

TRADITIONAL CHINESE MEDICINE: A PRIMER **Matthew N.O. Sadiku¹, Tolulope J. Ashaolu² and Sarhan M. Musa¹**

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Abstract: Traditional Chinese medicine (TCM) is a comprehensive medical practices which have been developed in China for more than 2,500 years. This healthcare system is becoming popular in recent years throughout Asia, Europe, India, Africa, and the Americas. It is more accessible, more affordable, and more acceptable to people. It has great potential to improve health and wellness. This paper provides a brief introduction to traditional Chinese medicine.

Keywords: traditional Chinese medicine, medicine in China, alternative medicine.

INTRODUCTION

Traditional Chinese medicine (TCM) originated from traditional Chinese culture and has evolved over thousands of years. This heritage has been incorporated into modern development and practices of medicine. TCM is designed for restoring the balance of the body for sick people and maintain health for others. Some of its precepts were standardized in the People's Republic of China, where the government promoted a systematized form of TCM. TCM has influenced traditional systems of medicine in other Asian countries such as Japan and Korea. In the United States, people use TCM essentially as a complementary health approach or as dietary supplements.

The four key TCM principles are [1]: (1) Your body is an integrated whole, (2) You are completely connected to nature, (3) You were born with a natural self-healing ability, (4) Prevention is the best cure.

UNDERLYING CONCEPTS

TCM arose from the naturalistic philosophies of ancient China and is based on the following abstract concepts. The most important concepts taken from ancient Chinese naturalistic philosophy in TCM are those of qi, yinyang, and the five phases (wuxing). The upper body is yang in relation to the lower body, which is yin. The human body is a miniature version of the larger, surrounding universe. Human beings are part of nature. The body has its own

alarms or reactions to malfunctions. TCM is based on the concept that the human body consists of interconnected systems which maintain healthy function through the balance of yin and yang, or opposing energies. When yin and yang are out of balance, health is adversely affected. Disease is regarded as a deviation from natural conditions. Sound health is understood as the proper balance of contending forces. Life arises from the polar forces Yang and Yin, Heaven and Earth, heat and cold, sun and shadow, dryness and wetness, summer and winter [2].

Five elements or five phases —fire, earth, wood, metal, and water—symbolically represent all phenomena including the stages of human life. These are illustrated in Figure 1 [3]. The six excesses and their characteristic clinical signs are [4]:

1. *Wind*: Rapid onset of symptoms, wandering location of symptoms, itching, nasal congestion; tremor, paralysis, convulsion.
2. *Cold*: Cold sensations, aversion to cold, relief of symptoms by warmth, watery/clear excreta, severe pain, and abdominal pain. Cold is usually characterized by aversion to cold, absence of thirst.
3. *Fire/Heat*: Aversion to heat, high fever, thirst, concentrated urine, red face, red tongue, yellow tongue fur, rapid pulse.
4. *Dampness*: Sensation of heaviness, sensation of fullness, greasy tongue fur, "slippery" pulse.
5. *Dryness*: Dry cough, dry mouth, dry throat, dry lips, nosebleeds, dry skin, dry stools.
6. *Summerheat*: Either heat or mixed damp-heat symptoms.

Six-Excesses can also transform from one into another. Extreme wind, heat, and cold can wreak havoc and derange balance within the human body.

TCM practitioners use various techniques to promote health and treat disease. These include diet, herbal medicine, acupuncture, acupressure, moxibustion, meditation, physical exercise, and massage. In the United States, the most commonly used approaches include Chinese herbal medicine, acupuncture, and tai chi [5].

- *Herbal medicine*: Herbal treatment is basic to TCM treatment. It consists of plants, minerals, and animal products. This also includes some human parts. The substances can come from different leaves, roots, stems, flowers, and seeds of plants. Examples of commonly used herbs are shown in Figure 2 [6].
- *Acupuncture*: This is another cornerstone in TCM. It is a family of procedures involving the stimulation of specific points on the body using a variety of techniques.

Acupuncture involves inserting fine thin needles into superficial structures (skin, tissue, and muscles) of the body and their subsequent manipulation. In electroacupuncture, an electric current is applied to the needles to further stimulate.

- *Tai chi*: This is a centuries-old mind and body practice. It involves gentle, dance-like body movements with mental focus, breathing, and relaxation. Tai chi has not been investigated as extensively as acupuncture or Chinese herbal medicine. TCM has been fully integrated into the health care systems of China, South Korea, North Korea, and Japan. The practice of TCM is regulated in most states in the US. License is granted to the practitioners whose practices are recognized as safe and bring the benefit for health.

MODERNIZATION

Traditional Chinese medicine is medical system that has been practiced for centuries to prevent, diagnose, and treat disease. It should be regarded as an alternative method of therapy which can be administered in oral, topical, or injectable forms. It has been used to treat various conditions including malaria symptoms, jaundice, rheumatism, diabetic wounds, drug addiction, cancer, tuberculosis, and menstrual complications.

TCM has provided an new alternative way of looking at medical practices, health care, scientific research, education, industry, and culture. It has been continuously refined through observation, testing, and critical thinking. The Chinese government has undertaken efforts to modernize TCM. The health services of TCM are continuously developing and are becoming globalized at an accelerated pace [7]. It has faced the crisis and challenge of historical continuity and modernization. Since the end of 20th century China has started to collect medical data of TCM through computer.

Although TCM can be practiced as a stand-alone therapy, it is functions best in close integration with Western medical care. In China, acupuncture is practiced side by side with Western medicine in hospitals and clinics.

BENEFITS AND CHALLENGES

The traditional Chinese medicines have played a significant role as alternative medicines. They are widely used around the world. They are safe, simple, natural, nontoxic, and inexpensive. They can be taken for general well-being, not necessarily when one is sick. Traditional medical doctors usually apply a holistic approach in treating a patient. This medical approach is appropriate to disease prevention and the treatment of chronic diseases without collateral damage. Pharmaceutical companies have explored the potential for creating new drugs from TCM. TCM herbal product manufacturers provide products of reputable

quality to the market. TCM can be integrated with modern medical treatments of surgery, radiotherapy, chemotherapy, and molecular targeted therapy [8].

In spite of the widespread use of TCM, there is skepticism about its true efficacy. A number of factors contribute to this skepticism. Some patients consume TCM products without consulting with their primary physician [9]. In most cases, there is no rigorous scientific evidence to know whether TCM methods work as claimed. The herbs recommended by traditional Chinese practitioners in the US are not regulated or allowed to pass through rigorous scientific evidence of their effectiveness. The US Food and Drug Administration (FDA) will not allow medical practice without verifiable scientific evidence. Some of the herbs used in Chinese medicine can interact with drugs and have serious side effects. They can be potentially unsafe for people with some medical conditions. For most people, it is hard to recognize different Chinese herbs and how to use them. It appears TCM follows complicated concepts and rules, making it very difficult to explain and prove in modern scientific means. The pharmacology of TCM remains poorly understood. The standards for evaluating Western medicine, which centers on “evidence-based medicine,” are not suitable for testing TCM. Critics argue that TCM was a pseudoscience that should be abolished in public healthcare.

CONCLUSION

There has been increased global interest in traditional medicines such as TCM. Increased side effects, lack of curative treatment for several chronic diseases, high cost of new drugs, and emerging diseases are some reasons for renewed public interest in traditional medicines [3].

Although rigorous scientific evidence of its effectiveness is limited, TCM has become more popular in the Western world. Governments and individuals are becoming more open to TCM practices and are considering them as an integrated part of health service delivery. The two systems of TCM and Western medicine need not clash. They are complimentary, taking advantage of the best features of each system and compensating for certain weaknesses in each.

TCM is being taught in China and outside China at different levels. More information about TCM can be found in the books in [10-13] and two journals exclusively devoted to it: *The American Journal of Chinese Medicine* and *Journal of Traditional Chinese Medical Sciences*.

REFERENCES

[1] “What is TCM?”

<https://www.tcmworld.org/what-is-tcm/>

[2] H. Beinfield and E. Korngold, ‘Chinese traditional medicine: An introductory overview,’ *Alternative Therapies*, vol. 1, no. 1, March 1995, pp. 44-52.

[3] B. Patwardha et al., ‘Ayurveda and traditional Chinese medicine: A comparative overview,’ *Advance Access Publication*, vol. 2, no. 4, October 2005, pp. 465–473, 2005.

[4] ‘Traditional Chinese medicine,’ *Wikipedia*, the free encyclopedia

https://en.wikipedia.org/wiki/Traditional_Chinese_medicine

[5] ‘Traditional Chinese medicine: In depth,’

<https://nccih.nih.gov/health/whatiscam/chinesemed.htm>

[6] X. Min et al., ‘A database on treating drug addiction with traditional Chinese medicine,’ *Addiction*, vol. 102, 2006, pp. 282–288.

[7] W. Xu et al., ‘Prospects of a comprehensive evaluation system for traditional Chinese medicine services,’ *Journal of Integrative Medicine*, vol. 15, no. 6, November 2017, pp. 426-432.

[8] C. Ling, X. Yue¹, and C. Ling, ‘Three advantages of using traditional Chinese medicine to prevent and treat tumor,’ *Journal of Integrative Medicine*, vol.12, no.4, July 2014, pp. 331-335.

[9] K.D. Moudgil and B.M. Berman, ‘Traditional Chinese medicine: potential for clinical treatment of rheumatoid arthritis,’ *Expert Review of Clinical Immunology*, vol. 10, no. 7, 2014, pp. 819-822.

[10] Z. Liu and L. Liu (eds.), *Essentials of Chinese Medicine*. Springer, volumes 1 and 2, 2009.

[11] Y.C. Lin and E.S.Z. Shen (eds.), *Acupuncture for Pain Management*. Springer, 2014.

[12] B. Flaws and P. Sionneau, *The Treatment of Modern Western Medical Diseases with Chinese Medicine*. Boulder, CO: Blue Poppy Press, Second Edition, October 2005.

[13] Y. Xinrong (ed.), *Traditional Chinese Medicine: A Manual from A-Z*. Berlin: Springer-Verlag, 2003.

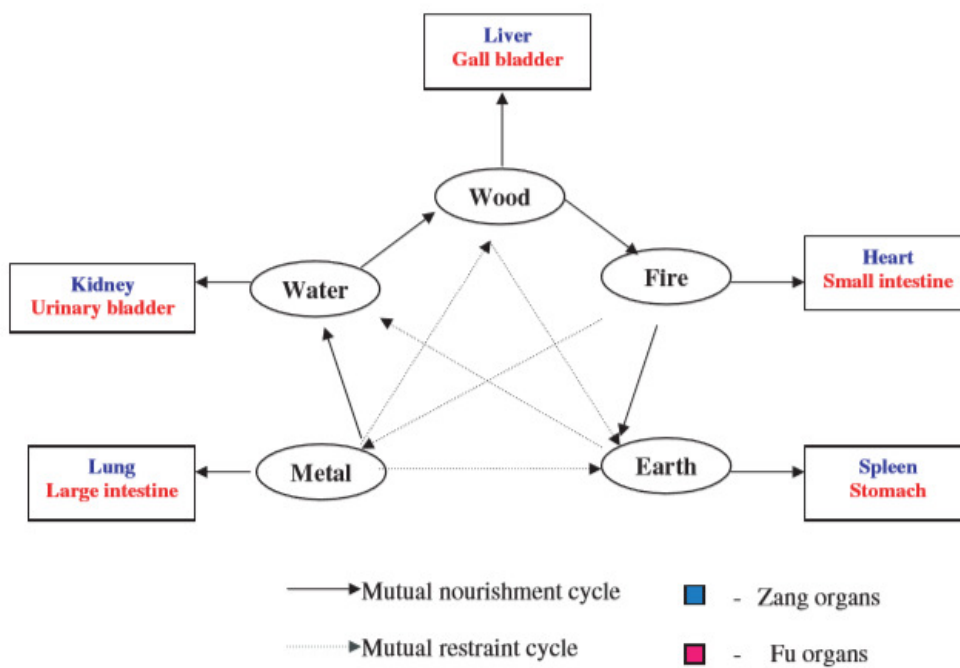


Figure 1: Basic principles or elements of TCM [3].

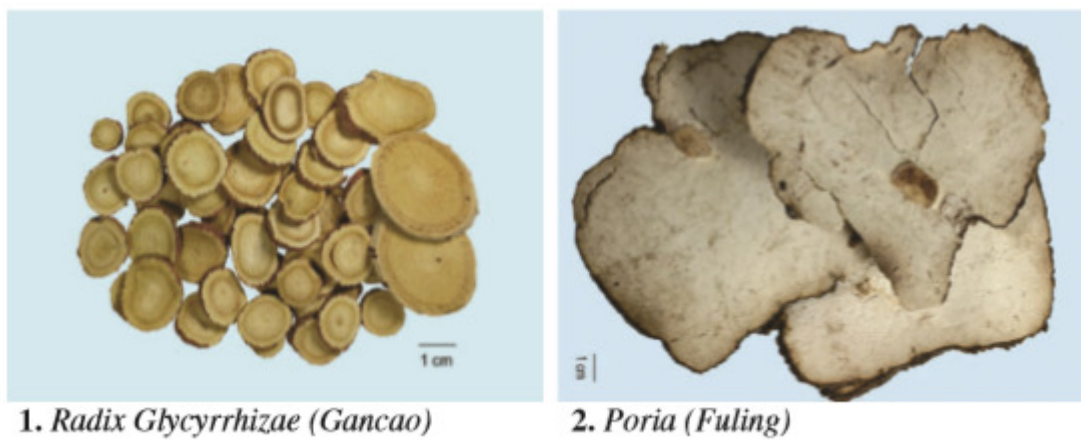


Figure 2: Examples of commonly used herbs [6]