

## Requirements for a Dynamic Karate Exercise Program Aerobically Oriented

A dynamic karate fitness program has four essential features:

- flexibility
- cardiovascular
- muscle strength and endurance
- satisfaction or enjoyment

To achieve these features, the karate workout should have four parts:

- warm-up
- muscle strength and endurance
- peak period (which can include the endurance component)
- cool-down period.

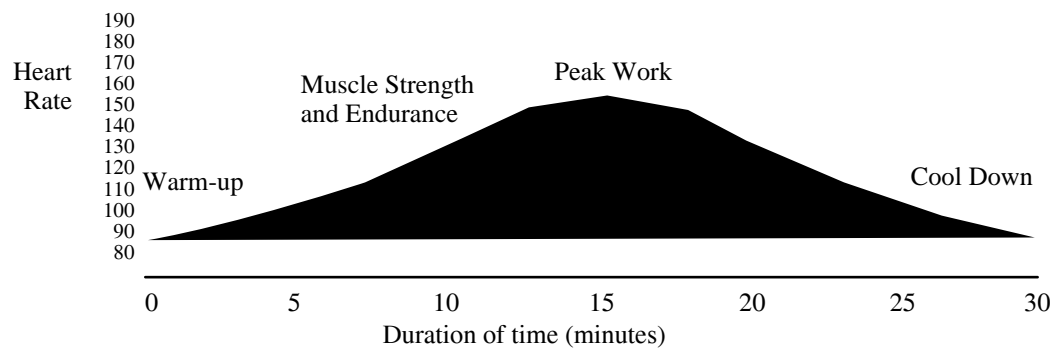
**Warm-up** The warm-up prepares the body for increased activity by opening up blood pathways increasing blood flow and raising the temperature in the muscles and heart. This increases the speed of muscle contraction and

Exercises should be vigorous and done in a continuous manner. Consideration should be given to increase strength and endurance in those muscle groups that are important in karate or are not exercised in the peak period.

**Peak Period** The peak period cardiovascular component is very important and at least 15 minutes should be spent on it. Aerobic capacity can be improved by 20-30%. Peak work improves cardiovascular fitness by raising the target heart rate to 85% and burns calories through continuous movement. Three objectives of the peak period are cardiovascular conditioning, calorie expenditure, and fun. The peak workout may include interval training -- high intensity activity interspersed with periods of reduced activity. Control the intensity, duration and frequency. Emphasis is on speed. Participants work relatively hard and then taper off at intervals. Circuit training can also be

used. A certain number of repetitions are performed for each exercise. Each exercise is completed correctly but as rapidly as possible. You move from one station/exercise to another as quickly as possible without a pause. You can and should try to have three laps through the circuit and work toward the target heart rate. We want a high intensity short duration workout. Exercise should be non-stop, bilateral,

### Workout Progression



relaxation and facilitates energy supply to the other muscles of the body allowing more rapid exchange of oxygen between the blood and muscles. It prepares the joints by increasing elasticity in the muscle and tendons reducing strain. Faster reception of messages sent from the brain and better psychological preparation also come about. During class, five to seven minutes should be allowed for the warm-up which includes calisthenics, joint preparation, stretching using where possible karate specific movements. The warm up should graduate in progress until the heart rate increases about 40%.

**Muscle Strength and Endurance** Muscle strength and endurance exercises tone the muscles and improve strength by building muscle mass while burning up calories. The more your muscle mass, the more calories you burn. High resistance, low repetition work is used for muscle strength. It is best to overload the muscles such that only 8-10 repetitions of the exercise can be done. Muscle endurance requires low resistance, high repetition exercises. Muscle endurance is often part of the peak workout so we suggest you concentrate on muscle strength during this part of the workout which can come before or after the peak workout. Five to seven minutes should be allowed for muscular strength and endurance.

and rhythmical.

**Cool Down** The cool down helps prevent injury and allows the body to return to normal by clearing out body wastes. During the cool down period relaxation exercises reduce blood pressure, calm and relax the body reducing muscle tension and fatigue and return the heart rate and breathing rate to pre-exercise levels. Static flexibility counteracts the ballistic movements and prevents post exercise muscle soreness as well as increasing flexibility. If you cool down too quickly, the blood can pool in the muscles and veins and light headedness can occur.

There are core exercises that should be practiced every class. What are they? Core exercises should provide for consistency allowing anyone to lead the class, help the participants measure improvements, exercise all the major muscles in the body, and be as karate specific as possible.

The goal is a karate physical training program, not a fitness test or competition. Not everyone can do the same thing you can or perform at the same level. Your job is not to exercise yourself, but to exercise the class.