

Sports Injury Prevention and Performance Optimization Unit

Cardiovascular Training - Swimming

Introduction

Aerobic exercise is physical exercise that intends to improve the oxygen system [1].

Cardiovascular exercise (aerobic exercise) forms an important element within the anti-aging exercise program, weight management program or sports-specific conditioning program. A list of benefits from aerobics exercise resembles that obtained with growth hormone: gain of muscles and strength, loss of fat, increased energy, greater well being and a decrease in anxiety and depression. Moreover, aerobic exercise also increases the level of HDL cholesterol, lowers blood pressure, improves immune system and helps protect the body against a host of diseases, including cardiovascular diseases, stroke, hypertension, diabetes, and osteoporosis.

A prescription for aerobic exercise

Aerobic activities stimulate breathing by using large muscle groups in a continuous and rhythmical manner. Exercises such as jogging, running, walking, hiking, dancing and swimming are such activities. The followings are the parameters to consider before engaging in any aerobic exercise in order to optimize the effect and minimize the risk to health condition.

- the type of activity
- the duration of activity
- the frequency
- the intensity (target heart rate / aerobic zone)
- the progression

The following guidelines should guide you on what form of exercise to do.

- Does the cardiovascular exercise offer a sustained repetitive movement using large muscle groups such as your legs?
- Does your activity allow you to continually be active for 30-45 minutes?
- Are you able to maintain an intensity of 60-80% of your maximum heart rate?

-Can you continue to pursue this activity 3-5 days a week in order to obtain significant benefits?

Precaution

Cardiovascular exercise performed immediately after a full meal is not recommended. You should wait at least 60-90 minutes after a full meal before engaging in any kind of intensive cardiovascular exercise. The larger the amount of food you eat, the longer the time you should wait before beginning aerobic exercise.

Reference

1. Concise Oxford English Dictionary (Eleventh Edition)

Swimming

Swimming is an exercise for all ages, without any impact for the lower limb.

Duration: minimum 30 minutes (5-10 minutes warm-up; 20-30 minutes high-intensity workout; 5-10 minutes cool down), with progression depends on individual difference

Frequency: 3 – 5 times, depends on the program planning and training schedule.

Intensity: High (as you cannot swim without using all the muscles in your body), heart rate is a good indicator for intensity. Target heart rate varies with respect to the goal of the exercise.

Progression: gradual increase in time

Important reminder:

1) Proper warm-up and stretching before getting into the water and try to use shallow lap pool just in case for muscle cramp