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## 5 Taijiquan and Health

As a result of his important role in the popularising of taijiquan during the 1930's, Yang Chen Fu is often called the "Father of modern taijiquan". In his book, *The Application of Taijiquan*, he mentioned that when he was a young man he decided there was little point in his learning taijiquan because it only enabled him to defend himself against a single person. He preferred to learn a technique which would enable him to fight millions at a time, by which means he could help save China from being conquered and divided up by other nations. His uncle explained to him that taijiquan was not just a means of self defence: in fact, primarily, it was a method of making people healthier and stronger. In order to save a nation, his uncle advised him, one should start by making all its people healthy and strong. Then there could be some hope of saving a country from foreign domination.

Yang Chen Fu took these words to heart and from that time onwards devoted his life to learning and teaching taijiquan, and it is largely as a result of his efforts that taijiquan has become so widely practised around the world. However, it has primarily been taijiquan's immense benefits to health that have caused it to become so popular rather than its usefulness as a means of self defence.

Even though written evidence indicates that taijiquan was only devised about 300 years ago by Chen Wangting, the basic principles and techniques used can be dated back thousands of years. For example, the internal discipline used in taijiquan is based on the principles of Daoyin and Tuna. These techniques are both mentioned in the writings of 4th century B.C. authors such as Lao Zi and Zhuang Zi. Many of these techniques were devised by traditional Chinese physicians to improve health and longevity.

Taijiquan stands apart from other martial arts in its use of the sort of techniques mentioned above which are used to strengthen the internal Qi, and other characteristics which are discussed elsewhere in this book. It is this combination of exercises used to strengthen the internal Qi together with the simultaneous performance of a series of relaxed, continuously flowing external movements directed by mental concentration which makes taijiquan so immensely suitable for healthy exercise.

The accumulation of thousands of years of knowledge and technique has come together in the creation of taijiquan to form a completely perfect exercise for good health. Its main use for many years was, of course, as a martial art, and in this form it was also proved to be one of the most effective forms of combat ever devised. Taijiquan's origin as a martial art doesn't invalidate it as a means of attaining good health, since, even in its original form, the main emphasis in its practice was to create a stronger, and thus a healthier body.

Taijiquan is a complete exercise in many sense of the word. Firstly, it requires complete mental concentration and great clarity of mind, so training the central nervous system

and promoting mental relaxation. Secondly, it either directly or indirectly exercises and benefits all the body's internal organs. Thirdly, it exercises all the muscles, joints and ligaments of the body. There can be no doubt of its immense benefits to health, and the vast majority of people who nowadays practise taijiquan do so for this very reason.

Scientific research supports the view that regular practice of taijiquan is beneficial to the health of both body and mind. Specifically, regular practice will improve mental health, improving mental relaxation and the ability to concen

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trate, and also physical health, by improving many of the body systems such as the cardio-vascular, respiratory and digestive systems. Taijiquan has also been shown to improve immunity, coordination, body awareness and the skeletomuscular system, and is also successfully used for its curative effect on many diseases. It has been used by doctors all over the world to treat different psychosomatic diseases, mental stress, heart disease, hypertension, diabetes, arthritis etc.

Much research has been undertaken, and many papers published in authoritative journals, concerning the medical benefits of taijiquan. Much of this has been carried out in China, the original home of taijiquan, but some has also been undertaken in other countries of the world because of its increasing popularity in those parts. A summary of one of these papers is included in Appendix (ii).

It is worthwhile taking a look at these health benefits a little more closely, firstly from the viewpoint of modern scientific knowledge of human physiology and of modern medicine, and then from the viewpoint of the classical taijiquan texts and of traditional Chinese medicine.

All forms of taijiquan share many basic principles and therefore have many similar benefits to health. However, there are particular characteristics relating to each style of taijiquan, so we will finally look at those particular benefits which result from practising Chen style, taijiquan - a style that has a greater range of benefits than any other style of taijiquan.

**1. The Modern Viewpoint (i) Mental Health** In our modern world we travel very much in the fast lane maintaining lifestyles that are often extremely hectic, and resulting in many cases in poor eating habits, too little exercise and a great deal of mental stress. It has been said that more than 50 % of illnesses treated by modern doctors can be attributed to psychosomatic disorders or, directly or indirectly, to mental stress.

It is well known that mental stress can cause physical illnesses such as cardio-vascular problems and high blood pressure. Stress has been proven to cause increased blood cholesterol levels and even some forms of cancer. Thus mental stress has a very clear and direct relationship to total body health, causing not only mental but also physical illness.

In practising taijiquan the principle requirement is for the mind to be completely cleared of extraneous thoughts so that it can concentrate completely on the execution of the required movements. When performing taijiquan the mind must be in a relaxed yet clear and alert state so that it can be used to direct and coordinate the movement of all parts

of the body. This exercises the central nervous system and improves mental relaxation.

There is very definite connection between relaxation of the body and relaxation of the mind. Usually when one is mentally tense one's body tenses up, and when one's mind is relaxed one's body is also relaxed: there is a direct physiological connection. When taijiquan is practised properly the muscles are gently stretched out and fully relaxed and it would be impossible to do this if in a tense state of mind. Thus in order to practise taijiquan properly one is almost compelled to relax mentally.

Further enhancing mental relaxation, the movements of Chen style, taijiquan are complicated, and specific requirements are called for at a particular time for each and every part of the body. In order to execute the movements properly one needs to have a clear mind, relaxed yet totally concentrated, which makes it almost impossible to think of any other matter than taijiquan.

In order to fulfill all these requirements it is necessary to train one's mind, and it is possible through it to reach a mental state similar to that of meditation, which is why taijiquan is often called "meditation in motion".

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Practising taijiquan is also a pleasurable experience, giving the practitioner a feeling of comfort and improving their mood. The Sinica study (summarised in Appendix (ii)) was able to verify this fact through the recording of electrical brain waves (EEG) of two groups of people. One group consisted of regular practitioners of taijiquan whilst the other group, a control group, were not taijiquan practitioners. In the experiment the taijiquan group recorded a larger number of alpha waves than the control group. The production of alpha waves, the study reported, signifies a state of "mental clarity and concentration", and subjects were said to be "highly calm and alert", and to have "improved or restored memory". All these findings are consistent with mental relaxation.

*(ii) The Cardio-Vascular System*

Another part of the body that has greatly benefited from regular practice of taijiquan is the cardio-vascular system. Various studies (including the Sinica study mentioned previously) have shown that regular practice of taijiquan improves heart function, exercising the heart in a gentle, yet gradual and well controlled way, in a similar manner to swimming. Exercise of the cardio-vascular system in taijiquan is continuous but gentle, and exercises can be tailored to suit different levels of health. So taijiquan can be said to be suitable for everybody, and as a form of sustained exercise of the cardio-vascular system, taijiquan is now recommended by many physicians to their patients with heart problems.

Another means in which the heart benefits from the practice of taijiquan is through the abdominal breathing carried out as a part of it. This causes alternate increases and decreases of pressure inside the abdominal cavity which, in turn, cause alternate increases and decreases of pressure inside the thoracic cavity. This in effect gives the heart a gentle massage, having similar beneficial effects to a massage given to tired muscles.

Changes of pressure inside the thoracic cavity also improve the ability of the heart and lungs to contract and expand, thus ensuring better blood circulation, and improved air exchange within the lungs.

Another factor which can lead to improved functioning of the cardio-vascular system is that when the whole body's muscles are stretched out, especially when executing spiral movements, this has an effect similar to that of twisting a sponge, efficiently emptying the blood and lymphatic fluid from all parts of the body including the extremities. When performing the subsequent returning movement this has an effect like untwisting a sponge; the body is able to suck in a greater amount of blood and nutrients than normal, thus improving the circulation of blood through the body and allowing oxygen and nutrients to reach all parts of the body more efficiently.

There are other factors which can affect the heart in a less direct way, such as elevation of cholesterol and triglyceride levels, which can cause atherosclerosis (damage to the blood vessels and to the heart). It has been clearly demonstrated in many studies (including the Sinica study), that taijiquan can decrease the level of cholesterol and triglycerides in the blood.

### ***(iii) The Respiratory System***

The abdominal breathing required in taijiquan is performed in coordination with body movements and is deep, slow and rhythmic in nature. This type of deep breathing utilises the abdominal and diaphragmatic muscles and is very beneficial as an exercise for the lungs. Many physiotherapists teach their preoperative patients deep diaphragmatic breathing as an aid to recovery, since it opens up the full space of the lungs and promotes better oxygenation of the body tissues. By creating alternating negative and positive pressures within the thoracic and abdominal cavities it improves perfusion on the internal organs.

Correct coordination of body movement with breathing is very important. When a movement is performed which involves an opening up of the body,

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such as when both of the upper limbs stretch out in Leisurely Tying Coat, this should be accompanied by inspiration. The movement involved in opening up stretches out the muscles of the chest wall, which controls inspiration, as well as lowering the diaphragmatic muscles. The combination of all these movements of the muscles fully extends the respiratory capacity. When performing a closing up movement, the reverse is also true, with all the air being fully exhaled from the lungs.

A study quoted from Traditional Chinese Fitness Exercises by China Sports Magazine and New World Press showed that taijiquan practitioners enjoyed greater vital lung capacity, greater lung tissue elasticity and a lower rate of calcification of the rib cartilages, as well as easier breathing patterns after completion of a respiratory function test, and a quicker recovery time.

### ***(iv) The Digestive System*** Taijiquan improves the digestive system in various ways.

Firstly, when practising taijiquan, the relaxation of muscles and elimination of mental stress enhances the functioning of the parasympathetic nervous system which aids better digestion

and also the general repair and maintenance of the body.

Secondly, practising taijiquan increases the flow of blood to the intestines and stomach through the alternate increases and decreases of pressure inside the abdomen resulting from abdominal breathing. With improved blood circulation the function of the digestive system naturally also improves. The change of pressure caused by diaphragmatic breathing also gives the abdominal organs a gentle massage.

Thirdly, in a sequence of events not yet fully understood, it has been shown (by the Sinica study and others) that the level of blood cholesterol and other blood fats in the body can be significantly lowered by practising taijiquan for as little as six months. It seems that somehow the breakdown of unhealthy fatty substances is encouraged through the practice of taijiquan.

Fourthly, as with all other forms of exercise, taijiquan aids the digestion of food and enables the body to utilise a greater proportion of its calorific content. Thus taijiquan is particularly suitable for people with poorly functioning digestive systems or who are obese.

(v) The Skeleto-Muscular System It has been scientifically established that lack of physical exercise leads to a thinning and weakening of the bones (osteoporosis) and causes susceptibility to fractures. People with a deficiency of calcium, and those whose body cannot utilise the calcium in it, such as menopausal women, are also affected in this way, but lack of exercise is known to be a common cause of these sort of problems. It is also well known that people who exercise very little are extremely prone to muscular and ligamental injuries.

Research has quite clearly established that regular exercise increases the density of the bones, making them stronger and less likely to fracture. Taijiquan is especially effective as a form of exercise because it increases the muscle load slowly, without stress, and gradually increases the strength of the bones.

When practising taijiquan, correct upright posture is essential. Good posture decreases the stress on the joints and the bones and allows them to work more efficiently and as a consequence to last longer. Poor posture not only affects the internal organs, since there is less space for them (for example, people with hunch-backs have a smaller lung capacity), but also causes more stress on the joints and the bones.

The gentle stretching exercises practised in taijiquan will strengthen the muscles and the bones, making the muscles more supple and stronger. This rhythmic stretching out and relaxing of the muscles has the effect of alternately squeezing the muscles dry and then letting the blood flow back in. In this way

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more blood becomes diffused into the muscles and the joints, and with the blood comes the nutrients and the oxygen that will improve the nutritional state of the tissues, muscles and bones. Also, a muscle that is tense due to physical or mental stress for a long time will be easily damaged, whereas the gentle stretching which occurs when practising taijiquan will prevent such injury or even repair it.

Almost all taijiquan movements hinge from the waist and involve a great deal of movement of the region around the lumbar vertebrae. Taijiquan, therefore, greatly benefits the lumbar spine and the muscles around it. The Traditional Chinese Fitness Exercises study mentioned earlier indicated that only 25.8 % of a group of elderly taijiquan practitioners studied suffered from spinal column deformities compared with 47.2 % of a control group chosen to represent the normal population and of the same age. X-ray examination of their spines also showed senile osteoporosis (thinning of the bones) in only 36.6 % of the taijiquan group as compared to 63.8 % of the control group.

(vi) Other Systems Taijiquan benefits ALL systems of the body. The immune system, which helps the body to fight invading disease and cleans up abnormal cells which are the precursors of cancer, is another good example. In 1989 in Dallas, Texas, in the USA, a research team undertook one of the world's largest ever studies on exercise and health. The findings showed that moderate exercise, such as obtained from walking or swimming will improve many aspects of health, including the immunological system. Taijiquan must, therefore, be considered to be an entirely suitable form of exercise for achieving improved immunological activity etc.

All other systems of the body are geared to working more harmoniously and effectively with regular exercise. When the major systems, such as the cardiovascular and respiratory systems, are working well then the repair and maintenance of other systems also functions well. So we can safely assume that practising taijiquan will improve metabolism and also the regenerative capacity of the body.

The fact that taijiquan benefits so many different parts of the body at the same time, does not diminish the level of benefit received by the individual parts. On the contrary, the benefit obtained by one system will actually enhance the benefits obtained by another. For instance, if we compare the benefit obtained to mental relaxation by practising taijiquan for one hour compared to that obtained from lying down and relaxing mentally, the former is considerably more effective because the relaxation of the muscles enhances mental relaxation, as does the abdominal breathing and the mental concentration required to perform the movements correctly. In fact, taijiquan is so well designed that one benefit will always amplify another. To give another example, mental relaxation improves muscular relaxation, muscular relaxation improves abdominal breathing and better posture, which in turn will further improve mental relaxation. It is like a ripple effect, with the benefits compounding on each other to improve the overall health of the body.

In summary, taijiquan is a gentle form of exercise that is suitable for the entire physiological system of the human body. It is especially beneficial since it combines physical exercise with mental exercise and, unlike many other forms of exercise, has the added advantage that, because it is gentle and relaxing, it also causes minimal injury problems.

2. The Traditional Viewpoint In ancient times Chinese culture and traditional medicine

were considerably more sophisticated than those in practice in many other parts of the world. In

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fact, many of the theories and practices in use in China two to three thousand years ago have been found to be entirely consistent with modern medical practices. For instance, in the Han Dynasty (25 - 220 A.D.) the renowned doctor Hua Tuo wrote, "The human body requires constant exercise", and also that "regular exercise aids digestion, stimulates circulation and helps the body to resist diseases." This is almost the same any modern doctor would advise; it is hard to believe that it was written nearly 2,000 years ago!

Many of the points discussed under the previous section are also entirely consistent with traditional Chinese medicine and do not need to be repeated here. Instead, discussion will mainly be centred on those traditional ideas not yet embraced by modern science.

Taijiquan incorporates the ancient philosophical techniques of Daoyin and Tuna. Daoyin is the concentrated exertion of inner force, whilst Tuna is a set of deep breathing exercises. Forming the basis of Daoyin is the Jingluo theory of the flow of internal energy throughout the body, which forms the basis of all traditional Chinese medicine. The term meridian which is used in western texts on acupuncture is the equivalent of Jingluo. Qi flows from the Dan Tian along meridians to all parts of the body.

Qi is a concept firmly embedded in Chinese culture and traditional medicine. Qi is defined as a form of life energy which circulates all over the body in all living people. It originates as a combination of air from the lungs, the essence from the kidneys and the essence from food and drink via the digestive system.

Qi not only maintains life and health, it governs almost all activity in the body including: (i) It activates the life force, and the growth, metabolism, regeneration and

repair of the body. (ii) It has a warming effect, regulating body temperature and keeping the

organs in an active capacity. (iii) It guards against invasion of the body by disease. (iv) It enhances and regulates the circulation of blood, body fluids, saliva etc.,

throughout the body and is, therefore, responsible for the transportation of

nutrients and oxygen to the whole body. (v) It restores and maintains the level of blood and body fluids circulating in

the body. Qi is stored in the Dan Tian and circulates around, to and through all parts of the body.

In summary, Qi is of vital importance to the health of the entire body. A person with strong Qi is both healthier and stronger than a person with weak Qi, and any

disturbance of the flow of Qi, or weakening of Qi, will result in illness.

Qi is not a tangible substance, and its existence cannot (as yet) be detected by modern scientific methods. Circumstantial evidence is however plentiful: most taijiquan practitioners will testify that they can feel the Qi flowing through their body and will, to varying degrees, be able to direct this flow.

Traditional medicine bases much of its theory on Qi; it is an essential part of all traditional Chinese medicine, including acupuncture which is now very well known and accepted throughout the world.

Acupuncture is based largely on a belief in the curative effects of correcting the flow of Qi. Acupuncture therapies are used to regulate and improve the flow of Qi precisely in the same way and for the same reasons that practitioners of taijiquan, through constant practice, aim to improve the flow and strength of their Qi, giving lasting therapeutic benefits to the whole body.

Taijiquan was created with the basic intention of strengthening internal Qi. It can be achieved by following the basic principles of Taijiquan, that is, by allowing Qi to sink to the Dan Tian, keeping the body erect, keeping the head straight, and relaxing and sinking the shoulders and elbow joints. The flowing

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movements of taijiquan are an excellent means of facilitating the improved cultivation and flow of Qi.

With a stronger Qi, and with the ability to direct it at will, the practitioner can concentrate Qi at one point of his or her body when attacked, making this point stronger and less susceptible to injury. When the internal force is delivered during an attack, the power released is very great, as often demonstrated by the famous masters of taijiquan, such as Chen Fake. (See the section on Chen Fake in the chapter on the history of taijiquan for details of his remarkable use of internal force.)

Control of Qi can be used to great benefit in improving health. Not only does a stronger and well flowing Qi allow the body to function better, but it can also be directed to cure illness of a particular part of the body.

For many years taijiquan has been recommended by traditional Chinese doctors as a form of therapy, and nowadays there are special taijiquan units attached to many of the hospitals in China which teach patients how to use taijiquan to improve their health.

### 3. The Special Benefits of Chen Style, Taijiquan

#### **to Health**

The most popular form of taijiquan in practice in the world today is the Yang style. Yang Luchan learned Chen-style, taijiquan in the early 19th century when he was employed as a servant in the Chen household. He became a highly skilled and enthusiastic practitioner and soon

developed his own style, which was more open and gentle with no fast movements, jumps or delivery of force. His style was further developed and refined by his sons, and in particular by his grandson, Yang Cheng Fu, into the Big Frame which is now the most popular style of taijiquan practised in the world today. It is a style suitable for general use by people of all ages and levels of fitness and is in keeping with modern needs of exercise and the maintenance of good health.

The Chen style is not as well known or as popular as the Yang style but it contains many characteristics which were omitted from the Yang style when that was created. These unique characteristics offer additional health benefits to suitable practitioners.

The Chen style, for example, places a great deal of emphasis on the use of spiral force. As the body is twisted this has a squeezing effect on the body and the muscles, emptying the blood vessels and the lymphatic system more thoroughly. When the body is twisted back the other way this allows the blood vessels to be filled to their full capacity once more. This greatly improves circulation and helps to remove toxic elements from the blood. This alternate contraction and then relaxation which results from performing spiral movements with the body has very great therapeutic value for the circulatory system.

One of the main technical characteristics of Chen style, taijiquan are that softness and hardness should complement each other, with fast and slow movements being intermixed. To achieve satisfactory expression of these characteristics requires excellent timing and training in the control and delivery of internal force. This further improves coordination and reflexes. A recent study in Beijing has shown that practitioners of Chen style, taijiquan have faster reflexes than practitioners of other styles. The fast and hard movements are particularly beneficial to those people who have a need for more rapid expenditure of energy, or for those who need a more expressive emotional outlet.

The movements in Chen style, taijiquan also contain a more clear and direct application for self-defence than any other form of taijiquan. This is an added bonus to the practitioner since understanding the application of a movement to self-defence helps the practitioner to better understand the movement and also how to direct the flow of internal force within it. It forms a sound foundation for training for self defence purposes and is entirely suitable as a complement to other martial art disciplines.

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Chen style, taijiquan also involves more hand and finger movements and more stretching of the body joints than other styles, which is very beneficial for those people who have a need for a more comprehensive exercise for all parts of the body.

Chen style is more vigorous, usually requiring a lower stance, and includes fast movements and force delivering movements, such as the punch in Cover With Hand and Punch With Fist. These require a greater exertion of strength. Yet, as explained in the movements themselves, they can all be performed with differing degrees of

exertion; certain modifications and the adoption of a higher stance will make the form much less vigorous. Chen style, taijiquan is, therefore, suitable for most people, and for younger people who wish to attain a high level of physical fitness faster, or for fitter people who wish to extend themselves further, this style has a great deal to offer.

In summary, all forms of taijiquan have basic similarities and all are very beneficial to health and fitness. However, the Chen style has many extra benefits for suitable practitioners.

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BOOK :

[Chen Style TAIJIQUAN The 36 Forms]

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