

MARTIAL ARTS AND PHYSICAL FITNESS

The study of the Martial Arts offers several unique advantages to the physical fitness of the student. The training usually performed in almost any place without the use of weights or special equipment; it may be practiced individually or in groups. Since the body sets its own limits, injuries or strains are rare and the physical condition of the student paces him automatically. The entire muscle system of the body, from the fingers to the toes is brought into play.

The training does not produce large knobby and bulky muscles, it tends to exchange flabby fat tissue for lean tissue. The thick muscles developed through weight training tends to push the blood vessels apart without adding new ones to fill the gap. Such tissue has difficulty in receiving oxygen and disposing of waste through the blood stream and thus tires more easily. The Martial Arts high repetition, low resistance to blood supply routes, thus producing maximum endurance and well being.

The emphasis in twisting the trunk, in executing the kicking movements and in counter-balancing the hand movements build a firm, well-muscled abdomen. The high leg raise proceeding most of the kicks in the Martial Arts also develops the side of the trunk and inner thigh muscles. The study of the Martial Arts is particularly recommended for women because of this development of the lower abdomen, hips and inner thighs; areas which produce a youthful, feminine figure for women of all ages. After childbirth in particular, these areas are stretched and weakened; Martial Arts training is ideal to restore muscle tone for health as well as appearance.

The typical training regime, involving extensive movements of the entire body, raises the pulse rate and oxygen characteristics of the heart and lungs over an extended period. This increased ventilation is termed an aerobic effect and provided the following benefits:

1. Helps the lungs operate more efficiently.
2. Enlarges the blood vessels, making them more pliable and reducing the resistance to blood flow, thus lowering the diastolic blood pressure.
3. Increases the blood supply, especially red blood cells and hemoglobin.
4. It makes the body tissue healthier in supplying it with more oxygen.
5. It conditions the heart, providing more reserve for emergencies.
6. It promotes better sleep and waste elimination.

The training tends to be a normalizer of body weight in that it results in a gain of solid tissue for the underweight and a loss of body fat for the obese. The estimated calorie consumption for a vigorous Martial Arts workout is about six hundred calories per hour, one of the highest for any sports activity. Since the expenditure of about 3,500 calories results in a weight loss of one pound, it will be seen that a weekly training schedule of only six hours will result in weight loss of one pound per week.

Martial Arts offer a superior means of developing the characteristics of good performance in other sports as well:

- Muscular strength
- Dynamic energy---the ability to throw oneself into performance with vigor
- Ability---to change the direction of movement
- Ability---the ability to move the body quickly from one place in space to another
- Flexibility of joints, muscles and ligaments
- Peripheral Vision
- Concentration and the ability to avoid distraction
- Understanding the mechanics and techniques of body movements

"Focus" requires that we have muscular strength and balance and the exertion of dynamic energy when we concentrate all the power of the body at one point in space. Combinations of basic techniques and patterns develops agility and the ability to change movements, while sparring develops concentration and peripheral vision.

The organized training procedures stress a systematic warm up of muscles and ligaments, increasing blood volume and flow through the muscles. These warming up exercises promote flexibility of joints, tendons and ligaments as well as serving to prevent injuries in training.

The regime also stresses the warming down exercises after training, to pump down the accumulation of blood and fluid present in the muscles after violent exercises. If this is not done, stiffness and discomfort will result. These techniques of warming up and warming down as well as the breathing exercise taught are another example of the highly developed science of body mechanics and physiology contained within formal Martial Arts training.

The attacking "yell" that is taught also has its basis in basic physiology. Aside from serving to demoralize the opponent, the "yell" serves also to tighten the lower abdominal muscles to prevent injury in the event of unexpected counter-attack. In addition, the exhalation, or thoracic grunt as practiced also by weightlifters or wrestlers, serves to equalize the pressure increase in the thorax which may result from violent exertion, thus preventing injury to the vital organs. The complete exhalation of the "yell" serves to expel the tidal air of the lungs, thus increasing the breathing or vital capacity of the lungs.

It can be seen that the study of the Martial Arts is recommended for men, women and children. It may provide benefits in perceptual-motor organization, concentration, vision, body development, aerobic conditioning of the heart and lungs and provides training in body control which is valuable in the pursuit of any other sport or physical activity. Coupled with the obvious benefits in self-defense and the satisfaction of mastering an ancient art form, it would appear that the Martial Arts should be a part of the life of all people for all of their life.