

Theory and Practice of Chinese Sports Massage

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Massage is a Chinese medical therapy with various manipulations applied to certain areas of the body's surface in order to improve physiological functions, remove physical fatigue and prevent disease. Sports massage refers to the massage therapies used for the improvement of performance, and for the prevention and treatment of various sports diseases in athletes.

1. Acting principle of sports massage

1.1 Regulating the function of the nervous system

The functional modulation of the nervous system by sports massage is accomplished through the reflexion of the nerves. The stimulating effects of manipulations on the nervous system can improve and restore the physiological function of some organs, such as the heart, lungs, muscles and so on. The effects of sports massage on the nervous system depend on the kinds of manipulation applied, and the affected degree and continuous periods of stimulations such as light pushing and light kneading which can produce the effects of soothing and tranquilizing the body, while relatively strong fast and powerful manipulations such as tapping and shaking, can expel the effects of stimulating the body.

1.2 Recovery of the function of muscles, tendons, bones and joints

Sports massage is a very effective way to relax muscles and tendons, restore and treat injured soft tissues, reduce dislocated joints, and smooth joints. The functions and mechanisms of massage consist of the following parts

; first, it can get rid of the causes that lead to

muscular tension by appropriate stimulation of the peripheral nerve-endings

; secondly, it can locally raise body temperature and promote blood circulation

; thirdly, it can improve the ranges of joint movement and the elasticity of tendons and ligaments

; and finally it can also decrease the accumulation of lactate in the muscles, so that muscle soreness can be eliminated.

1.3 Regulating the function of the circulation system

The application of massage manipulations can improve the blood circulation and decrease hypertension and blood pressure in some arteries. Subsequently, cardiac output may be promoted. Meanwhile, it can also improve the dredging function of the lymphatic system and promote the diffusion of the capillary walls so that tissue swelling caused by injury may remit or disappear.

1.4 Regulating the function of the respiratory system

Massage at the appropriate parts of the body can promote breathing efficiency through the relaxation of the nerves, improve the rate of alveolar ventilation and the diffusion of oxygen from the alveoli into the pulmonary blood and of carbon dioxide out of the blood into the alveoli.

1.5 Regulating the function of the digestive system

The effects of various manipulations can activate the autonomic nervous system which controls the internal functions of the body. Subsequently, the secretion function of the gastrointestinal glands

and the gastrointestinal movement may be improved. Generally speaking, massage can cure gastrointestinal spasms induced by overtraining.

1.6 Regulating the function of endocrine, immune and metabolic system

All kinds of massage manipulations can modulate the function of the endocrine glands, improve immunity and regulate the metabolic rate. Some studies suggest that massage leads to an increase in white blood cells and hormone secretion and an improvement of phagocytosis in neutrophils.

2. Commonly-used sports massage manipulations

2.1 Pushing manipulations

Pushing is the manipulation performed by rectilinearly pushing and scrubbing the treated part to and fro with the operator's palm and thumb radial border, with his thumb abducted at a right angle to the other fingers. Pushing manipulations can be divided into light and heavy pushing manipulations. Light pushing manipulation has the function of soothing and tranquilizing the human body. But heavy pushing manipulation can promote the blood and lymph circulation, remove blood stasis, and regulate local temperature, etc. So, light pushing technique is used mainly as a starting and ending therapy. In addition, it can also be applied in the shift period of the manipulation. Heavy pushing manipulation is used in the middle of the treatment. It is often used prior to training in order to improve the localized body temperature of athletes to prevent sports injuries and improve performance.

2.2 Scrubbing manipulations

Manipulation by rubbing and scrubbing the treated part to and fro along a straight line with the operator's palm face, minor or major thenar eminence is called scrubbing manipulation. This

kind of manipulation involves a strong rubbing force with a range of movement, so it has evident warming effects and the function of promoting blood circulation and the relaxing muscles and tendons. It is mainly applied to treat the limbs, the lumbodorsal region, joints, ligaments and tendons.

2.3 Kneading manipulations

This is a manipulation performed by kneading slowly and softly the treated region to and fro with the fingers, the bottom of the palm, major thenar eminence or the tip of the elbow. Generally speaking, light kneading manipulation can have the effect of tranquilizing the mind and alleviating pain; heavy kneading manipulation can have the therapeutic effects of promoting blood circulation to remove blood stasis and regulating the function of channels and collaterals. This kind of manipulation is used to the operation on all the channels and collaterals and the points all over the body.

2.4 Grasping manipulation

Grasping manipulation is performed by symmetrically and slowly lifting and squeezing the treated part and meanwhile holding and twisting, furling kneading and pinching it with the operator's thumb and other four fingers. This manipulation has the following effects: the promotion of blood circulation in core tissue, the improvement of tissue metabolism, the relaxation of muscles and tendons, the relief of spasms and pain, the reduction of swelling, the removal of blood stasis, the improvement of muscle power, and the prevention of myofascial tightness. It is chiefly applied to regions of large and thick muscles such as the muscles of the neck, shoulders, upper and lower limbs and buttocks, etc.

2.5 Foulage manipulations

Two palms facing each other rapidly roll-

knead the held part of the body with relative force and move upwards and downwards repeatedly. This kind of manipulation is called Foulage. It has the following effects: the relaxation of the muscles, the promotion of blood circulation, the removal of muscle pain and the improvement of performance. It is mainly applied to the upper and lower limbs, especially to the thighs and arms. It is used after grasping manipulation as a conclusion to manipulation therapy.

2.6 Pressing manipulations

Pressing is the manipulation performed by pressing the treated region continuously with the operator's palm and palm base or the tip of his elbow, from lightly to heavily, shallowly to deeply. It is suitable for the treatment of the lumbodorsal region, shoulders and lower limbs. This kind of manipulation can tranquilize the mind, relieve spasms and pain, relax the muscles, remove muscle fatigue and reduce dislocated joints.

2.7 Shaking Manipulations

A manipulation by which the doctor holds the distal end of the subject's upper and lower limbs and makes a constant, narrow range, vertical shaking. This manipulation is mainly applied to the extremities and mostly after foulage as a conclusion to manipulation therapy, and has the function of regulating *qi*-blood and tissues, and relaxing muscles.

2.8 Rotating Manipulations

In this, the proximal and distal ends of the affected joint are held with both hands and the joints are moved with forward and backward flexion-extension, right and left lateral flexion, or rotation, within the limits of their physiological movement along the joint-moving axis. Rotation is one of the passive articular-moving manipulations, which may be applied to joints all over the body such as the neck, lumbar vertebrae,

and extremities. It has the functions of lubricating joints, releasing adhesion, relaxing muscles and tendons, relieving spasms, and strengthening and renewing articular-moving ability.

2.9 Tapping Manipulations

The manipulation using the back of the fist, palmar base, palm center, minor thenar eminence, or a bundle of mulberry twigs to pound and hit the body surface is called tapping manipulation. It is mainly applied to the lumbosacral and lumbodorsal regions and limbs. This manipulation has the effects of relaxing muscles and tendons, and activating the flow of *qi* and blood in the channels and collaterals, promoting blood circulation to remove blood stasis.

2.10 Rolling Manipulations

With the minor thenar eminence and dorsoulnar used as the force-applying surfaces, the practitioner lowers his shoulder and drops his elbow, and with his arm erect and his palm set upright proceeds with cyclical flexion, extension and inward and outward arm-rotating swinging. Meanwhile, accompanied by the extension and flexion of the elbow joint and forearm, the operator's wrist joint rolls round to back of the hand to and fro on the region to be treated. Such manipulation is called rolling manipulation. This manipulation has a large area of stimulation with strong effects, evident deepness and thoroughness. It can be performed on all the points except the cranio-facial region, anterior cervical parts and thoracico-abdominal region. This manipulation has the following effects: the reflexing of the muscles and tendons, warming the channels, the expulsion of pathogenic dampness, the promotion of blood circulation, the relief of spasms and pain, the relaxation of adhesions, the lubrication of joints, etc.

2.11 Pressing Points Manipulation

This manipulation is performed by pressing the special channel points with the operator's thumb or his middle finger tip. It has the functions: of dredging channels and collateral, regulating qi and blood, eliminating spasms and pain, and treating diseases, etc.

3. Application of sports massage to training practice

Recently, sports massage has been playing an important role in the field of sports training. In general, it has roughly three common functions; (1). It can be used as a method of warming up the body prior to training; (2). It has evident effects on relieving sports fatigue; (3). It can be used as a means of prevention and treatment of sports injuries and sports diseases.

3.1 Application of sports massage prior to training

Application of massage prior to training may regulate the functions of the nerves, muscles, ligaments, joints and internal organs, which in turn improves the sports performance of athletes and adapts the functional demands to the subsequent activity and prevents sports injuries in training practice. Sports massage should be combined with the warming up exercise. In the case of mental depression, those manipulations which can excite and stimulate the body should be adopted. The operator can tap the shoulder and back with his palm, pat the vertex and lateral sides of the head with his fingers, knead the upper limbs and lower limbs, pull and draw the muscles and tendons, press the special points such as *Taiying*, *Zusanli* and *Hegun*. In the case of overstrain, manipulations such as light pushing, light kneading and soft pinching which can soothe and tranquilize the body should be adopted before training and competition. Also,

appropriate points on the corresponding channels should be stimulated.

3.2 Application of Sports massage after training

Massage treatment after training and competition can relax the muscles and tendons, remove fatigue, relieve muscle pain and treat sports injuries and sports diseases. Generally, alternate application of kneading and rubbing, pressing and pulling, are suitable for joint areas, For muscle areas, manipulations such as kneading pinching, pressing, shaking and tapping should be alternately adopted. Especially, kneading and pinching manipulations should be predominantly applied for about 60—70 percent of the total treatment period.