

Comforting Cooldown: Adapting T'ai Chi to the water.

Author: Dakota Hart

Dakota presented this session at the Bodylife Conference Sept of 1994.

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Referred to as the 'universal harmony system', 'meditation in motion' and 'rhythm of life', the 700-year-old form of meditation known as T'ai Chi is believed to have originated from monks imitating animals in combat. It is based on the four principles of health, defence, mental accomplishment and the way to immortality.

Three movements characterize T'ai Chi: 'short' - small ranges of movement entailing quickness and agility; 'medium' - distinct movements while maintaining a moderate posture; and 'long' - large flowing and brisk movements that balance agility and steadiness while maintaining a natural, straight body.

'When the lowest vertebrae are plumb erect, the spirit of vitality reaches the top of the head. When the head feels as if suspended from above, the whole body will be light and nimble.' Classical T'ai chi'.

Classical T'ai chi claims that the movements strengthen the spine and pelvis, internal organs and the brain. Defined as a preventive and curative system of Chinese medicine and martial art, it is an excellent exercise in concentration, willpower and visualization.

Effects on the body

Nervous system:

Concentration of the will and peacefulness of body movements allows one to put aside distracting and stressful thoughts. Thus only a small portion of the brain is used allowing the body to recover from fatigue and stress. As one becomes more 'in tune' with the surrounding environment, reactionary abilities increase. An improved nervous system leads to a better functioning heart, and lower blood pressure, stress and tension.

While performing t'ai chi one must listen to a quiet heart and a purpose of will.

Respiratory system:

Breathing is sometimes difficult due to tension and stress causing the back, chest and shoulder to tighten. T'ai chi promotes relaxation of the upper body. Deep slow breathing and calm harmonious movements increase lung capacity and elasticity.

Circulation:

Since the nervous system nourishes the heart and controls the pumping of the blood, benefits to the nervous system consequently affect circulation. Better breathing from full use of the diaphragm promotes more effective blood flow through

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the circulatory system. Diaphragmatic breathing enhances blood flow and positively affects the liver and kidney functions. When practised for only a few months, it is said to substantially decrease the concentration of globulin and cholesterol in the blood as it increases the concentration of protein.

Metabolism:

Although little research has been done in this area, the nervous system, functioning as a metabolic regulator, has positive effects. As with other bodily functions, the gentle harmonious movements can increase the metabolic rate.

Studies

Various studies have been conducted supporting the benefits resulting from t'ai chi. Here are a few of them.

'Effects of t'ai chi on the cardiovascular system', Applied physiology lab, Long Island, Brooklyn, N.Y., 1978.

Is t'ai chi a valid form of exercise for stimulating cardiovascular development? According to the American Heart Association, 60-80% of maximum heart rate for 20 minutes a day, 3 times a week is necessary to develop the cardiovascular system.

Greater than 85% of maximum heart rate could be harmful.

Less than 60% of maximum heart rate does not stimulate the heart enough.

Twenty-five individuals (20-60 yrs old) who performed t'ai chi for 1-7 years participated in the study. A pre-exercise heart rate was taken in the standing position. T'ai chi in the 'high' position (knees slightly bent) was performed. *heart rates were measured using a Telemetry Electrocardiogram

one week later.....

T'ai chi in the 'low' position (knees bent as much as possible and low, held stances) was performed lasting approximately 7-9 minutes.

Results: as in other studies, it was determined that an increase in heart strength may occur depending on the position of the knees. The height of the knees seemed to be the determining factor. The participant's heart rates achieved a training zone of 60-80% maximum heart rate.

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Stephan Palos, author of The Chinese Art of Healing, conducting research at the First Medical Academy in Shanghai on Chi Kung respiratory therapy.

Stephan Palos's research on breathing concluded the following:

Exhalation stimulates the parasympathetic nervous system, whereas inhalation stimulates the sympathetic nervous system, and

Ailments due to disorders of the autonomic nervous system can be cured by respiratory exercises.

Research Institute for Sports Medicine in Peking

Eighty-eight individuals ranging from 50-89 years of age participated, 32 of whom had practised t'ai chi for some time.

Research showed that those actively involved in t'ai chi were in far better shape than those who pursued no activity other than their everyday routine.

Specifically, their heart, circulation, breathing, metabolism and strength of bone structure were superior.

T'ai chi in aquafitness?

Definitely. It balances and integrates the body-mind-spirit connection; decreases tension, stress, anxiety, nervous disorders, back pain, headaches; and increases circulation, memory, learning skills, balance, flexibility, strength, and co-

ordination. T'ai chi penetrates deeper than the muscles to benefit the entire physiology.

In a cool down, t'ai chi will gradually slow the heart rate while keeping participants warm. The movements will:

Allow participants to relax both mentally and physically

Massage the internal organs

Allow participants to gently ease into the stretches

Be easy to perform, appealing to old and young, healthy and

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Injured, novice and advances

When instructing, remember these key elements:

RELAX - the entire body, especially the upper body

EMPTINESS/FULLNESS - yin = emptiness, yang = fullness.

For example, when the left leg is weighted, the right leg is yin; when the upper body is empty while lower body is full (yang) then you are like a 'blade of grass'-aggression, hostility and stress can't harm you when you are empty and yielding.

EVENNESS/SLOWNESS - done continuously without pauses and involves acceleration and deceleration. This develops continuous force. Performed as slow as possible develops exactness, balance and patience.

BALANCE - spine straight, no tilting, dipping or leaning. When one leg is full, the other is empty.

ROOTING/SINKING - lowering the centre of gravity, relax the waist, knees and ankles.

CO-ORDINATION/CENTREING - the body moves as a unit, extremities reflect and extend the torso movements. The head follows the body.

BREATHING - breathe deep into the abdominals
Exhale-extend the arms, raise or push the arms

CONCENTRATION - focus on relieving tension, on the relaxing music, the speed of executing the movements, and gentleness following breathing.

Creating the mood To ensure an effective cool down:

Do not talk (unless necessary) and do not count

Adjust the lighting, providing this is safe to do so

Music should be calming and the volume adjusted (not too loud, not too soft)

Allow sufficient time in each movement to let the mind and body relax

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In my personal experience teaching t'ai chi I've seen participants benefit in the following ways:

Improved outlook on life

Increased cognitive function in older ages

Better concentration skills

Higher self-esteem, better self image

Better dexterity