

A discussion of jogging exercises

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Abstract. With the increasingly severe environmental situation and the enhancing number of diseases, the eradication of diseases has become an urgent problem to be solved. In addition to medicine and food therapy, physical therapy is receiving more and more attention. This paper discusses the functions, problems, suggestions, and precautions of jogging, aiming to meet the needs of people in curing diseases, especially in adjusting chronic diseases.

1 Introduction

With the development of society, environmental pollution is becoming increasingly serious, especially the widespread use of herbicides, pesticides and fertilizers, the continuous promotion and use of genetically modified foods, and the proliferation of trans fatty acids. The rapid pace of life has led to increasing work and life pressure, and people's chronic diseases such as cancer, hyperlipidemia, hyperglycemia, hypertension, and cerebral hemorrhage are gradually increasing. In addition to medication and food therapy, sports psychotherapy is also gradually being valued by people, especially jogging and aerobic exercise, which do not require any sports equipment, are more easily accepted by people. Some people say that for chronic disease management, nutrition is the foundation, medical treatment principles are auxiliary, and jogging is the lubricant, which is likely to become the main direction of chronic disease exercise management in the future^[1-2].

Jogging, also known as footing, is a moderate-intensity aerobic exercise aimed at completing a relatively long distance by running in a slow or moderate pace. The best time for jogging is between 17: 00 and 18: 00 in a day, during which people's body temperature is the highest. The key to enhancing one's physical fitness and improving one's immune system through jogging lies in continuous practice, which requires more than three times a week^[3].

2 The function of long-term jogging

Long term jogging accelerates metabolism, enhances lung respiration, promotes blood circulation, improves sleep quality and mood, controls weight, as well as enhances physical

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fitness. Besides, it shows positive impact on the treatment of some diseases, especially in reducing hyperlipidemia and hyperglycemia, and the later maintenance of cancer patients. For teenagers, scientific jogging can also improve their endurance and willpower. For the middle aged and elderly, they can get increasing muscle strength and flexibility. A proper uphill running is recommended for their beneficial for increasing muscle protection for the knees and cardiovascular function enhancement. Moreover, increasing running speed during uphill is considered as the best way to improve running performance. Conversely, decelerate gradually during the downhill process is the best way to improve flexibility^[3-4].

3 Problems and suggestions of long term jogging

For people who jog for a long time, they may also face some physiological problems. It is reported that long-term jogging in one direction may cause viscus left leaning or right leaning, especially for those who jog more than ten or twenty laps, or even more per day. Generally, for people who always jogging in a clockwise direction, they may usually suffer left leaning of viscus; for those in a counterclockwise, they are more likely get a right leaning. This is because when people run in a circle on the sports field, their viscus get different weak pressure from both sides. This problem is unnoticeable in the short run, while it may emerge after long term exercises.

Therefore, to avoid the problems mentioned above, it is suggested to take turns running clockwise and counterclockwise when taking exercises on the sports field. One circle is clockwise and the next one circle should be counterclockwise, so as to balance the weak pressure from both sides of the runner's body. Some sports fields even change the running track to a straight along with a diagonal line, so that runners can run back and forth in a line, only stopping two or three steps during the return run. The most ideal one is a single long straight running track, such as the one at a deep forest by the river or road, that people can run in a straight line. We also hope that in the future, straight lines will be applied in running competitions, especially in large-scale competitions, such as world competitions.

4 Precautions of long term jogging

4.1 Keep the correct jogging posture

A correct jogging posture including relaxed upper limbs and elastic lower limbs. The arms should be swung naturally, accompanied by inhale and exhale once every two or three steps, or inhale once and exhale twice. Keep breath evenly and lean forward as much as possible to maintain a natural and comfortable range. The body trunk should neither sway left and right, nor rise and fall too much. Both legs and knees should be straightened forward, since lateral movements and lifting can easily cause knee injuries. To avoid Achilles tendon strain, the calves should not be crossed too far. The best way is to land the front foot on the ground, keep balance and a constant pace, and maintaining a relaxed state of exercise is enough^[3-4].

It is suggested to establish a jogging posture model system by imitating the car navigation system. The correct and incorrect jogging postures can be compared by inputting both of them into the software. Besides, the system can monitor the runners postures by continuous remind and correction, including the gestures involving head, shoulder, back, limbs, hand swing, foot span, etc. Moreover, it will remind the runners with eye problems to slow down and avoid danger when meeting obstacles. Runners can also use this system to improve running speed under its guidance. With this model system, people can adjust their running postures in a relaxed and harmonious state. In addition to

keep a healthy body, teenagers can improve their speed while the middle-aged and elderly can protect their bodies, especially their knees. Furthermore, this system can be applied to other sports to keep a proper posture, adjust physical fitness, achieve the best results as well as protect their own body. Especially, it can enable the athletes to maintain the most proper posture and best physical fitness in training and competition, so that their potential will be fully stimulated to get high scores, which may improve the overall sports level in China. It can also be extended to other fields as a posture reminder, such as dancing, qigong, body movements and facial features in acting, etc. It can even be applied to various subjects including language and mathematics, history and geography, physical chemistry. For example, in Chinese writing exercises, it can guide the students to optimize the structure of Chinese characters by voice to make each Chinese character more beautiful. After students finish writing each word, they will be reminded by pronunciation to point horizontally and vertically, and then change in direction or length to make the characters more standardized and beautiful. These reminders will play a very important role in children's conscious video learning in the future. This is a major topic that needs further practice and research to enable people to enjoy happiness in sports learning and practice.

4.2 Warm-up before jogging

To prevent injury from jogging, athletes should take sufficient warm-up exercises before jogging, improve muscle performance, and enhance their excitability. In the cold winter, in particular, sufficient warm-up can promote local blood circulation, reduce cramps during exercise, and avoid muscle strain caused by sudden and intense exercise. After jogging, stretching exercise should be taken to rapidly excrete lactic acid produced in muscles during exercise, reduce the acidic stimulation on muscles and reduce muscle soreness. Moreover, it can relax tense muscles, prevent muscle stiffness, and avoid blood accumulation in muscles^[5].

4.3 Scientific and nutritious meals are required for long-term jogging

The principle of a scientific meal is to balance the nutrition in food. Food ingredients should be selected based on their shape, color, structure, nutritional value, chemical composition, and physicochemical properties and mixed properly. At the same time, food type should be diversified, with a combination of both vegetables and meat, coarse and refined grains. Proteins, minerals, vitamins, and carbohydrates should be supplemented timely. Attention should be paid to the color, aroma, taste, and shape of food as well as the types and quantities of nutrients at the same time^[6].

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