

# Powerful Cure of Well Designed Exercises

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All forms of exercises have many known health benefits. We will discuss their general benefits, benefits that are rarely known, and special health benefits.

## (1) Well known health benefits

Ordinary exercises include walking, hiking, swimming, running and any other forms of exercises. Exercise is the most effective means to burn calories to reach energy balance.

Exercise can also burn out deposited fats and increase capillary density so as to reduce overall blood flow resistance. By improving blood circulation, exercise can improve the overall health and help gradually improve structural properties of blood vessels.

Exercise can stimulate the production of endorphins and serotonin, which can improve mood, reduce stress, and improve sleep. Exercise can be done in a smart way to limit adrenaline release.

Exercise is an activity that occurs in a working cycle, and therefore has an effect of stressing the body, but can also help get a better and longer recovery phase by promoting sleep. An exercise can change the attention of focus, and help the brain get inhibitory rest.

## (2) Less well known health benefits

Doing regular exercise can gradually improve body energy-utilization efficiency. After exercise results in a reduction in the flow resistance, the heart can pump blood more efficiently because blood pressure will be lower. By improving blood circulation in tissues, the body can use energy more efficiently and the dynamic performance of whole vascular system is improved. Thus, the person feels more energetic and need to use hormone less frequently in handling daily activities.

An exercises of moderate intensity will not adds severe stress to involved muscles and the whole body. For healing diseases and promoting health, one does not need to do intense exercise. Qigong, Taichi, and Yoga all demands moderate intensity, slow motions, smooth transitions, and small forces. They do not have adverse side effects.

Exercise can change muscle load distribution, muscle usages balance to allow overused muscles to recover from fatigue. Such force balance and usage balance are important to long term health.

Exercise can gradually reduce peak blood pressures near blocked or narrowed points. When a section of an artery is narrowed or blocked, upstream blood pressure before the narrowed or blocked point will be elevated by a great margin. Exercise is the only means to remove blockages in most situations.

## (3) Consequential effects

Ordinary exercises may be incorporated with deep breath, relaxation and mind regulation to make it more effective. Doing exercise and hormone-driving activities can raise heart output. However, they differ in many key aspects:

Doing exercise can will draw glucose and slowly removing fat deposits from tissues and walls of blood vessels while a hormone-driving activity can burn very little energy. A hormone activity raises effective glucose concentration in tissues and promote fat accumulation.

Exercise can improve both physical capacity and diseases-fighting capability. When blood circulation is improved, one can recover from extreme fatigue much faster. A person will get illnesses such as cold, flu, headache, and fever at lower frequency.

Doing exercise at moderate intensity will not damage the vascular system, but hormone activities often do. Hormone activities cannot be controlled easily. Heart outputs triggered by hormones depend upon uncontrollable factors such as stress level, shock, annoyance, fears, anger, etc. Such fast, painful or discomfort heart beats exert harmful mechanical stress on blood vessels and damage them.

Doing exercise would help progressively reduce blood pressure, but hormone activities could raise baseline blood pressure gradually.

Doing exercise can improve all organs and thus improve cooperative functions for improving health. In contrast, hormone activities create extreme imbalance between different organs. The heart is forced to race when the entire body is not up to the condition.

Most exercises inherently contain relaxation, deep breath and induction components, but can be reinforced by other components. Such special exercise can improve the whole body health, increase stress-bearing capacity, shorten the time for recovery from fatigue and injury, increase the body ability to fight diseases, increase alertness and energy, and increase job-performance.

#### (4) Healing effects thorough mind

Doing exercise can raise the blood circulation for the whole body, and thus raise the Qi level in the body. A high level of Qi will alter signal interactions or the mind-and-body connection, and cause the brain to maintain an improved health status. Thus, doing a regulation exercise helps the body raise Qi level for the whole body. The increased Qi causes stem cells to produce better and healthy tissue cells.

Complex exercises such as Qiqong, Taichi, circulating Qi, martial arts, etc. can adjust Qi levels in different parts of the body, and change the mind-and-body interactions selectively. Pervasive practices of such an exercise can change the mind-and-body interactions globally. By affecting a specific mind-and-body interaction, one can fix a specific health problem in the body or the brain. Doing a pervasive exercise can affect overwhelming mind-and-body interactions and thus can strengthen the whole body and the whole brain.

#### (5) Standing, walking and running

Standing, walking and running can deliver different health benefits. Their impacts can be fully explained by using Chinese Jingluo theory.

Standing does not activate lower limbs and its related organs, and nor the upper limbs and

related organs. That is why it is bad to health. In addition, it also has special harmful effects on all weight-bearing joints because those joints are under load all the time. In other words, those joints do not have any relaxing periods. People who stand for long hours in a long term basis may experience problems in foot joints, knee joints and hip joints.

Walking is better than standing because walking causes all limbs to move back and forth. Such moving actions can stimulate all organs by 12 Jingluo channels. That is why most doctors believe that 15 minutes of walking is critical to health, and half an hour of walking would make people even healthy.

In each walking cycle, the person shifts body weight from the left leg to the right leg, with alternate bearing times. The joints on each side are in a compressed state for about 50% time and are in a relaxing state for about 50% time. When a foot is raised and moved in the air, the foot is in a relaxing state while all joints on the side of the lifted foot are relaxed. This is critically important to recovery of the joints. People who walk a lot in their life time would have much lower chances to suffer from joint diseases.

Running is even better than walking. We found that both walking and running have the same effects of stimulating the body organs, but running will have stronger effects. Second, more intensive activity may have more power to improve capillary density (number of capillaries per area). Running can have a stronger impact on heart performance and whole body health.

Running also reduces the duration of loading time of all joints on each side. Each limb will bear the body weight only in a brief time of landing and jumping up. The weight-bearing time in running is shorter than that in waling, thereby allowing more time for recovery.

However, the joints must bear a larger force than walking. Thus, people with a joint problem that could not bear sufficient force should consider other alternatives.

In running, when the body is jumping into the air, the body is suspended in the air for a short movement, all lower limbs in the jumping side are in a relaxing state. The knee joint in the jumping side makes a scissor-like movement in a larger range. In walking, the knee joints make scissor-like movement in a moderate angle. The duration of the joint movement with the body weight on the joint is reduced. This will have the benefit of reducing wears and tears on the joint.

The biggest benefit is that running is doing an “internal massage.” Running causes the body to move up and down at big amplitudes, and thus causes the body tissues to move up and down. However, all tissues and organs do not move in phase. Some portions of a tissue or an organ are moving down while other portions of the tissue or the organ are moving up. Different parts of the tissue may engage in twisting or tortion movements if they experience different forces in different parts or due to different strengths in their support structures.

Running can force all parts of tissues to do compression movements, twisting movement, and stretching movements. Those movements can impact the whole body including all internal organs, the belly and all limbs. While people may not feel, even face tissue and body surface are moving up and down. Even the brain tissues must make those movements. All internal movements in all parts of the body have same benefits of a fullest body massage that cannot be performed by a manual method.

Internal movements have immense health benefits. Those movements can make all tissues structure stronger. The movements can loose up muscles and tissues and thus improving blood

circulation -- a condition for strengthening the tissue. Moreover, all relative movements generate a large amount of heat in tissues. Improved blood circulation at high flow rate also generates more heat. Thus, internal massage and improved blood circulation generates more heat. We believe not all heat is generated by working muscles).

As we have discussed elsewhere, blood and heat are two important components for life vitality or Qi. The internal massage would have same effects of increasing Qi level in tissues or organs. Increased Qi levels would signal the brain of increased tissue vitality. Thus, internal massage would slowly change brain-tissue signals or make a new mind-and-body connection.

During exercise, exchanging signals progressively stepped up. The state of the tissue changes from an original state to a higher state by infinitesimal small steps. We believe that Qi in a tissue or organ is a reflection of the physiological properties in the tissue or the organ. Exercise forces the body to improve Qi levels and characteristics.

Intensified Qi modifies the characteristics of nerve signals sent to the brain, which interacts with neural signals. Thus, the brain changes neural signals, which causes the body to adjust accordingly for improved health condition and thus help maintain the improved physiological properties in the improved tissue or the organ. The improved health state is recorded in the brain.

Some mechanical sport equipment can create similar or even stronger internal massage. So, you should open to other options.

Ordinary people have ample potential for accepting weight stress on joints. Moreover, we hypothesize that this high stress may send signals to the central nerve system for building stronger joints. One more benefit is that when the leg moves in the air, the leg angle also changes in the air. Thus, this angular movement works like a pumping action which forces blood to move into joint issues. We believe that running can help improve blood circulation in tissues outside the joints as well the tissues inside the joints. This may be why people can maintain healthy joints at eighty and ninety years old.

Our comparative analysis is consistent with a large number of observed health benefits of running. As a general rule, if your health condition is good, running is better than walking. If you have joint diseases, you should carefully evaluate different options. Subject to abundant caution, you should learn how to progressively improve the joint condition before you can increase running intensity and duration. Never try to force your body to do anything that your joints are not up to.

It is widely believed that running can hurt weight-bearing joints and damage them and everyone can prove it by experience.

We reject this powerful justification for a simple reason. If a joint is inflicted with arthritis, the blood circulation inside the joint is bad. It will become worse and worse, and the final result is naturally the worst of the worst. No drug or other things can fix arthritic joints. We believe that exercise, particularly running, is the best cure and, perhaps the only cure. Failure to improve blood circulation would be same as "give up", accepting a worst end.

Running cause additional stress that can aggravate joint pain. The trick is how you do it. Some people can "run away" from joint diseases easily while others fail. Essentially, you have a small room to work with: you may have to use your joints to run to improve your blood circulation, but you also must avoid too much weight stress on the diseased joint.

The biggest trick for a successful program heavily depends upon whether you can relax when you are running.

We ask why you feel pain in your joints when you are running. When you run, you use the diseased joint, increase energy usage, and generate waste. Due to poor blood circulation, the joint lacks glucose to generate enough working energy, and thus result in accumulated waste. Even if the capacity of removing waste is short by a few percents, the waste accumulate quickly. So, you feel pain.

The solution is to improve blood circulation in the joint. This solution is right in your mind. If you can enlarge cross-section by one or few percents, blood flow rate can be improved by a much bigger margin.

If you learn not stricture your blood vessels, the blood circulation in your joints is much better. It can make a huge difference: a few percent deficit in blood flow can quickly intoxicate the joint, but a few percent surplus would allow you to do steady-state exercise. If a person can run 10 minutes in a strained state, he can easily run an hour in a relaxed state.

A second trick is that you progressively increase running time and intensity in a pace consistent with the improvement in your joints.

In addition, you should consider taking other supportive measures. You should use best nutrition in support of joint recovery and consume bone-rich soups, and fiber-rich and vitamin-rich diet. You should avoid exposing yourself to a low temperature because low temperatures can make inflammation worse.

Finally, you should not allow concentrated sweat to stay on any part of your body especially on your joints. If you can use those factors correctly, you will soon be on a track of getting rid of arthritis. While it does take one year to several years to fix your joint problems, persistence, time and knowledge will help you to get there.