



# Understanding Health & Fitness Education Series 2a

## Are you Fit?

### What does it mean to be physically fit?

**Physical fitness** is a state of health and well-being and, more specifically, the ability to perform aspects of sports, occupations and daily activities. According to the United States Department of Health and Human Services, physical fitness is defined as "a set of attributes that people have or achieve that relates to the ability to perform physical activity." This description goes beyond being able to run fast or lift heavy weights. Despite being important, these attributes only address single areas of fitness. **YOU SHOULD STRIVE TO POSSESS ALL THE COMPONENTS OF FITNESS TO CONSIDER YOURSELF PHYSICALLY FIT. The forthcoming program will help you understand these components and how to measure them on yourself.**

Being physically fit depends on how well a person fulfills each of the fitness components

- cardiorespiratory fitness
- muscular strength
- muscular endurance
- body composition
- flexibility (range of motion)
- functional and movement ability

TO BE TRULY FIT YOU NEED TO PAST THRESHOLDS ON ALL COMPONENTS

So, you can tell if someone is physically fit by determining how well they perform in each component.

### Cardiovascular Fitness is considered the most important component of fitness

**YOU CAN BE HEALTHY BUT NOT PHYSICALLY FIT AND VICE VERSA, IT WOULD BE GREAT TO BE BOTH -- BUT GENERALLY SPEAKING IF YOU POSSESS ALL THE COMPONENTS OF FITNESS YOU ARE MOST LIKELY HEALTHY.**

## WHAT IS AEROBIC (CARDIOVASCULAR) FITNESS?

Aerobic (cardiovascular) fitness is one of the most important components of physical fitness. It is your ability to continuously perform physical work like walking, shoveling, running, etc. It is different from short burst of power as in lifting or pushing a heavy object or a short sprint, which are termed anaerobic (absence of oxygen).

### It is directly related to your heart's and overall health.

It is a measured of the maximum amount of oxygen transported in the blood and pumped by the heart to the working muscles and as the efficiency of the muscles to use that oxygen at your maximum effort. It is called VO<sub>2</sub> max. VO<sub>2</sub> max can be expressed in milliliters of oxygen per kilogram of body weight per minute. (see section to come on how to measure your aerobic fitness yourself).

### Did You Know that Better Cardio Fitness Predicts a Longer Life

Having good cardiovascular fitness has many health benefits, for example, it decreases your risk of cardiovascular diseases, stroke, high blood pressure, diabetes and other diseases as well as impacting life span and all cause mortality.

#### Cardio Fitness Basics

The heart is like any other muscle - it becomes stronger and more efficient after practice. Cardiovascular fitness is best improved by activities, which employ large muscle groups working dynamically. Such activities include walking, jogging, running, swimming, skating, cycling, stair climbing and cross-country skiing. There are two main forms of cardiovascular training 1) Continuous - where you keep the same intensity for the length of the workout 2) Interval Training - where you have defined periods of low and high intensity (this is sometimes referred to as HIIT or High Intensity Interval Training). Both have their benefits and both can be done by someone who is healthy (more on this to come). The American Heart Association recommends a minimum of 30 minutes of cardiovascular exercise 5 to 7 days per week (more on that in other section). Don't forget warm-up, cool-down and stretching exercises in your aerobic exercise session.

## Do you have good aerobic fitness?

### Look at your Heart Rate

### Low Resting Heart Rate and Faster Exercise Recovery Heart Rate are easy to measure signs of fitness

#### Heart rate

Heart rate is a quantitative measure of heart's work. At rest a healthy heart of an average individual beats approximately 70-100 beats per minute. A conditioned heart beats much less at rest, only 40 to 50 beats per minute or even less and less at workloads compared to someone who is unconditioned. Heart rate variability is a quality measure of heart's work. The lower the resting heart rate the higher the heart rate variability, and thus the better the quality of heart's functions. You can see yourself improving from exercise if your heart rate is lower at the same workloads that you were previously doing - it is a sign that your heart is more efficient. Another good sign of heart efficiency is if your recovery heart rate is quicker after exercise.

### Fast Recovery Heart Rate is a good thing

### Heart rate should be able to drop 12 beats within first minute of exercise recovery

#### Recovery Heart Rate

Your Recovery Heart Rate, the speed at which your heart rate returns to normal after exercise, can indicate how fit you are as well as a physical cardiac condition and the risk of certain diseases. For instance, according to the a study in the New England Journal of Medicine people whose heart rate recovery time is long are at a higher risk of death than people with shorter recovery times regardless of physical condition or other risk factors. The first minute of recovery is the most crucial. After exercise, your heart rate experiences an abrupt drop during the first minute. In this study a heart rate decrease of 12 beats or less in the first minute as abnormal. The study also reported that people with an abnormal decline in heart rate had a greater chance of mortality in the subsequent six years due to heart problems. Some suggest possible abnormality if less than or equal to 18 beats. Additionally the National Emergency Medicine Association suggests measuring heart rate recovery rates is one way to tell whether an exercise program is effective. People in better cardiovascular condition tend to have lower heart rates during peak exercise, and return to their resting heart rate more quickly after physical activity. Subtract your 2-minute heart rate from the heart rate you took immediately after vigorous exercise. The faster your heart rate recovers (or slows down ) after 2 minutes the fitter and healthier your heart. See if your 2 Minute Exercise Recovery is:

- Less than 22: Your biological age is slightly older than your calendar age.
- 22-52: Your biological age is about the same as your calendar age.
- 53-58: Your biological age is slightly younger than your calendar age.
- 59-65: Your biological age is moderately younger than your calendar age.
- 66 or more: Your biological age is a lot younger than your calendar age.

