

Traditional Chinese Exercises

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By

Jianmei Qu and Xinqing Wang

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CONTENTS

Series Introduction..... vii

Part One: Basic Knowledge of Traditional Chinese Exercises

Chapter One..... 2

A Brief Introduction to Traditional Chinese Exercises

1. Brief History of Development
2. Basic Concept and Theories
3. Efficacy and Mechanism
4. Fundamentals and Methods

Chapter Two 25

A Brief Introduction to Taijiquan

1. Origin and Characteristics of Taijiquan
2. Basic Requirements of Taijiquan
3. Points for Attention in the Exercise of Taijiquan

Chapter Three 32

A Brief Introduction to Qigong

1. Connotation of Qigong
2. *Dantian* and Commonly Used Acupoints in Qigong
3. Fundamentals, Essentials and Methods in the Exercise of Qigong
4. Effects and Points for Attention in the Exercise of Qigong

Part Two: Traditional Chinese Exercises Practice

Chapter Four..... 54

Taiji Exercises

1. 24-Form Taijiquan
2. 32-Form Taiji Swordplay
3. Taiji Push-Hand

Chapter Five	164
Qigong Exercises	
1. Relaxation Qigong	
2. <i>Ba-Duan-Jin</i> (Eight-Section Health Exercise)	
3. <i>Wu-Qin-Xi</i> (Five-Animal Play)	
Chapter Six	183
Self-Massage	
1. Sixteen Tips for Self-sage	
2. Commonly Adopted Self-Massage	
3. Local and Meridian-Corresponding Self-Massage	
Glossary 1	192
Terms of Exercises	
Glossary 2	195
Terms of <i>Jing Luo</i> and Acupoints	
Bibliography	197

SERIES INTRODUCTION

China, a country of appealing mysteries.

The Chinese nation, a nation intermittently strong and weak, honorable and infamous, awake and asleep, with a history of five millennia at the shortest, though probably longer, has experienced the highest stages of ancient civilization in the most prosperous dynasties of the world, and made indelible contributions to the advance of human societies. As the world's biggest nation, the Chinese people account for approximately a quarter of the whole population on Earth.

As a standing member of the UN Security Council, China exerts enormous influence on international affairs. Economically speaking, it is the world's largest consumer market and human resource reservoir, as well as the largest base of processing industries.

Over the recent three decades, China's opening up to the world has brought about an unprecedented level of contact with people from all other countries, resulting in great advancements in Chinese society and a drastic growth of its economy, which have drawn even greater attention from the world.

As was the case in the past when China was in its prime, again, the world finds it impossible to overlook China and its people.

However, for its many sufferings in pre-modern and modern history – social unrest and setbacks, natural disasters and social misfortunes – for a long time, China has remained relatively backward, listed as a “developing country” of the world. For the same reasons, the Chinese people and their civilization have been neglected in the developed countries, and to many people in the West, what is now known of China remains what it was 30 or 50 years ago.

In view of the above conditions, we hereby present to our readers these brand new Chinese Way books with the aim of helping those who are interested in all things Chinese to learn about the people and their social life, and ultimately to discover “the last hidden world” and the nation that is once more on the rise in the Orient, so as to more effectively communicate with Chinese people in all walks of life.

Within this series, there are five books, respectively on the language, folk culture, rites and rituals, traditional food, and traditional physical exercises of the Chinese people. Drawing upon vast resources from libraries and internet materials, these books are all written from the special perspectives of the writers themselves, and infused with their individual insights. What's more, the style of the language may also be interesting to Western English readers because the writers are all native Chinese themselves who teach English in higher institutions of education in China. This means that their English language may smack of some "Chinese flavor," somewhat different to that of the native English writers, but pleasantly readable nevertheless after minor revisions by native English speakers.

The Chinese Language Demystified by the undersigned chief-editor of this series begins with a general introduction of various "Chinese languages," languages of different Chinese ethnic groups as well as the majority Han people. The relation between Mandarin Chinese and Chinese dialects is also explained with fair clarity. Through reading the introduction, you will learn why Mandarin Chinese has become "the Common Language" (Putonghua) of the nation, how Chinese written characters evolved into the present form, and what differences exist between the classic and modern language, and between the formal written style and informal speech. In addition, the systems of Mandarin Chinese Pinyin and Tones are introduced in detail to serve as a threshold for exploring the contents of the book.

After the introduction are six chapters elaborating on the distinctive features of Mandarin Chinese, respectively in terms of its phonology, tones, morphology and syntax. In each chapter, typical and practically usable examples are provided, along with annotations of the tones and translations in order to help readers learn with ease. Finally, the book is rounded up with a seventh chapter summarizing the most prominent features to reinforce what the readers have read.

Chinese Rites and Rituals is co-authored by Ge Feng (冯鸽) and Zhengming Du (杜争鸣), professors of Chinese at the Northwest University and English at Soochow University respectively. The English translation has been done by Jieting Huang (黄洁婷) and Yinji Jiang (蒋茵佶), who are both English lecturers at Suzhou Vocational University. The book comprises an overall introduction of the Chinese ritual systems and the related social norms and customs. The first part begins with an elaboration of the central Chinese concept Li (礼), which carries a wide range of connotations including not only rites and rituals, but also what are

generally concerned as good manners, appropriate behavior and acceptable ceremonies for various social occasions.

The contents are divided into two parts, with the first part on traditional rites and rituals and the second on the modern practice. Actually, all possible aspects, which are appropriate for consideration under the general title of Li, are touched upon, from individual social conduct to state rules. With the understanding that Li is a matter of great importance in Chinese culture, we believe this book is of special value for those who wish to learn about the Chinese society and the Chinese way of thinking and life.

In *Chinese Food for Life Care*, authored by Hua Yang (杨嫫) and Wen Guo (郭雯), lecturers of English at the Soochow University of Science and Technology, readers are expected to learn about the traditional Chinese way of eating, and find their opinions as regards the choices of food in various situations. They will also familiarize themselves with a great variety of traditionally consumed Chinese food items, and learn to understand why some items are more popular than others in China, as well as why the Chinese people generally believe “food and medicine are of the same origin.” It is our hope that the detailed accounts of the properties of different food items will serve as useful references for making decisions on what one should choose to eat according to his or her own physical conditions.

Traditional Chinese Exercises is written by Jianmei Qu (曲建梅) and her daughter Xinqing Wang (王新清), respectively an associate professor of English at Yantai University and an MA student of English at Shandong University.

The book begins with a brief account of the basic knowledge of Chinese physical exercises and health care, a short history of the development of various methods of traditional physical exercises, such as Taijiquan and Qigong, the basic theories concerning their efficacy and mechanisms, and the methods generally adopted in practice. Then, in the following chapters, the concrete procedures of exercises are presented, all well illustrated with clear pictures to aid the practitioner. In addition, traditionally practiced supporting “minor exercises” including various methods of self-massage are also introduced at length. It is our belief that the explanations and illustrations not only make interesting reading, but also help in practice.

Traditional Chinese Folk Customs is written by Huawen Fang (方华文), my colleague at Soochow University. Its first draft translation was completed by Weihua Zhang (张伟华), associate professor of English at

Wuxi Institute of Arts and Technology. At the request of the writer and the publisher, I gladly sign my name as a co-translator after reading and revising the manuscript. This book projects to the readers a changing and kaleidoscopic view of Chinese social phenomena seen in different areas and ethnic communities, in both ancient times and the present. Although it is understandably difficult for the writers to account for how much or to what extent the old customs have lasted to date, we can well assume that quite a lot have, though possibly in somewhat changed forms. At any rate, they should have some ineluctable impact on the contemporary Chinese way of life. In addition, with the growing consciousness of the importance of protecting traditional culture, some wholesome folkways that had once fallen to the verge of extinction are now being recovered, while others are still often found in Chinese literary works even if they have fallen out of date. Thus, reading about them should be rewarding, and as I hope, it could also be enjoyable.

On the whole, the five titles in these Chinese Way books form a kind of knowledge pool for readers interested in Chinese society, the people, and their way of thinking and social behavior. I believe they will be of very practical use for those who are presently working in China, or considering a visit or some time staying there. For readers of Chinese literature, the contents should also be worth reading because they provide knowledge of the social and cultural background to aid understanding.

I feel obliged to acknowledge the help of many who have given me very good suggestions as regards the contents of the books. First, I am grateful to Professor Xiaoming Tian (田晓明), Vice President of Soochow University and an open-minded scholar in arts and education who has seen the meaningfulness of these books and urged me to carry on. Then, for making the plan more concrete and practical, I feel indebted to Mr. Jinhui Deng (邓锦辉) and Mr. Lei Zheng (郑磊), editors of China Intercontinental Press, for providing many insightful suggestions. Last but not the least, my gratitude goes to Mr. Mingming Chen (陈明明), vice-chairman of the Translators Association of China and an ex-ambassador of China to New Zealand and Sweden, for he has been a constant source of encouragement in any of my endeavors of translation and writing.

July 5th, 2015
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PART ONE:

**BASIC KNOWLEDGE OF TRADITIONAL
CHINESE EXERCISES**

CHAPTER ONE

A BRIEF INTRODUCTION TO TRADITIONAL CHINESE EXERCISES

1. Brief History of Development

Traditional Chinese physical exercises and health care are the crystallization of the Chinese nation's thousands of years of life and productivity, especially with regard to its fight against disease. As one of the treasures of the Chinese culture, it plays a significant role in the nation's civilization and prosperity and has made great contributions to the development and progress of Chinese physical and medical sciences. The exercises include *Wushu*, Qigong and other forms of practice with Chinese characteristics.

Boasting a long history, traditional Chinese physical exercises and health care have been developing in a continuous course of improvement through practice, forming a unique methodology and theoretical system of its own. The theory, belonging to the domain of human physical sciences, originated from Traditional Chinese Medicine (TCM), has also adopted key ideas of classical Chinese philosophy. In terms of development, its evolution has followed the sequence of *Dao-Yin-Shu* (Physical and Breathing Exercise), *Wu-Qin-Xi* (Five-Animal Play), *Ba-Duan-Jin* (Eight-Section Health Exercise), *Yi-Jin-Jing* (Changing Tendons Exercise), and Taijiquan.

Dao-Yin-Shu, which dates back to the end of primitive society, is an ancient way to keep fit and healthy. It is related to ancient Chinese witchcraft as well as the natural environment. It is said that a type of dance, invented by Yinkang to prevent and treat joint ailments during the period of the Five Legendary Rulers (2600-2070 BC), was the earliest health care physical exercise and a precedent of *Dao-Yin-Shu*. The word *Dao Yin* first appeared in *Chuang Tzu* (book of the famous Taoist Chuang Tzu), in which breathing and the acts imitating the tree-climbing of bears and the flying of birds were related for achieving fitness and good health, and preventing aging. *Dao-Yin-Shu* was thus taken as a combination of breathing and body movements for the purpose of health care and the

treatment of diseases. It was supplemented with self-massage after the Han Dynasty (206 BC-220 AD).

Dao-Yin-Shu took form in its early development in the Eastern Zhou Dynasty (770-256 BC). This special physical exercise based on breathing then became a special inquiry named Qigong. The Han Dynasty was an important period for its development, for *The Physical and Breathing Exercise Picture* unearthed from the Mawangdui Han Dynasty tombs at Changsha is the earliest and most complete on it so far. The picture contains 44 charts, each describing a separate movement in the exercise. These charts depict both men and women, old and young alike, some of whom are clothed, some barebacked, with some people standing and others sitting. The charts delineate general exercises and particular actions for specific ailments, breathing methods, imitation of animal movements, and exercises either with or without tools. Each act is separately presented, illustrating different ways of breathing and exercise of the time when it was made. There are some similarities between these postures and those of modern body-building exercises.

Since most postures in early *Dao-Yin-Shu* were imitating the movements of animals, the exercise was also called *Qin Xi* (Animal Play). The ancient TCM physicians mainly followed the practice of body movements and massage while the Taoists would emphasize the control of breath and conduct the intrinsic *qi*. The exercise gradually matured during the Chinese Middle Ages (200-581 AD), when more movements were added to it and classified into different sets. Moreover, many works specializing in health care were written during this period. In the Sui and the Tang Dynasties (581-907 AD), preceding ways of health care and disease treatment were collected and compiled; concerned theories were also proposed, which marked a major breakthrough in its development. From the Song to the Qing Dynasty (907-1911 AD), such great innovations as *Yi-Jin-Jing* and Taijiquan were made and promoted further development of *Dao-Yin-Shu*.

Inspired by the different animal movements, the famous TCM physician Hua Tuo (141-208 AD) devised the so-called Five-Animal Play which mimicked the movements of five animals: the tiger, deer, bear, monkey and bird. The appearance of this exercise marked the new stage of the development of *Dao-Yin-Shu* and opened up broad prospects for the invention of other body-building and health-keeping exercises. The initial chart of this exercise had already been lost; the edition that had been handed down to this day was edited by Tao Hongjing (456-536 AD) and recorded in his *Collection of Ways to Protect Health and Deter Aging*. Though large in variety, most of the popular protocols at present were

compiled by later practitioners in his name, some emphasizing internal exercise, others underlying techniques of combating.

Developing into the Song Dynasty (960-1279 AD), Chinese traditional health care exercises made their most remarkable achievement by inventing an exercise that is practiced while sitting. An example of this is *Ba-Duan-Jin*, which is consisted of eight sections, including sitting postures and standing postures. The whole set of sitting postures includes dry bath (bathing hands, arms, head, eyes, nose, chest, legs, knees), beating the heavenly drum, revolving the eyes, tapping the teeth, resonant gargling, holding-rotating *yaoyan* acupoint (about 3.5 *cun* lateral to the lower border of the spinal process of the fourth lumbar vertebra), holding-rotating arch and rubbing abdomen. In contrast with standing postures, these movements are fine and delicate with moderate intensity. When it came to the Qing Dynasty (1644-1911 AD), *Shi'er-Duan-Jin* (The Twelve-section Health Exercise) and *Shiliu-Duan-Jin* (The Sixteen-section Health Exercise) were developed on the basis of sitting postures. They combined body movements with massage and breathing exercises and were widely practiced.

Another simple and practical exercise called *Xiao-Lao-Shu* also appeared in the Song Dynasty. Practicing principles such as “gradual and moderate practice in accordance to one’s capability,” and “perseverance” were proposed. At the end of the Ming Dynasty (1368-1644 AD), *Yi-Jin-Jing* was invented and later spread widely in the Qing Dynasty. In Chinese, *yi* means “change,” *jin* means “tendons or sinews,” while *jing* means “methods”. It was clearly stated by the compiler that this exercise program was effective enough to improve one’s physique. As a relatively intense form of exercise, it is symbolic of the further development of Chinese physical exercises and health care. It aims at strengthening the muscles and tendons by breathing and isometric training, improving the circulation of blood, and the function of the internal organs.

Taijiquan can be traced back to the turn of the Ming and Qing Dynasty. Nearing modern times, five styles or schools took shape: the Chen, Yang, Wu (Jianquan), Woo (Yuxiang) and Sun schools are named after the families that established them. Each school, connecting both the spiritual and the material worlds, is characterized by the combination of body movements and mind-intention.

While we are summarizing the formation and development of Chinese physical exercises and health care, we can find that the history of *Dao-Yin-Shu* is at the same time the history of Qigong. There are similarities as well as differences between them in both theory and practice. While both of them are the dynamic combination of breathing

actions and body movements, the former stresses body movements and the latter focuses on the mind-intention.

Since the founding of the People's Republic of China in 1949, a mass movement of body-building and health preservation has been flourishing. It is in the 1950s that the word "Qigong" was first put forward. Many Qigong research institutes and Qigong sanitariums were established afterwards. Qigong has been recognized as a branch of human physical sciences to benefit all of mankind.

Records show that Chinese *Dao-Yin-Shu* had spread to Japan and North Korea by the 10th century. By the 18th century it had been introduced to Europe by French missionaries and exerted a vital influence on the establishment of one of the cornerstones of modern physical exercises—Swedish gymnastics, which was rare in the recent history of East-West cultural exchanges. Since the 1960s, the function of Qigong has gained attention from the scientific communities in Europe, America, Japan, and Russia. Comprehensive research has been made in this field. Qigong schools have been set up in Sweden; courses on it are now obligatory for American and Russian astronauts and have been taught in the geriatrics colleges of France; three international symposiums on Qigong have been held since 1973.

In China, Chinese Qigong Joint Performances in July, 1979 promoted the widespread practice of Qigong, which was then pushed to a climax with the establishment of The National Association of TCM on Qigong in September, 1981. In addition to the traditional exercises, such as *Wu-Qin-Xi*, *Ba-Duan-Jin*, *Yi-Jin-Jing* and Taijiquan, new exercises are also explored, strengthened and devised.

The introduction of traditional physical and healthcare exercises to schools has not only helped students to enhance intelligence, encourage ethics, protect health, and prevent diseases, which can benefit them for a life time, but has also promoted the popularity of physical exercises among the mass and made great contributions to people's health maintenance.

Since the 1980s, there has been a "Qigong Fever" all over the world. In this context, some people claim that they own "supernatural power" and are able to bring it into play. These claims are actually swindles in the name of "human body science" to disseminate superstition and con people out of their money. Some of them even turned into evil cults with certain political purposes and brought disaster to Chinese people. In fact, traditional *Dao-Yin-Shu* is simple and easy to learn, with little religious mystery. Hence, as long as we understand its basic principles and movements, we can avoid being deceived.

2. Basic Concepts and Theories

Concept of Holism

Being the fundamental concept and one of the features of TCM, the concept of Holism gives particular emphasis on the unity and wholeness of matters and their relations. TCM believes that the constituent parts of the human body are inseparable in structure, related with and conditioned by one another in physiology. Meanwhile, the human body is also conditioned by the natural environment in the way that the former dynamically adapts to the latter and maintains its normal functions. This recognition of the interrelated nature of the body's components and the balance between the body and nature are defined as the concept of Holism. It is the theoretical basis for Chinese traditional physical exercises and health care, applied throughout the process of TCM treatment, such as diagnosis, healing and recovering.

As a matter of fact, the concept of Holism that “Man corresponds with nature” is embodied in all the theories and practices of Chinese physical exercises and health care. Under the guidance of this concept, the ancient masters of health care paid close attention to the relationship between man and nature. The internal causes—joy, anger, anxiety, pensiveness, grief, fear, and fright are called “Seven Emotions”, while the external causes—wind, cold, summer-heat, dampness, dryness, and fire are “Six Evils”. Although the former type of causes is considered primary, the second is also stressed. The masters recommended the preservation of vital essence (*jing*), the replenishment of *qi*, and the cultivation of vitality (*shen*). The principles are “cultivating one's mind”, “conforming to the change of the seasons”, “eating a balanced and healthy diet”, “observing a regular way of life,” and “avoiding overworking”. In terms of mind cultivation, they advocated keeping a happy mood and emotional balance, for the excessive changes in emotion may lead to disease. For correspondence with the law of nature, they advised that the change of the seasons and the climates should not be conformed passively. Correct ways to maintain good health were suggested, such as active physical exercise, so as to improve one's physique to adjust to the climatic changes. With regard to diet, instead of preference for foods of certain tastes, the masters approved a balanced diet for providing all ingredients of nutrition needed by humans, regardless if the food is crude or delicate. As for daily life, they advocated adjusting one's living habits in accordance with the change of seasons. For example, in Spring, one should rest late and rise early to take a walk and enjoy the fresh air; in Summer, one should also go to bed late while getting up early, in spite of the burning sun; in Autumn, one

should sleep early and rise early following the chicken's living rhythm; in Winter, one should repose early and get up at sunrise. As regards the avoidance of overwork, they were for working in a regular but mild way, rather than working in extreme intensity or to an overdue extent. Fatigue should be avoided. In their view, protracted watching disturbs the flow of blood; long sitting time impairs the muscles; longtime lying weakens *qi*; a long period of standing causes bone injuries; excessive walking does harm to tendons. Therefore, a habit of taking regular but moderate exercise should be followed.

Yin Yang Theory

As a system of ancient Chinese philosophic thought, *Yin Yang* Theory is also a science to generalize and elucidate the laws of nature and those of the living system. It is believed that all things embody two aspects, *yin* and *yang*, the contradiction and harmony of which are the fundamental causes for the production, changes, and perishing of everything. The universe itself is the development of *yin* and *yang*, which oppose yet complete each other.

The basic contents of the *Yin Yang* Theory can be summed up in four words—opposition, interdependence, inter-penetration, and transformation. As a pair, *yin* and *yang* contradict each other. For example, while *yin* is regarded as the upper part of the body, the interior, the *zang* organs, cold, and quietness, *yang* refers to the lower part of the body, the exterior, the *fu* organs, heat, and mobility. Interdependence means that *yin* and *yang* cannot exist in isolation. One cannot exist without the other. Without “upper”, there is no “lower”; without mobility, there is no quietness. Inter-penetration and transformation indicate changeability. For example, heat occurs when cold goes to extreme; brightness takes place when darkness gradually disappears. Thus, as is shown above, the basic contents of *Yin Yang* Theory are not isolated but correlated and interactive.

TCM holds that the dynamic balance of *yin* and *yang* in the movement and changes of the human organism maintains health and the normal function of body organs. In Chinese traditional physical exercises and health care, the harmony of *yin* and *yang* cultivates the flow of blood and *qi*, helps prevent disease, deter aging, and thus prolongs life. Therefore, practitioners should remember that “there is *yin* inside *yang* and vice versa”, so it is possible to restore a balance of *yin* and *yang* and to regain the state of harmony in the living system.

Five Elements Theory

The concept of Five Elements, literally meaning Five Movements, is developed from the concept of “Five Materials” referring to five indispensable and primordial materials in people’s daily life and production activities.

The theory, which further extends the concept, claims that all things in the universe are generated from the movements of five elements—wood, fire, earth, metal and water, the relation among which is inter-promotion and inter-restriction. Inter-promotion means each element generates another and is therefore followed by one another. This productive cycle is in the following order: wood, fire, earth, metal, and water. Inter-restriction means each element conquers an element that follows it, but each is preceded by a conquering element. The controlling cycle, also known as the destructive cycle, repeats itself, with water controlling fire. The relation of the Five Elements shows the interrelation of all things and phenomena in nature, which endeavors to maintain the state of balance in movements.

Theory of Zangfu Organs

Zangfu (viscera), a general term for internal organs, includes the five *zang* organs (the heart, liver, spleen, lungs, and kidneys), the six *fu* organs (the gallbladder, stomach, small intestine, large intestine, bladder, and triple energizer, including other extraordinary organs). The common physiological functions of the five *zang* organs are generating and storing vital essence, while the six *fu* organs receive, digest and transport food.

The heart, playing a leading role in all the viscera, provides motive power for blood circulation.

The liver is the primary organ for storing blood. It smoothes and regulates the flow of *qi* and blood by producing bile and purifying the blood.

The spleen rules transportation and transformation, which means it digests, absorbs, and distributes nutrient essences in the entire body. It can also command and control blood.

As the respiratory organs, lungs govern and exchange *qi*.

Being the prenatal base of life, the kidney, either one or a pair of organs in the lumbar region, stores essence of life, rules water, governs the bones, produces bone marrow. An abundance of kidney essence leads to the sufficiency of kidney *qi*, which in turn contributes to good health and ensures good eyesight and hearing. In addition to these attributes, “the gate

of life” and uterus are also inside the domain of the kidney function.

The main physiological function of the gallbladder is to store bile to aid the digestive process. To store vital essence is its other function.

The stomach governs intake, i.e. it receives and digests ingested foodstuffs. Playing an important role in life, it functions together with the spleen, and is called the “root of acquired constitution”.

The small intestine receives what the stomach has not completely digested and further digests it. It also separates the “pure” (useful) from the “impure” (waste).

The large intestine receives the impure parts of the digested food from the small intestine and continues to absorb nutrients and water from these ingredients. At the end of this process, stools are formed and excreted.

The bladder is responsible for promoting *qi* flow, transforming *qi* into liquid, and storing and discharging urine.

The triple energizer is a collective term for the upper, middle, and lower energizer. The upper energizer is located above the diaphragm and includes the heart and the lungs; the middle energizer is the region above the belly button and below the diaphragm, including the spleen and the stomach; the lower energizer, which includes the liver, the kidneys, the large intestine, the small intestine, and the bladder, is located below the belly button. The triple energizer governs ingestion and is the channel for the transformation and metabolism of water, food, and fluid.

The functions of *zangfu* mainly depend on the *qi* of *zangfu*. The loss of one’s genuine *qi* may result in the deficiency of *zangfu* organs. Therefore, the practicing process of Chinese traditional physical exercises and health care is also the process for cultivating the *qi* of *zangfu*. On the other hand, it is believed in TCM that seven emotions are closely related to the *qi* of *zangfu*. For example, “*qi* is driven upwards by rage, relieved by joy, inhibited by excessive anxiety, stagnated by pensiveness, consumed by excessive sorrow, lowered by excessive fear, and disturbed by fright.” For these reasons, an optimistic attitude plus a peaceful mind is suggested to the practitioners so as to cultivate the *qi* of *zangfu*.

Theory of Meridians (Jing) and Collaterals (Luo)

Jing Luo, a general term for meridians and collaterals and the routes for the transportation and circulation of *qi* and blood, is an important constituent part in the human body, with *Jing* meaning “to pass through” or “pathway” and *Luo* meaning “network”. Meridians refer to the vertical channels which carry and distribute *qi* and blood; collaterals branch off horizontally from the vertical channels and connects both *yin* and *yang*

meridians; the smaller branches are called minute collaterals (*Sunluo*), running over the whole body in a crisscross fashion to smooth genuine *qi*. To sum up, *Jing Luo* is a unique system connecting the interior (the internal organs) and the exterior (body surface).

In the *Jing Luo* system, *Jing* consists of twelve regular meridians and eight extraordinary meridians, while *Luo* (collaterals) includes major collaterals (*Bieluo*), minute collaterals (*Sunluo*) and superficial collaterals (*Fuluo*). Besides, there are twelve muscle meridians (*Jingjin*) and twelve skin areas (*Pibu*).

The twelve meridians are closely related to *zangfu* organs. It is composed of three *yin* meridians of hand (the Lung Meridian of Hand-Taiyin, the Pericardium Meridian of Hand-Jueyin, the Heart Meridian of Hand-Shaoyin), three *yang* meridians of hand (the Large Intestine Meridian of Hand-Yangming, the Triple Energizer Meridian of Hand-Shanyang, the Small Intestine Meridian of Hand-Taiyang), three *yang* meridians of foot (the Stomach Meridian of Foot-Yangming, the Gallbladder Meridian of Foot-Shanyang, the Bladder Meridian of Foot-Taiyang), and three *yin* meridians of foot (the Spleen Meridian of Foot-Taiyin, the Liver Meridian of Foot-Jueyin, the Kidney Meridian of Foot-Shaoyin). Descending along the inner side of the arm, the three *yin* meridians of hand are interior and run from the chest to the hand; following the outer side of the arm, whereas three *yang* meridians of hand are exterior and run from the hand to the head. Distributed over the lateral and posterior aspects of the leg, three *yang* meridians of foot are exterior and run from the head to the foot. Ascending along the medial aspect of the leg, the three *yin* meridians of foot are interior and run from the foot to the stomach. The above-mentioned twelve meridians are known as the regular or principal channels. As the bond for the twelve regular meridians to flow *qi* and blood, the eight extraordinary meridians are *Du*, *Ren*, *Chong*, *Dai*, *Yangwei*, *Yinwei*, *Yangqiao*, and *Yinqiao* meridians. If the twelve meridians are likened to the river, the extraordinary meridians are the swamp, balancing the genuine *qi* in the twelve meridians. Among them, *Ren* and *Du* meridians are the most important. *Ren*, a *yin* meridian running along the front midline, governs all the other *yin* meridians; *Du*, a *yang* meridian running along the back midline, governs all the other *yang* meridians. In Qigong practice, along with the connection of *Ren* and *Du* (the so-called minor celestial circle), all the other meridians and collaterals inside human body can be connected successively, thus forming up the so-called major celestial circle.

Collaterals, which branch off from the twelve regular meridians, *Ren* and *Du* meridians (Figs 1-2-1, 1-2-2), together with one spleen collateral,

are called the fifteen major collaterals. The smaller and thinner ones are called minute and superficial collaterals.

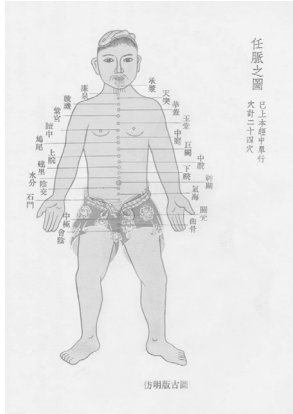
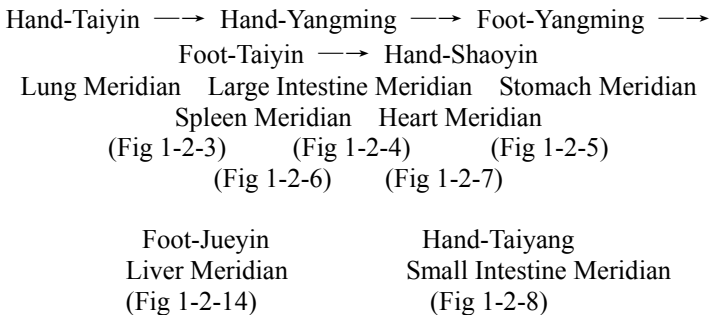


Fig 1-2-1



Fig 1-2-2

The flow patterns of the twelve meridians are as follows: Generally speaking, all *yin* meridians follow an upward order, while all *yang* meridians a downward order. Starting from the Hand-Taiyin Lung Meridian, it flows towards the Foot-Jueyin Liver Meridian. Then, it proceeds from the Lung Meridian of Hand-Taiyin and repeats the cycle. The meridian cycle is outlined below.



Foot-Shaoyang ←— Hand-Shaoyang ←— Hand-Jueyin ←—
 Foot-Shaoyin ←— Foot-Taiyang
 Gallbladder Meridian Triple Energizer Meridian Pericardium Meridian
 Kidney Meridian Bladder Meridian
 (Fig 1-2-13) (Fig 1-2-12) (Fig 1-2-11)
 (Fig 1-2-10) (Fig 1-2-9)



Fig 1-2-3

Fig 1-2-4

Fig 1-2-5

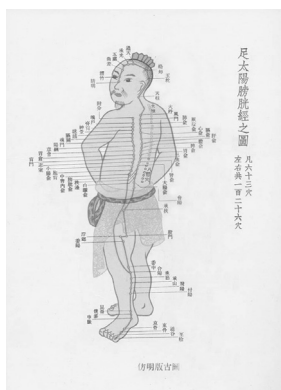


Fig 1-2-9

Fig 1-2-10

Fig 1-2-11

strengthening vital essence, *qi* and vitality while the latter at the muscles, bones and skin. The ancient practitioners view the sun, moon, and stars as the three treasures of the sky, the water, fire, and wind the three treasures of the earth, and the vital essence, *qi*, and vitality the three treasures of the body, indispensable to the physical body.

Unique as they are, vital essence, *qi*, and vitality are inseparable. On one hand, vital essence houses vitality; thus, the accumulation of vital essence ensures the completeness of vitality and the loss of vital essence dislodges vitality. On the other hand, vital essence serves as the hothouse of *qi*; hence, lack of vital essence results in the non-existence of *qi* which leads to death. These three concepts existing in a complementary and interactive way are the crucial factors for maintaining the well-being of human life. Vital essence, the basis of life, is a congenital substance necessary for the origin of life. Consumed in the physiological activities, it is at the same time replenished and preserved to sustain life. Vitality governs the appearance, consciousness, or life activities. It is the reflection of the functions of the internal organs and hold sway above every aspect of the physical body. Its material base is created by the congenital essence, stored in lower *dantian* by the ingested nutrient essence and constantly replenished. *Qi* is viewed as the life force or the vital energy of the body. It is with the energy acquired from the preservation of *qi* that the functions of all body components are maintained. Without *qi*, vital essence cannot be regenerated, nor can vitality exist. Therefore, in order to keep the body physically strong with vigorous vitality, the cultivation of *qi* should be exercised in the first place. The major aims in health care are preserving vital essence, cultivating vitality, and replenishing *qi*, all aiming at preventing disease and deterring aging.

3. Efficacy and Mechanism

The multi-efficacy and complicated mechanism of Chinese traditional physical exercises and health care have long been explored and expounded by *kungfu* practitioners and physicians of past ages. Four aspects concerned are meticulously selected and elaborated here.

Efficacy and Mechanism of Preventing Disease and Improving Health

1. Supporting vital *qi* and expelling pathogenic evils

TCM holds that the pathogenic factors are not the only factors resulting in disease, for the human body's resistance to various pathogens

and health maintenance also count. Thus, to strengthen vital *qi* against diseases is one of the major aims of traditional physical exercises and health care. In the view of TCM, *qi* governs blood and blood depends on *qi* for its movement. When the flow of *qi* and blood becomes sluggish, disease occurs; but it can be cured automatically with the smooth circulation and transportation of *qi* and blood. Here *qi* has two kinds of existence: The first is the nutrient essence that forms the basis of human body and maintains its life activities, for instance, the food essence and the fresh air; and the other is the physiological function of *zangfu* organs, hence we say as *qi* of *zangfu* and *qi* of *Jing Luo*. Correlated as they are, the former kind is the physical basis of the latter, the latter being the functional manifestation of the former. *Qi*, reaching the internal organs as well as the limbs and joints along the meridians and collaterals, is the fundamental force warming and nourishing muscles and *zangfu* organs, lubricating and moistening tendons, bones, skin and hair. With its ascending, descending, in-going and out-going movements, it tightens striae and guards against external evils. In light of the above argument, exercises are advocated to strengthen vital *qi* and remove various evils for keeping normal and regulated blood circulation, *zangfu* functions and metabolic activities, all for the purpose of improving health conditions.

2. Regulating psychoactivities and improving body functions

Through the practice of “relaxation” and “stillness”, traditional physical and health care exercises regulate people’s psychoactivities, upgrade body adjustment functions and improve antiviral ability. The principle “tranquility and nihility”, i.e. wiping out distracting thoughts and focusing on relaxation, can ease the muscles and reduce the impact on the cerebral cortex so that “the state of relaxation response” can be achieved and the physiological function improved. For instance, according to the epidemiological study of hypertension, tension can affect some physiological indicators, and environmental pressure forces the human body to constantly regulate its activity, resulting in “emergency response” which leads to the increase of skeletal muscle bloodstream, the rise of blood pressure, the acceleration of heart rate and respiratory frequency. Instead, “relaxation response” weakens the activity of the nervous system, reduces the lactic acid content in arterial blood, decreases the metabolic rate, lessens the activity of the plasma dopamine, the β -hydroxy acid and rennin, hence quickening the recovery of normal conditions. Furthermore, traditional physical and health care exercises enable people to feel at ease, eliminate negative emotions and morbid mentality, and thus effectively strengthen the central nervous system, respiratory system, digestive system

and cardiovascular function.

3. Balancing *Yin* and *Yang*

The *Yin Yang* disharmony, one of the causes of disease in TCM, can be put right with the *dual modulation effect* by containing the strong while supporting the weak. As found in experiments and clinical observation, when the practitioners attain stillness, the activity of his or her sympathetic nervous system declines, metabolic activities slow down, the state of high reaction is controlled and the hyperfunction is kept in check, all of which manifest the effect of *Qigong* exercise: restricting the excessive *yang* and restoring *yin*. On the contrary, after *Qigong* exercises, those with kidney *yang* deficiency will find that the content of uric ketone steroids in their body recovers to the normal level, the triphosadenine and cyclic amp content in blood plasma increases, and the immune function of white blood cells intensifies. All of this is the result of *yang* replenishment. Consequently, these practitioners will feel warmth in their limbs. Such effects can be seen at different levels and reflect the mechanism of traditional physical exercises of curing illnesses and protecting health.

4. Opening up channels of meridians and collaterals

According to TCM, soreness occurs when channels are blocked, and so blockages in meridians and collaterals are another cause of disease. As observed, those having meridian blockages which disturb the flow of *qi* and blood may suffer from body temperature inequality ranging from the extremely high to the extremely low. However, with the progress of exercise, the flow of *qi* and blood tends to get regulated. Due to the redistribution of blood, the peripheral vessels open, microcirculation improves, the blood flow volume in tissues increases and regional temperatures rise. Consequently, the difference of body temperature tends to be remarkably reduced and restore to balance. The thermal imager shows that when a person is practicing, wherever *qi* goes, brightness overwhelms while darkness succumbs and the bright spot moves with the mind-intention. The temperature rises by 2-4°C or so and the regional blood flow volume increases by as much as 30%. Meanwhile, the activity of dopamine and β -hydroxylase in blood plasma decreases while the eosinophil, erythrocyte and hemoglobin increases, immune response increases, and the secreted volume of plasma cortisone is halved. Hence, as is shown above, illness can be prevented or cured by dredging up channels of meridians and collaterals, and regulating *qi* and blood.

5. Deterring aging and prolonging life

Central neurotransmitter and endocrine gland activity tend to change during physical exercise. Therefore, as is measured, the practitioners will feel at ease and calm after practice, for it results in a decrease of the activity of dopamine, a central neurotransmitter, and an increase in the consistency of the prolactin in blood plasma. Furthermore, the decrease of the secreted volume of plasma cortine deters aging and enhances the immune system, thus preventing illnesses and prolonging life.

Efficacy and Mechanism of Developing Body Potentials

Traditional physical and health-keeping exercises can improve the coordination of the human nervous system and protect the cerebral cortex by suppressing overdue activity, thus bringing human potential into full play and helping self-control. Physiological experiments have demonstrated that a large number of electroencephalograms recorded of men when they are awake display high-frequency and low-amplitude waves with poor synchronization. However, the electroencephalograms made by Qigong masters are low in frequency but three times higher than normal people in amplitude, with very good synchronization. All these changes are most notable in the frontal and parietal lobes, which serve to direct the consciousness in the central nervous system. This proves that Qigong exercise is able to make the activities of cerebral cortex cells more orderly, and can thus improve the efficiency of brain function. It is also found through tests that the cerebral cortex is in a special process of being initiatively intra-suppressive when doing Qigong exercise. Relying on the protection of such a favorably suppressive process, the inordinate function of cerebral cortex cells caused by over-excitement can be restored to normal, the obstinate pathologic excitement foci can be transferred into suppressive state, and most of the central nervous system can be renovated positively. All these changes are beneficial for improving the coordination of the nervous centralis between excitement and suppression and better directing the functional activities of all organs.

Research indicates that the potential of the human body is great but not fully brought into function. The number of human brain cells is about 14 billion or so, among which only several billions are usually tapped, and so there is still 80 to 90 percent to be done. Similarly, only part of other human organs, like blood capillary and alveolus, is used. After Qigong exercise, there are obvious changes in brain waves, an increase in lung capacity and enlargement in vascular volume. This shows that the human body's potential can be further tapped through Qigong. By keeping on it,

we can change the modes of receiving, processing and storing information in brains and fully utilize the otherwise inactive cells, thus resulting in the improvement of human intelligence, sensing capability and function of controlling one's own actions. This makes human vitality more exuberant and human beings more intelligent, living longer, healthier lives.

Efficacy and Mechanism of Enhancing Body Function

Qigong exercise, by showing its preliminary effectiveness in improving people's competitive ability, treating their injuries, eliminating their fatigue and adjusting their state, has become a new trend in physical scientific research.

Treatment of sports injuries is generally about acupoint-pointing and self-practice Qigong, supplemented with medication, acupuncture and massage. Its mechanism is to mobilize and motivate the self-adjustment of the human body's physiological function, aiming at strengthening the vital *qi*, toning the root, nursing *yin* and *yang*, and clearing the channels in order to help with rehabilitation.

Qigong is a positive way to eliminate exercise-induced fatigue. On the one hand, Qigong exercise can accelerate the blood circulation and increase the expansion and contraction of lung cells, which leads to adequate supply of oxygen and energy, the elimination of accumulating lactic acid and the decrease of muscle soreness. This function makes it beneficial for eliminating fatigue. On the other hand, Qigong exercise can improve the function of internal organs, whet the appetite, and accelerate the excretion of metabolites, thus promoting the restoration of the body. In addition, Qigong exercise, which can adjust the central nervous system, relax the muscles, hence reducing energy consumption and increasing energy storage to mobilize body potential, is an effective way to positive recovery.

Nowadays, Qigong or similar methods are adopted home and abroad as an approach to adjust athletes' competitive state and improve their scores. The results are often gratifying. It is found in preliminary attempts that Qigong exercise can indeed strengthen the self-control of central nervous system, overcome physical inertia, increase competition desire and responsive actions, all contributing to the enhancement of the athletic ability.