Ear points genitalia, urethra, hip, abdomen, lumbar, uterus, sympathy, choose 2-4 points in each ear.

Acupuncture anesthesia is most effective in the areas of the head and neck and become less effective as areas are farther away from the head down the body. Occasionally, drugs are used prior to the operation and Procaine is also sometimes used to block nerve pain. Surgical anesthesia can be found in out-of-print books Acupuncture for Americans or Acupuncture for Medical Doctors, by Louise Wensel; Acupuncture Anesthesia (Chinese translation), 1975, NIH; Current Acupuncture Therapy, by Lee & Chueng.

Refer to (C) Pages 562 – 566 & (CAM) Pages 531 - 541

Microacupuncture

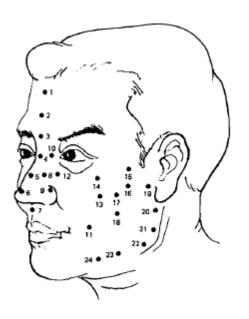
Face and Nose Acupuncture

Face and nose acupuncture were developed using the ancient way of observing variations in color changes on the face and nose to diagnose and treat diseases. According to the Nei Jing, Ling Shu (475 B.C.-23 A.D.), the "Five Colorations" are related to the internal organs and could be used to diagnose disease. Blue indicates Liver problems, Red or Crimson Heart, Yellow Spleen, White Lungs, Black Kidneys. The face may be divided into areas related to the internal organs and the limbs. Another part of the Ling Shu says that "The vital energy and blood of the Twelve meridians and 365 Points, all ascend to the face and their Qi goes up and out the nose to be the sense of smell". The face is therefore related to the Jingluo, Qi, and Blood. If the appropriate areas are punctured, therapeutic effects to the related organs can be achieved.

A book published in the Qin Dynasty about skin diseases says "The nose is situated in the middle of the face as a route of blood circulation throughout the body". "The nose is an opening of the Lungs". Hence the nose is closely related to the vital energy and Blood of the whole body and to the functional activities of the Heart and Lungs.

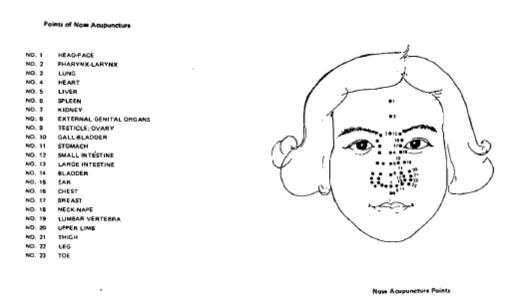
The Ling Shu gives an overall detailed description of the areas of the face and face acupuncture points have been drawn from these descriptions and are used in clinical practice. Face acupuncture points include: 7 points on the forehead, nose, and the center of the upper lip; 17 paired points on the nose, eyes, sides of the mouth, zygomatic and cheek regions.





Face Acupuncture Points

The Ling Shu also says "The bridge of the nose is high and prominent, even and straight. The points of the 5 Zang organs (Heart, Liver, Spleen, Lung, Kidney) are situated on the midline (bridge of the nose) and the 6 Fu organs (Gall Bladder, Stomach, Small Intestine, Large Intestine, Urinary Bladder, San Jiao) are on both sides". According to this principle, the distribution of nose points is divided into 3 lines. Some of their locations are the same as that of face points, others are different.



Rules for Selecting Points for Face and Nose Acupuncture

- 1. Select points according to the affected organs. For example, Spleen or Stomach point for digestive problems.

 Corresponding face points can also be used for anesthesia. For example: Umbilicus for abdominal surgery or Large Intestine for appendectomy, etc.
- 2. Select points according to the sensitive reaction point (probe with an ear probe, handle of a needle, or point finder, around the corresponding area to the affected organ). The sensitive point is the reaction point and is needled.
- 3. Select points according to Zang Fu theory. This is used more for acupuncture anesthesia. For example, the Kidneys govern bone, Kidney point can be used in any type of bone surgery. The Lungs govern the skin and hair, Lung point may be used when the skin is incised, etc.

Needling Method and Course of Treatment

- 1. Needling method uses the same principles as regular acupuncture. However, the needle insertion angle will be according to the thickness or thinness of the skin & tissue in the area to be needled. Oblique or transverse is used for the forehead, nose, and sides of the mouth. Perpendicular insertion is used for the cheek areas.
- 2. After obtaining Qi, the needle is retained for 10-30 minutes and stimulated every 5-10 minutes.
- 3. For anesthesia, the needles are continuously stimulated.
- 4. Electro-Acupuncture may be used on the face.
- 5. Treat once a day or every other day. 10 treatments are considered a course, 7 days between courses.

Cautions

- 1. Carefully clean the area with alcohol before needling.
- 2. Avoid scars.
- 3. Do not use needles that are too long. Perpendicular insertion is not appropriate where the skin and tissue is thin. Avoid lifting and thrusting of the needle.
- 4. The skin of the nasal area is usually more sensitive.
- 5. Use extreme caution when using an electro-stim machine.
- 6. The face can bruise easily. It is best to advise patients of this possibility prior to using points on the face.

Hand Acupuncture

The Ling Shu states "The four distal ends where the positive and negative meet, is the great collaterals of the energy of life". Therefore, if different points of the distal limbs (hands and feet) are used, therapeutic effects to various parts of the whole body can be achieved.

There are 15 points on the dorsum of the hand and 12 points on the palmar surface of the hand, making 27 points in all.



Rules for Selecting Points for Hand Acupuncture

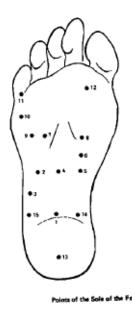
- 1. The "intersection method" is most commonly used. The corresponding points on the opposite hand are selected. For example, with a disease/symptom on the left side of the body, the corresponding points on the right hand are used and vice versa. This is associated with the Jingluo's cross transmission.
- 2. Points that have the same therapeutic properties may be combined. For example, to treat tonsillitis, choose Occiput, Pharynx-Larynx, and Tonsil points.
- 3. If diseases are the same kind but with multiple symptoms, the method of "symptomatic combining of points" may be used. For example, fever with headache, choose the combination of points Anti-fever and Headache.

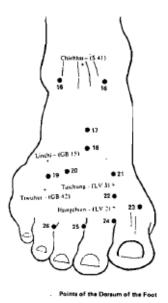
Tae Woo Yoo, a Korean acupuncturist, developed a system called Koryo Hand Acupuncture. He devised complex treatment strategies for constitutional, five element, extraordinary vessel, and local problems. His system also maps out all the channels and their major acupoints, all on the hand.

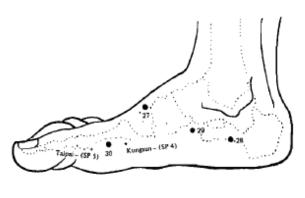
Foot Acupuncture

There are 31 foot acupuncture points, 11 of which are on the instep, 15 on the sole, 4 at the medial side, and 1 at the lateral side of the foot.

Points of Foot Asupuncture			
NO. 1 (1)	ND, 17 (17)		
NO. 2 (2)	NO. 18 (20)		
NO, 3 (3)	NO. 19 (21)		
NO, 4 (4)	NO. 20 (23)		
NO. 5 (5)	WD. 21 (25)		
NO. 6 (8)	40. 22 (26)		
NO. 7 (10)	NO. 23 (27)		
NO. 8 (11)	40, 24 (48)		
NO. 9 (13)	NO. 25 (47)		
NO. 10 (14)	NO. 25 (48)		
NO. 11 (44)	NO. 27 (19)		
NO. 12 (45)	NO. 28 (29)		
NO. 13 (49)	NO. 29 (30)		
NO. 14 (50)	NO. 30 (34)		
NO. 15 (51)	NO. 31 (35)		
NO. 16 (15)			









Points of the Medial Side of the Foot

Points of the Lateral Side of the Fool

Rules for Selecting Points for Foot Acupuncture

- 1. For treatment of various diseases/symptoms, 1 to 3 points which have the appropriate therapeutic effect would be selected. Points which have similar therapeutic properties may be used in combination. For example, points # 1 and #3 are usually used in combination to treat neurasthenia.
- 2. Points which have the same therapeutic effect may be combined with those which have a symptomatic effect. For example, neurasthenia is usually accompanied with headache, use points #1, #3 may be combined with #46 or #48, etc.

Needling Method for Hand and Foot Acupuncture Points

- 1. In China, typically a 28g to 30g, 1" needle is inserted perpendicular or oblique to a depth of 0.3 to 0.5" with moderate to strong stimulation. Needles are retained 3-5 minutes.
- 2. When needling hand point Loin-Leg, insert the needle at a 15-30 degree angle into the palmar surface between the tendon of the extensor muscle and the metacarpal bone to a depth of about 0.5-0.8".
- 3. When treating sprain of the lumbar region and that of various soft tissue of joints, ask the patient to move or massage the affected limb as the needle is stimulated.
- 4. When treating pain, continue stimulating the points for at least 1-3 minutes after the pain is relieved. Prolonged retention of the needles may be appropriate.
- 5. Electro-acupuncture may be used in cases where continuous stimulation is needed.

Cautions

- 1. There can be a strong needle sensation for hand and foot acupuncture points. Patients should be advised of this and the practitioner should watch closely for fainting.
- 2. When a needle is inserted obliquely near a bone, be careful not to injure the periosteum.
- 3. Always use sterile needle technique to avoid infection, especially with foot acupuncture points.

Sample Point Prescriptions for Anesthesia Using Face Acupuncture Points

Face, nose, hand, and foot micro-acupuncture points can be used for anesthesia. Some examples are:

Appendectomy - Face points Lung, Heart, Large Intestine, with auxiliary points Stomach or Umbilicus

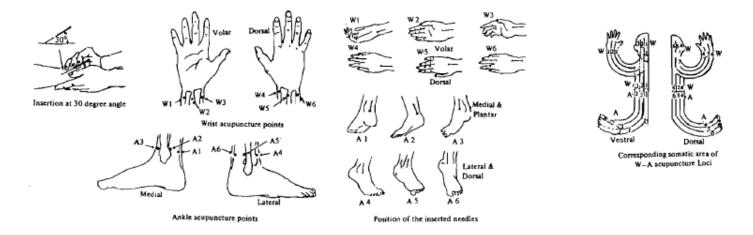
Appendectomy - Nose points Lung, Ear, Large Intestine, Small Intestine

Thyroidectomy - Nose points Lung, Ear, Pharynx-Larynx with electro-acupuncture.

Wrist and Ankle Acupuncture

Wrist and Ankle Acupuncture use the theory of the more distal the point, the more effective it is for treatment. Also the wrist and ankle are less sensitive than the hands and feet. Through-and-through acupuncture is used to connect these points.

In China, 30g, 1.5" needles are commonly used. The needles are inserted on a 30 degree angle, after insertion the needle is manipulated subcutaneously for at least an inch or so. It is not really necessary to obtain Qi. Retain the needles for about 30 minutes, repeat every other day, 10 treatments is a course. This is not a commonly used micro-acupuncture technique.



Refer to (C) Pages 492 - 497; 501 - 507

Porcelain Needle Therapy

Porcelain needle therapy is an ancient technique using pieces of china or porcelain as needling instruments. It is not actually needling that pierces the skin but is superficial needling on the surface. It's therapeutic basis relates to the meridians. Porcelain needle therapy originated from the "Bian-stone" of ancient times. It is still used today by some minorities in China.

Traditionally, a clean piece of china was struck with hard object to produce relatively sharp "chipneedles". The sharpness of the pieces of china is divided into 3 categories: coarse, medium, and fine. In more modern times, these pieces are boiled or placed in alcohol to sterilize them. Obviously, in today's litigious society, this is not an ideal technique to use. The classification for the amount of intensity was: light, heavy, and medium puncture. For strong stimulation or even bleeding, sharp-pointed pieces were used. There were specific methods and stimulation sites used for porcelain therapy. The specific stimulating methods were: spot, row, line, circular, cluster, radiating, and concentrate and diffuse puncture. The specific techniques related to the intensity of the stimulation, bleeding, and pricking. An example of a treatment would be to treat asthma, 5-7 punctures using the line method in the laryngeal area along both sides of the Adams Apple; or influenza, 7 puncture longitudinally on each side of the neck parallel to the cervical vertebra.

Press/Push/Blunt Needle Therapy

The push/blunt needle or holding pressure needle was one of the Ancient Nine needles. It was used to apply pressure on a point to treat symptoms or diseases. Because the skin and Jingluo are mutually interconnected, push needling stimulated Qi and Blood. The LingShu indicated the press needle is indicated for Deficient diseases with pain, and weakened Qi in the channels. The push needle is about 3-4" long and is made out of bone, hard wood, or thick steel wire. The tip of the needle is blunt and round and unable to pierce the skin. It is used on acu points for pushing or pressing, which is more specific than acupressure. The handle was usually wound with wire and scraped as the needle was pushed in order to increase "de qi" sensation. Patients would sometimes be taught to use the needle at home. The amount of stimulation was classified as weak or strong. The push needle was considered especially good for deficient patients.



Method

- 1. The needle is held against the skin with the index finger pressing downwards on the handle, the amount of stimulation is controlled by the pressure of the index finger.
- 2. Use mild stimulation until the point or area becomes red & the symptoms are relieved. The area may then be massaged.

- 3. When stronger stimulation is desired, the needle is pressed more rapidly and with more force, causing a sensation of soreness and distention or pain which may radiate out from the point. Then the needle is quickly removed.
- 4. Do not apply any twirling or manipulation, only downward pressure.

Indications

Deficient stomach ache, abdominal pain, indigestion, nervous vomiting, morning sickness, and any nervous dysfunction. Patients can be taught to use this technique to treat themselves at home. Points are selected along the channel associated with the disease, or from appropriate acupoints. Ashi points may also be used for pain.

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Laser Acupuncture

Laser radiation was first generated in 1960 coinciding with extensive research in eastern Europe and Russia in the 1960s. Interest in low-energy (600-1000 nanometer /nm) L.A.S.E.R. (Light amplification by stimulated emission of radiation) acupuncture as an adjunctive therapy has increased over the past 10-20 years, especially in China, Europe, Japan, Canada, and the U.S. Various techniques have been developed using simple laser lecture pointers (5 milliwatts/mW, 670 nm wavelength) to larger helium neon has lasers (HeNe, up to 15m W, 632.8 nm) to infrared lasers (invisible, beyond 690 nm, 20-50 m W). These lasers have varying depths of penetration according to their mW. These lasers are also called "cold or soft" lasers. Medical clinical research in the use of low-energy lasers has included burns, face lifts, wound healing, paralysis, pain, etc. Clinical research in this technique is still considered in its infancy.

Low-energy lasers emit a non-ionizing form (not cancer-causing) of radiation. The photons (electromagnetic energy flight) produced by lasers have different wavelengths (colors) of light. The most common elements used in low-energy lasers are Helium and Neon, emitting a red light, or a red laser beam. Laser light is different from other light sources (like light bulbs), because it is monochromatic (one color) and highly coherent in temporal and spatial (light from everyday light bulbs is much more random). The most commonly used lasers for acupuncture are 5-20 milliwatts (mW). When this type of milliwatt radiant power is shown onto the skin, it produces no feeling whatsoever. Laser will begin to burn the skin when it is about 500 m W (half a watt). Laser devices are classified by Class I, Class IIa, Class IIIa, Class IIIb, and Class IV. Cutting lasers used in surgery are about 300 watts.

There are 3 variables you must know about a specific laser before using it:

- 1. Wavelength in nanometers (nm) For laser acupuncture the wavelength must be in the red-to-infrared range of 600-1000 nm.
- 2. Number of watts or milliwatts (mw) Usually only 5-20 mw are used
- 3. Number of seconds exposure -1 joule of energy (joule is a unit of work energy) For example, the energy expended by a current of 1 ampere flowing for 1 second through a resistance of 1 ohm 1 to 8 joules of energy are necessary to treat various conditions You must calculate how long in seconds it will be necessary to hold the laser on the point in order to produce 1 joule of energy –With weaker lasers (5mw), 1 joule = 200 seconds; with stronger lasers (20mw), 1 joule = 50 seconds Manufacturers do not supply such information You must compute it yourself, using the equation 1 watt = 1 joule over 1 second.

Practitioners who use laser acupuncture say that it is an effective way to stimulate points, especially for points that are too sensitive to needle, for the treatment of children, and for patients with "needlephobia". How, or why, low-energy lasers have an effect is not known. A possibility is an effect occurs through some sort of "photostimulation" of special light-sensitive receptors in the skin. Other sources believe the laser penetrates the skin and subcutaneous tissue to effect the micro-vessels and nerve endings.

Some authorities say that lasers have more of an "even stimulation" effect. It has not been determined about "tonifying and reducing stimulation" effects of a laser or even ideal stimulation times. An example of a treatment used in China, in a research protocol for paralysis in stroke patients: A 10mW, red-beam, HeNe laser was used for 4 minutes per acupuncture point (24 joules per point); LI 11, LI 4, SJ 9, ST 31, ST 36, GB 39; tx. every other day (3 times per week) for 4 weeks.

Some general precautions and contra indications are: never look directly into a laser beam, do not shine the laser beam onto a cancerous tumor, do not use lasers on pregnant women except for BL 67 for breech position, do not shine lasers onto the unclosed fontanels of babies and children.

Laser acupuncture is quite controversial within the profession and has many FDA regulations and other legal issues. Lowenergy lasers are considered to be "investigational" for medical use in the U.S. Some sources say it is illegal to make any medical claims for the use of low-energy lasers on humans, to advertise the use of low-energy lasers, and to charge for the use of low-energy lasers as a medical treatment. Patients who are treated with laser acupuncture should sign an informed consent/release as to the device being classified for investigational use only and the treatment being investigational research. Laser acupuncture is specifically stated in some states (Massachusetts) scope of practice for acupuncture.

Injection Therapy - Pricking Therapy-Suture Therapy

Point Injection Therapy

This is a technique that is not legal in most states. State laws do change continuously. The following information should be verified as to accuracy. Point injection is legal in New Mexico with appropriate training, legal in Washington to inject saline only, and legal in Colorado but the legality has not been challenged.

Point injection is a therapy combining herbal injectable or solutions (or pharmaceuticals in China) with acupuncture. In China, the most common solutions to inject are glucose, saline, distilled water, vitamin B1, B12, and C, procaine, and various sterile Chinese herbal solutions like Dang Cui, Huang Qi, Hong Hua, Chuan Xiong, Zi He Che, etc.. A syringe is used to inject a liquid into an acupuncture point or into other areas of the body such as sensitive ashi points. In the U.S., most typically a disposable diabetic syringe and needle is used. In China, a 20-27g hypodermic needle and 2, 5, 10, and 20 milliliter capacity is used.

Technique

A sterile solution is selected according the disease/problem and is drawn into the syringe, the skin is swabbed with alcohol, and the needle is inserted into the muscle. When the patient feels an appropriate sensation and there is no blood entering the syringe after the plunger being drawn back, the solution is injected into the point. For patients with acute diseases and good constitutions, it is advisable to inject the solution quickly. For patients with chronic diseases and weak constitutions, inject the solution slowly. If a relatively large amount of solution is being injected, the needle may be progressively withdrawn to more superficial muscle layers, or the direction of the needle varied. The location of the point and depth of the tender tissue should be taken into consideration when determining depth of insertion. If the point is tender to superficial pressure, the injection should be correspondingly superficial, whereas a point that is painful only with deep pressure, would require a deeper injection.

Injection Dosage and Course of Treatment

Injection is usually intramuscular (1M) or subcutaneous. On the 4 limbs and lumbar regions with average musculature, 2-20ml of solution may be injected into each point or area. On the head, face, and the ears, 0.3-0.5ml is used. If antibiotics or other medicinals are used, 1/5 to 2/5 of the normal dosage is used. For patients with acute diseases, injection is done 1-2 times per day. For those with chronic diseases, one time per day or every other day is recommended. A course of treatment consists of 6-12 treatments. Rest 3-5 days between courses.

Indications

This method can be used in all diseases/problems which are suitable for acupuncture treatment. Point injection is indicated and used most commonly for low back and leg pain, joint pain, sciatica, sprains, and some chronic diseases like bronchitis, hypertension, ulcers, etc. On the back and chest, the Associated or Alarm points may be palpated for tenderness, in which case they may be injected. Tender points along the course of a related channel, or appropriate acupuncture points may be injected. In cases of trauma injury to soft tissue, the most sensitive point may be used. The origin of insertion of related major muscles to tendons may be used. In cases of a "slipped disc", the injection can be made near the spinal nerve root.

Sample Treatments

Bronchial Asthma - Inject 0.5-1 ml Zi He Che (Human Placenta) in to Extra Jiaji Points C7 to T6, select 1 pair daily, move downward, daily or every other day, 20 treatment course

Arthritic Pain - Inject 0.5-1 ml Dang Gui into each point, choose standard appropriate treatment points & ashi points, inject 3 times per week, 10 treatment course, Injection of sterile, filtered air is another method used for sprained or strained soft tissues.

Precautions

1. Pay attention to the total dosage, pharmacological action, characteristics, nature, incompatibilities, side effects, and allergic reactions of the solutions being used

- 2. Hypersensitive tests should be done before any solutions are used which may produce allergic reactions. Explain to the patient that an injection could cause soreness, fever, and even temporary exacerbation of the symptoms
- 3. Sterile technique must be used. Some sources say to use a different syringe for each different solution injected
- 4. If 2 or more solutions are combined, make sure there are no chemical incompatibilities.
- 5. Some Chinese herbal solutions "sting" when injected
- 6. Avoid injecting into articular cavities
- 7. Avoid blood vessels
- 8. Injection should be used with extreme caution for the elderly, young children, pregnant women and patients with weak constitutions. Initially a smaller quantity of solution should be used. Injections should not be given to pregnant women in the lumbo-sacral region
- 9. Injection can worsen symptoms for a short period of time
- 10. If injection around the spinal nerve roots produce a tightening sensation (indicate hitting a nerve), withdraw the needle slightly before injecting the solution
- 11. Many injectable solutions cause a considerable "sting"

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Pricking/Piercing/Stirring Therapy

Pricking therapy uses a thick needle to prick or a small knife to cut subcutaneous fibrous tissues (eruption sites) to treat disease. Pricking locations include skin manifestations such as eruptions, congested looking stagnation spots on minute vessels, vascular spiders, etc. This therapy is somewhat similar to the "ancient vessel puncture therapy" in the Neijing Ling Shu.

The area in which the reactive eruption points most frequently occur are the region of the back from C7 to L5 spreading towards both sides of the posterior axillary folds and occasionally in other areas. The eruption sites are like papules, slightly raised, about the size of a pin head. They are usually gray-white, dark red, brown, or light red. They do not fade when pressed. The location of eruption sites varies according to the disease such as spots related to hemorrhoids usually appear over the lumbosacral region and the frenulum of the upper lip; sty sites often appear over the scapula area; etc. If there are no eruptions to prick, points related to various diseases may be pricked such as BL 28 for prostatitis or DU 14 for acute conjunctivitis, etc.

Another therapy related to pricking therapy is "cutting therapy" or "cutting the fat". With this therapy a scalpel is used to make a small incision on specific related points on the palm and a small amount of white fiber fatty tissue is removed. This procedure stimulates the points. Also regular acupuncture points related to the disease can be used. Extreme caution must be used when using surgical-type methods. These methods are contraindicated for patients with heart conditions, diabetes, high fever, or during pregnancy. Use caution when using these methods on women during menstruation. Avoid blood vessels and nerves.

Another related therapy is the Incision Method where a surgical incision is made at points on the skin, a small amount of fatty tissue is removed, and the wound massaged.

These types of therapies are not commonly used in the U.S for legal reasons.

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Suture Therapy - Other Surgical-Type Techniques

Suture therapy involves the use of a curved suture needle and cat gut suture material. The suture is embedded (threading the point), using standard sterile procedures, through the acupuncture point and retained for 3-7 days. The suture material could be absorbable like catgut or non-absorbable like silk or nylon thread. The suture is used as stimulus (foreign protein) to stimulate the point.

An example of treatment would be to suture REN 17 for the treatment of asthma.

Strict sterile procedure must be used to avoid infection. A local aseptic inflammation can easily occur within 1-5 days. Some patients will show an increase in temperature within 4-24 hours. If the suture needle punctures a blood vessel there will be bleeding which must be attended to immediately. Caution must be taken to not cause any nerve damage. The suture must be observed for any infection or allergic reaction. Another surgical-type method is Direct Stimulation of the Nerve Trunk. An incision is made on an acupoint over a major nerve trunk and the exposed nerve is massaged with forceps to provide intense stimulation. This method is used to stimulate and revive nerve tissue that has been injured due

to disease. Another surgical-type method is Piercing Lymph Nodes. This method incorporates Western and Chinese medicine and is used to treat acute inflammation.

Extreme caution must be used when using surgical-type methods. These methods are contraindicated for patients with heart conditions, diabetes, high fever, or during pregnancy. Use caution when using these methods on women during menstruation. Avoid blood vessels and nerves. These therapies are not commonly used in the U.S for legal reasons. **Refer to (C) Pages 463 - 471**

Five Element Acupuncture

The terms "Five Element Acupuncture", "Worsley Five Element Acupuncture", "Classical Five Element Acupuncture" and "Traditional Acupuncture" are referring to a style of acupuncture. These different groups also disagree with one another on "What is Five Element Acupuncture"? Jack GR) Worsley, born in Coventry, England, studied physiotherapy while serving as an army education officer and also studied and practiced Osteopathy, Naturopathy. He began to study acupuncture in the 1950s and studied in Singapore, Korea, Hong Kong, and Taiwan and received his Doctorate of Acupuncture. He founded the College of Traditional Acupuncture (UK) in 1956 and later came to the U.S. to teach his style of acupuncture. He founded the Traditional Acupuncture Institute (USA) in 1974, and the Worsley Institute of Classical Acupuncture (USA) in 1988. Many Americans also went to England to study "Worsley" medicine at the UK college in the 1970s and 1980s. Worsley's great legacy has been in the field of teaching. Founding the College of Chinese Acupuncture (UK) in England and lecturing all over the world, he has trained countless students throughout the world. JR passed away in 2003.

"Five Element" practitioners refer to TCM practitioners as "8 Principle" practitioners. The "Five Element" style bases its medicine solely on five elements in a much deeper way than a TCM practitioner would think of or use five elements. These practitioners also read pulses very differently from TCM practitioners. They use terms like aggressive energy and possession, often speak of the spiritual level of the problem, and refer to the importance and needs of the mind and spirit. They typically never use 8 Principles, differentiation of syndromes, or Chinese herbs. Some TCM practitioners describe them as more of a psychotherapist who uses acupuncture. Many patients describe a treatment visit being similar to a therapy session. "Five Element" practitioners describe their treatments as: opening or unlocking gates or doors; pushing or pulling energy from one pathway to another; and using the fewest needles possible. They usually use very thin, short Japanese needles and insertion tubes.

Japanese Acupuncture

Acupuncture and moxibustion were introduced into Japan from Korea early in the 5th century and went through periods of expansion and decline. In 562 A.D., a Chinese monk and physician Zhicong, immigrated to Japan with 160 volumes of Chinese medical texts. After direct contact was established between China and Japan in the 6th century, physicians traveled to China to learn more medical knowledge.

During the Nara and Heian Periods (A.D. 710-1185), the first legal system was started and an official department of acupuncture and moxibustion was established and education standards were established to be 7 years of study. In 753, more Chinese monk physicians immigrated to Japan bringing more knowledge. All knowledge of Chinese medicine was actively assimilated in Japan during this period. However, in the mid-ninth century all contact with China was stopped and Chinese medicine began to undergo independent development in Japan. In 984 a doctor of acupuncture was commissioned by the emperor to compile a comprehensive medical text. The text "Ishimpo" became the first Japanese medical text.

In the Kamakura and Muromachi Periods (A.D. 1185-1574) the official medical system was abandoned and the practice of acupuncture and moxibustion began to decline in Japan. In the Momoyama Period (A.D. 1575-1602) acupuncture began developing again. During this period the use of gold and silver needles was developed.

Early in the Edo period (A.D. 1602-1868) a blind acupuncturist named Waichi Sugiyama developed a so called "painless needle insertion technique" using a guide tube. He was born into a samurai family in 1610 and went blind at an early age. For the blind in Japan, the primary jobs were doing acupuncture, moxibustion, and massage. He left home at age 18 and began to study acupuncture. As the story goes, he was not very skilled, but continued to practice his skills. Waichi stayed at a shrine, fasted, and prayed in a cave for 3 weeks. He came out of the cave after the fast, he stumbled, fell to the

ground, and a pine tree needle stuck deep into his leg. He realized that it was sticking out from a reed of bamboo. This was the inspiration for a guide tube. It is important to insert needles straight down and attain the proper depth; this pine needle in its bamboo cradle had done just that. He began using a small pipe to help guide the needle vertically to pierce the patient's skin. That bamboo reed became the basis for a device known as kudabari in Japanese, a needle insertion guide tube that is now standard equipment for both blind and sighted acupuncturists worldwide. He became a very successful acupuncturist, he cured a shogun of a serious illness and was given a piece of land. He opened an acupuncture school, had a profound influence on Japanese acupuncture and the use of guide tubes, and thin needles became widespread in Japan. By the time he died in 1694 at the age of 84, he had established 45 acupuncture schools for the blind throughout Japan. After Sugiyama's death, his abdominal diagnosis techniques became more widely used in this period and Todo Yoshimasu, an herb doctor, developed a system assigning traditional formulas to certain diagnostic indicators found by gently palpating the abdomen. Also during this period, Western medical knowledge of anatomy and physiology began reaching Japan by way of the Dutch Trading Company and their physicians. One of Sugiyama's students opened an acupuncture school, incorporating this new knowledge.

In the modern era, the Meiji Restoration marked the end of the feudal era and the new government resolved to modernize Japan after the Western model, particularly influenced by Germany. This brought great changes to Japanese society, including changes in medicine. All physicians were required to study and pass an examination in Western medicine, and thus practitioners of traditional medicine lost their status as physicians. The traditional methods of the blind were given exceptions to continue practicing acupuncture, moxibustion, and anma, as part of the government's social policy towards the blind. Eventually, traditional medicine did receive approval from the government. However, new standards were established for acupuncture education disregarding traditional theories, and acupuncture was defined as nothing more than a stimulation therapy.

After the American occupation following the war, a new law was passed to guarantee the right to practice traditional forms of medicine. Since that time a wide range of acupuncture has developed and flourished in Japan. Acupuncture, moxibustion, and herbal medicine have attained a level of clinical success that compares well with Western medicine.

The majority of Japan's 69 schools for the blind are almost entirely funded by government sources. There are about 600 teachers, 300 of whom are blind, teaching acupuncture to the visually impaired. After graduating from high school and before going on to acupuncture school, students must pass an entrance exam just as sighted students must pass. Students learn with Braille texts and special practice models with raised acupoints.

Currently, there are many famous acupuncturists in Japan such as Kodo Fukushima, known as the "godfather" of contemporary meridian therapy and the force behind the famous Toyo Hari I Teaching Center in Tokyo. Katsuke Serizawa, a near blind medical doctor and acupuncturist, is another famous practitioner who has upgraded the overall quality of Japan's blind education system. Blind acupuncturists are not allowed to practice in major hospitals.

Toyo Hari Acupuncture has some major differences with Chinese acupuncture. Both are based on the classics and share the same meridians and acupoints, and many of the same underlying philosophical principles. However, from a clinical perspective they are very different. Toyo Hari practitioners use far thinner needles, insertion tubes, and the needles are usually not inserted as deep as in Chinese acupuncture and often are not inserted through the skin at all. Chinese style practitioners often insert the needles and leave the room. In the Toyo Hari system, the practitioner usually remains in the room throughout the treatment tinkering with the flow of Qi in one way or another. Other differences include relying on the abdomen for diagnosis, always beginning with treating the root and ending with symptomatic treatment, and the inclusion of many of the spiritual aspects of the medicine.

Proponents of Japanese acupuncture often point to an advantage that they perceive over the original Chinese system of acupuncture. The latter is portrayed as intolerable to most Americans because of its use of relatively large needles, deeply inserted and strongly stimulated. The Chinese aim is to attain the qi reaction, called deqi, which has a strong sensation at the needle and travels along the meridian. Japanese acupuncture, as promoted in the U.S., is contrasted as involving extremely fine needles, shallow inserted and not stimulated to get a strong qi sensation for the patient (the acupuncturist, however, likes to feel a slight bobbing of the needle as it is inserted at the point, which is interpreted, instead, as the qi reaction). Indeed, because many Americans have had bad experiences with hypodermic needles injecting fluids into the body, IV needles, etc., they are not drawn to the strong needle sensations, even if not painful, associated with standard acupuncture.

While Chinese acupuncture has been subjected to intensive scientific investigation, Japanese acupuncture is only loosely studied, and its effectiveness, especially when practiced in the very light stimulation forms, is open to question by many. While practitioners proclaim the benefits they see in their own patients, modern researchers recognize these are often unreliable indicators. However, the basic Japanese acupuncture technique is used in Japan by about 90,000 acupuncturists, about 8 times as many acupuncturists as there are in the U.S. So, they have a good resource for experience.

Some scholars point out that many practitioners in the West are attracted to new theories and techniques from Japan that have not been researched or tested sufficiently. Some of these include Omura's bi-digital O-ring test and Manaka's Ion Pumping Cords. These practitioners are encouraged to leave behind the long-standing tradition in order to experiment with these new theories and techniques. Some so-called authorities call many of these new theories and techniques "fads".

Kototama Principle (Medicine)

Kototama Institute was a school in Santa Fe, NM in the 1970s and 1980s. The school was founded by a Japanese, Masahilo M. Nakazono (Sensei), who played a large part in New Mexico acupuncture politics and getting an acupuncture bill introduced in the legislature in 1973. Sensei Nakazono had been practicing Oriental medicine over 50 years. He taught from the principle of "not understanding from studying, but from grasping by learning". He tried to train students to improve their capacity for inner judgement and spirituality. This medicine has been called a Japanese lineage medicine that was handed down like an apprenticeship. More accurately, it was based on the Life Principle of Kototama Futomani and the NeiJing. It is actually more of a philosophy and lifestyle and often called "life medicine". Outsiders have even described it as a cult, in a respectful way. Sensei was brutally honest and tolerated no nonsense. The school focused on sounds for spiritual and physical purification, diet therapy (similar to Ohsawa macrobiotics), exercise, hand-work, and acupuncture and moxibustion. Their acupuncture was much different from TCM acupuncture, both theoretically, practically, and technically. The student's own healing and health was also an integral part of the training. The school did not teach Chinese herbs, but relied more on medicinal foods.

Sensei Nakazono began studying Kendo at age 6. He also studied Judo and Aikido. He began an apprenticeship in acupuncture in 1934 and in 1938 also received his license in a structural and manipulation osteopathic specialty. He studied macrobiotics with George Ohsawa for 10 years and went to India to establish the Universal Institute (an institute where mental and physical disorders were treated with macrobiotic meals). He guided the institute for 3 years. He went back to Japan and studied a type of handwork with a renowned master. The first Aikido Dojo outside of Japan was founded by Sensei in 1958, in Singapore. He settled in France in the early 1960s and trained students in Aikido and life medicine. Prior to coming to Santa Fe in 1972, Sensei Nakazono had been the representative for World Aikido for Europe and Africa for 11 years, with over 40,000 students. He opened the Kototama Institute in 1972 teaching Aikido and Oriental medicine as manifestations of the Kototama Principle and enrolled the first class in 1978. His son was an Aikido master and acupuncture practitioner who also came over from Japan to teach at the Institute. He has published several books and student texts on the Kototama Principle and natural medicine. Kototama Institute closed in the late 1980s, when Sensei moved to San Diego, CA.

Veterinary Acupuncture

Like everything else in Chinese medicine, there are many different reports about the evolution of veterinary acupuncture. Most of the information on veterinary acupuncture comes from the Tang Dynasty (618-907 A.D.). During this period, due to military requirements on the northern front, many horses were raised specifically for the ever-increasing military presence and its purposes. Recognizing the tremendous importance attached to health and welfare of the horses they established an actual department and school of veterinary medicine. This was the first formal education of this type in the history of China and the world.

From the Warring States Period, the historic practitioner Shun Yang is given credit for being "the father of Chinese veterinary acupuncture. However, the earliest record practitioner of veterinary medicine was during the Zhou Dynasty (1121- 255 B.C.). Japan also made contributions to veterinary acupuncture in the period of 1100 to 1600 A.D.

Veterinary acupuncture was mentioned in the British Veterinary Journal in 1828. In France in 1836, the first mention of veterinary acupuncture appeared in print. The case was a report on the treatment of an ox.

During the last Chinese Dynasty, the Qing Dynasty (1644-1911 A.D.), there was a countrywide epidemic that proved catastrophic to pigs. As a result of veterinary acupuncture, the disease process was cured and eliminated. In 1947, the formation of the beginning of modern Chinese veterinary medicine developed with the establishment of the School of Agriculture of the Northern University. The school focused on large animals only due to there being no demand for treating small animals.

The history of American veterinary acupuncture had its root beginnings following the national public interest shown in China and acupuncture in the early 1970s. The National Association for Veterinary Acupuncture was formed in 1973 and the International Veterinary Acupuncture Society formed in 1974. By 1975, veterinary acupuncture symposiums were being conducted at many universities across the U.S. Since those days, veterinary acupuncture has become increasingly popular, with more than 500 certified doctors of veterinary medicine as practitioners in North America alone. Veterinary acupuncture uses the premise of transferring the acupoints from a human down on all fours, to animals. A nationally renowned veterinarian in Santa Fe, New Mexico, apprenticed with all the D.V.M. "so-called veterinary acupuncture experts" across the U.S. after receiving his D.V.M. degree in the 1970s. He discovered that they really didn't know very much about acupuncture or the treatment of animals with acupuncture. He was determined to learn more and decided the only way was to also become an OM practitioner. After graduating from an acupuncture school, he applied the knowledge of human acupoints and treatment, to small and large animals.

Veterinary acupuncture brings up another interesting discussion. Many OM practitioners feel there is a comparison to mainstream physicians (MDs, DCs, etc.) who also practice acupuncture with very little training. OM practitioners do not believe mainstream doctors should be practicing acupuncture with almost no training. Therefore, why should acupuncturists practice veterinary acupuncture with no veterinary medicine training? The ideal way is for acupuncturists to work under the supervision or along with licensed veterinarians. This is just food for thought on a controversial subject.

Metric Equivalents

1 millimeter = 0.03937 inch 10 millimeters = 1 centimeter 1 centimeter = 0.3937 inch 2.54 centimeters = 1 inch

Technique Practice

Students must devote a lot of time to practicing all techniques in order to acquire sufficient skills. Students should not practice any techniques that have not been demonstrated in class and they have not practiced in class. Students must initially practice on themselves in order to understand how their technique will feel on a classmate and eventually on "real" patients. If your insertion and needle technique is painful on yourself, it will obviously be painful on someone else. This technique practice outline has been sequenced for optimal development of skills. Students should follow the outline in order of skills. When a student feels confident in one item, they can then move on to the next item. Students should not practice on anyone else until they feel confident about their technique skill. When students advance to practicing on their classmates, they should follow this same sequencing. Students must memorize all cautions and contraindications for all techniques and acupoints.

- 1. Organize and assemble your acupuncture travel kit. Practice establishing a clean field with all equipment you may need for an acupuncture treatment.
- 2. Practice holding a 1" 32g Chinese needle. (You may also purchase some thicker 30g needles) Observe the differences between a Chinese, Japanese, and Korean needle. Practice holding a Japanese needle and insertion tube. Hold a needle by the handle and brush it against a finger of the other hand to observe the difference in thickness of various needles of different lengths and gauges/numbers. Try needles of various lengths and gauges/numbers. Always practice CNT. Never touch the shaft of a needle that is to be inserted into the skin, with your bare fingers.
- 3. Practice hand needle insertion with a Chinese needle and Japanese needle insertion with an insertion tube, on a piece of fruit, vegetable, and other objects. Always practice CNT.
- 4. Practice all aspects of CNT without inserting a needle in yourself. This may sound silly, but the sequencing of when to wash your hands is extremely important. You can visualize the procedure without actually inserting a needle in yourself or insert the needle in the object on which you are practicing.
- 5. Practice needle manipulation techniques on the objects that you practiced needle insertion. Always practice CNT.
- 6. Practice swabbing points with cotton ball and 70% alcohol. The points should be swabbed in a tight circular motion from the point and working outward. Alcohol swabs may be used or an alcohol dispenser and cotton balls.

- Always allow the alcohol to dry before inserting needles. The area should not be touched or come in contact with any objects until the needle has been inserted, removed, and the skin swabbed again with alcohol.
- 7. After your skill is sufficient, practice insertion on your leg on non-acupuncture points/ areas. Usually the best area to practice needling is on the inner calf or medial or anterior thigh. The area should be easily accessible. Only practice insertion and do not manipulate the needle. [Pinch Needle/Two-Finger Pressing/Supporting/Holding the Body of the Needle Technique, Finger Press/Single-Finger Pressing/Pressing Finger/Nail Pressing Technique, Spreading Skin/Tight Skin Technique, Pinching Skin Technique, Stabbing/Rapid Insertion Method, Tube Insertion/Tapping Method] This should involve at least 100 needle insertions. Practice with various thickness and length of needles. Always practice CNT.
- 8. Practice different angles of insertion on your leg on non-acupuncture points/ areas. [Perpendicular, Oblique, Horizontal/Transverse/Subcutaneous] Also practice inserting the needle to different depths. Only practice insertion and do not manipulate the needle. Practice with various thickness and length of needles. This should involve the use of at least 100 needles. Always practice CNT. This should involve at least 100 needle insertions.
- 9. After your skill is sufficient, practice needle manipulation on your leg on non-acupuncture points/ areas. Practice how you Grip the needle. Practice Movement techniques of insertion. After insertion of the needle, practice Rotation. Don't worry about obtaining Qi. Practice with various thickness and length of needles. This should involve manipulating at least 100 needles. Always practice CNT.
- 10. Practice obtaining Qi on a point on your leg such as SP 6 or KID 3. Always practice CNT. This should involve the use of at least 10 needles.
- 11. Practice various techniques to induce the arrival of Qi. First practice these techniques on your leg on non-acupuncture points/ areas. This should involve the use of at least 100 needles. [Rotation/Twirling, Scraping, Vibrating, Flicking/Flipping, Hover, Pressing, Plucking, Shaking, Flying] Always practice CNT.
- 12. Practice tonifying, reducing, and even movement needle techniques on your leg on nonacupuncture points/areas [Lifting and Thrusting Method, Twirling/Rotating/ Twisting Method, Even Method, Direction of Meridian/Meeting and Following Method, Needle Withdrawal/Opening and Closing Method, Respiratory/Exhaling and Inhaling Method, Quick and Slow Insertion, Nine and Six, Simple Insertion and Withdrawal, Retaining the Needle, Intermittent Insertion, Contact Needling, Scatter Needling, Length & Thickness & Type of Needle, Depth, Massage Point, Pinch Point, Five Elements, Source Luo Points, 12 Time periods, Removing Needles]. Always practice CNT. This should involve the use of at least 100 needles.
- 13. Practice on your leg on non-acupuncture points/ areas, the techniques of "Set the Mountain on Fire" and "Cool Like a Clear Night Sky" or "Penetrating Heaven Coolness". This should involve the use of at least 15 needles.
- 14. Practice on your leg on non-acupuncture points/ areas, the 3 degrees of needle stimulation: strong, moderate, and mild. Always practice CNT. This should involve the use of at least 15 needles.
- 15. Practice on your leg on non-acupuncture points/ areas, the techniques of threading and through-and-through. Use a 2-3" needle and demonstrate the technique on 2-3 "make believe" points. This technique takes a lot of practice in order to be proficient and not cause pain. Always practice CNT. This should involve the use of at least 10 needles.
- 16. Run through in your mind, what you would do for various needle complications such as a stuck, bent, or broken needle; fainting; hematoma or bleeding; or injury to any internal organs.
- 17. Practice proper patient positioning with a classmate or friend/family member. [Supine/Recumbent Lateral recumbent, Prone, Sitting Upright or leaning back, Facing back bent over back of chair /Sitting on low stool with arms resting on treatment table (flexion), sitting with side of face resting on treatment table.
- 18. Practice direct scarring moxa on your leg on non-acupuncture points/ areas. Afterwards, use some type of antibiotic ointment on the burn and blister to prevent infection. This should involve the use of at least 10 cones in various spots.
- 19. Practice direct non-scarring moxa on your leg on non-acupuncture points/ areas. Afterwards, use some type of antibiotic ointment to prevent infection if there is a burn or blister. This should involve the use of at least 10 cones in various spots.
- 20. Practice Indirect Warming Moxa Method with a moxa roll on your leg on non-acupuncture points/ areas. The burning red end of the stick is brought slowly nearer to the skin over the point to about 1/2" to 1" above the skin. This method is used for about 5-10 minutes. Always knock the ash off the moxa roll before using it. If needed, you may blow on the end of the stick to make it hotter before applying the technique. Always place the moxa stick in an extinguisher when finished. This should involve the use of a moxa stick for at least 30 minutes. Practice for 1 hour, rolling your own moxa rolls using a moxa rolling board and moxa paper.
- 21. Practice Indirect **Spreading/Rotation Method** on your leg on non-acupuncture points/areas. The ignited moxa roll is brought within 1/2" to 1" above the skin and then moved slowly and evenly back and forth across the area. The

rotation method is applied in a circular motion to spread the focus of heat over a large area by increasing the size of the circle. Two rolls may also be held side by side to heat a larger area. Always knock the ash off the moxa roll before using it. If needed, you may blow on the end of the stick to make it hotter before applying the technique. This should involve the use of a moxa stick for at least 30 minutes.

- 22. Practice Indirect **Sparrow-pecking Method** on your leg on non-acupuncture points/areas. The lighted end of the moxa stick is brought (up and down) slowly near to and then away from the skin so that the patient feels a pleasant warmth to facilitate heat penetration and when strong stimulation is required. This is like a "sparrow pecking at rice". This is used mostly for tonification and takes a shorter time than the warming method, usually 2-5 minutes. Always knock the ash off the moxa roll before using it. If needed, you may blow on the end of the stick to make it hotter before applying the technique. This is generally applied around a point which might be too sensitive for the more direct or sustained application of heat. This should involve the use of a moxa stick for at least 30 minutes
- 23. Practice Indirect Smokeless moxa on your leg on non-acupuncture points/areas. Two rolls may also be held side by side to heat a larger area. Always knock the ash off the moxa roll before using it. If needed, you may blow on the end of the stick to make it hotter before applying the technique. This should involve the use of a moxa stick for at least 15 minutes.
- 24. In class, practice Indirect moxa roll method to points which are covered with hair, like DU 20. The point should be located and the hair parted as much as possible with the fingers and held flat against the skin. The burning end of the roll would then be used as with any other location. Always knock the ash off the moxa roll before using it. If needed, you may blow on the end of the stick to make it hotter before applying the technique.
- 25. Practice indirect moxa with adhesive cones on your leg on non-acup. points/areas. Use at least 10 adhesive cones.
- 26. Practice warming needle skills on inanimate objects to develop sufficient skill before using the technique on the skin. Practice **Warming Needle** moxa on your leg on non-acupuncture points/areas, using a 1/2 to 3/4" piece cut off of a moxa stick, a piece cut off a moxa stick you rolled yourself, and a piece of ready-to-use pre-cut moxa. The needles must have metal handles and not plastic handles; inserted deep enough and be of a large enough diameter to support the weight of the moxa on the handle. A slice of a moxa stick is pushed (either vertically or horizontally) onto the handle of the already inserted needle. You must hold the needle handle with the thumb and index finger with upward pressure when pushing the moxa onto the needle with the other hand, so as not to push the needle deeper. The piece of moxa should be at least 1" above the skin. A small piece of cardboard, tinfoil, or suede leather (the piece is cut half way through so it can be placed around the needle on the skin) serving as a "skin protector shield" may be placed around the base of the needle to catch any moxa ash that might fall. If subsequent pieces of moxa are to be placed on the needle, the ash is knocked off into an ashtray without removing the needle and another piece is placed onto the handle. The needle may need to be held with tweezers if it is too hot to hold with the fingers. When ready to remove the needle, either knock the ash off first into an ashtray or carefully remove the needle and moxa ash with tweezers so as not to drop the ash on the skin. Practice this technique with at least 10 needles.
- 27. Practice **Warming Needle** moxa on your leg on non-acupuncture points/areas, using a small amount of semi-pure "wakakusa" moxa wool rolled and formed in the palm and wrapped around the handle of an already inserted needle. This can also be done by pressing 2 pieces of moxa on each side of the handle. Using a 1/2 to 3/4" piece cut off of a moxa stick, a piece cut off a moxa stick you rolled yourself, and a piece of ready-to-use pre-cut moxa. A skin protector may be used. Practice this technique with at least 10 needles.
- 28. Practice **Warming Needle** moxa on your leg on non-acupuncture points/areas, using a moxa stick held close to the handle of the needle. Practice this technique with at least 10 needles.
- 29. Practice Warming Needle moxa on your leg on non-acupuncture points/ areas, using fire needle caps if available.
- 30. Practice indirect moxa on each of the following substances: fresh ginger, garlic, and salt in the navel.
- 31. Practice the Akabane Test on your Jing Well points.
- 32. Practice fire-twinkling cupping on your leg on non-acupuncture points / areas. Use various size cups to practice. Practice sliding cupping, cupping over a needle, cupping with bloodletting.
- 33. Practice cutaneous acupuncture on your leg on non-acupuncture points/ areas with a "Seven Star" or "Plum Blossom/Flower". If you have purchased or have access to a cutaneous roller, practice on your leg on non-acupuncture points/areas.
- 34. Practice Gua Sha on your leg on non-acupuncture points/ areas.
- 35. In Acu Moxa Technique class, ask a classmate to use an infrared lamp and a TDP lamp on your leg and then use the lamps on your classmate's leg. Observe the heat sensation and take notice of the appropriate distance between the skin and the lamp before it gets hot enough to burn the skin.

- 36. Practice electroacupuncture on your leg on non-acupuncture points/areas. Try varying degrees of stimulation intensity. Note the fine line between tolerable stimulation and pain. Total practice time should be 1 hour.
- 37. If you have purchased magnet pellets, demonstrate their use on any painful area you may have or on acupoints.
- 38. Practice inserting a Granular/Pin type Intradermal Needle on your leg on non-acupuncture points/ areas.
- 39. Practice inserting a Press/Button/Thumbtack type Intradermal Needle on your leg on nonacupuncture points/areas.
- 40. Practice using a pellet and a seed on your leg on non-acupuncture points/areas.
- 41. In class, practice Auricular/Ear Acupuncture. Demonstrate Auricular/Ear Acupuncture using a 1/2", and 1" needle, Press/Button/Thumbtack type Intradermal Needle, pellet, and a seed.
- 42. In class, practice Scalp Acupuncture. Demonstrate the insertion and manipulation of at least 10 needles.
- 43. In class, practice Microsystem acupuncture including Face and Nose acupuncture, Hand Acupuncture, Foot acupuncture, and Wrist and Ankle Acupuncture.

^{***} After you have sufficient skill in all the above techniques, under supervision, practice all the previous listed skills on classmates.

Clinical Skills Assessment

Skills Assessment Guidelines

 Concentration - Focus in class and on techniques
 _ Attitude - Works in a conscientious and caring manner, responsive to suggestions
_ Aseptic Procedures - Handwashing - CNT
 Preparation - Equipment
 _ Information - Discuss treatment procedures with patient, address any patient concerns
 Positioning - Proper patient positioning for treatment
 Point Location - Demonstrates accurate point locations, use of appropriate marking of points, knows point contraindications
 Needle Technique - Demonstrate all specific techniques, rotation, grip, movement, sterile technique, proper depth, angle
 Demonstrate Pinch Needle/Two-Finger Pressing/Supporting/Holding the Body of the Needle Technique
 Demonstrate Finger Press/Single-Finger Pressing/Pressing Finger/Nail Pressing Technique
 Demonstrate Spreading Skin/Tight Skin Technique
 Demonstrate Pinching Skin Technique
 Demonstrate Stabbing/Rapid Insertion Method
 Demonstrate Tube Insertion/Tapping Method
 Demonstrate Perpendicular, Oblique, Horizontal/Transverse/Subcutaneous angle needle insertions
 Demonstrate at least 3 auxiliary manipulation techniques to induce the" arrival of Qi" or needle sensation:
 Demonstrate at least 5 tonifying & 5 reducing needle manipulation techniques
 Demonstrate at least 5 even needle techniques
 Demonstrate strong, moderate, and mild needle stimulation
 Demonstrate a through-and-through needle technique stimulating 2 points with one needle
 Demonstrate a transverse through-and-through subcutaneous insertion with one needle
 Demonstrate an oblique through-and-through insertion of 2 points close together
 Demonstrate a perpendicular through-and-through insertion of 2 points located opposite each other
 Demonstrate a one-direction through-and-through insertion connecting several points
 Demonstrate bloodletting with a 3-edge needle and with a lancet
 Demonstrate direct scarring moxa
 _ Demonstrate direct non-scarring moxa _ Demonstrate indirect warming moxa with a moxa roll
 Demonstrate indirect warming moxa with a moxa roll Demonstrate indirect spreading/rotation moxa roll method
 Demonstrate indirect spreading/rotation moxa roll method Demonstrate indirect sparrow-pecking moxa roll method
 Demonstrate indirect sparrow-pecking moxa roll method Demonstrate indirect smokeless moxa roll method
 Demonstrate indirect shockess move for method Demonstrate indirect move roll method to points which are covered with hair
 Demonstrate indirect moxa with adhesive cones
 Demonstrate mancet moxa with addresive cones. Demonstrate warming needle moxa, using a small amount of semi-pure "wakakusa" moxa wool rolled & formed in the palm and
 wrapped around the handle of an already inserted needle. Using a 1/2 to 3/4" piece cut off of a moxa stick, a piece cut off a
moxa stick you rolled yourself, and a piece of ready-to-use pre-cut moxa. Demonstrate using a skin protector shield
Demonstrate warming needle moxa using a moxa stick held close to the handle of the needle
Demonstrate warming needle moxa using fire needle caps
Demonstrate indirect moxa on each of the following substances: fresh ginger, garlic, and salt in the navel
Demonstrate the Akabane Test
Demonstrate fire-twinkling cupping, sliding cupping, cupping over a needle, cupping with bloodletting
Demonstrate cutaneous acupuncture with a "Seven Star" or "Plum Blossom/Flower". If you have purchased or have access to a
cutaneous roller, demonstrate
Demonstrate Gua Sha
Demonstrate the use of an infrared lamp and a TDP lamp
Demonstrate the use of electroacupuncture
Demonstrate the use of magnet pellets
Demonstrate the use of a granular/pin type intradermal needle
Demonstrate the use of a press/button/thumbtack type intradermal needle
Demonstrate the use of a pellet and a seed
Demonstrate auricular acupuncture using a 1/2" & 1" needle, press/button/thumbtack type intradermal needle, pellet, and a seed
Demonstrate Scalp Acupuncture
 Demonstrate Microsystem acupuncture including Face, Nose, Hand, Foot, Wrist, and Ankle acupuncture

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