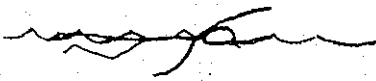


# ♥ The Five Components of Physical Fitness ♥

## I. Cardiorespiratory Endurance

Definition: a measure of the heart's ability to pump oxygen-rich blood to the working muscles during exercise. It also measures the muscle's ability to take up and use the delivered oxygen to produce the energy it needs to continue exercising.

☞ Physical activities such as distance running, cycling, or swimming 30-60 minutes without tiring-out requires a high level of cardiorespiratory endurance



## II. Muscular Strength

Definition: a measure of the maximal ability of a muscle to generate force. In other words, it means how much weight an individual can lift during one maximal effort.

☞ Physical activities such as weight lifting, football, and shot-putting require high levels of muscular strength.



## III. Muscular Endurance

Definition: a measure of the ability of a muscle to generate force repeatedly. Like muscular strength, it requires a muscle to contract against a force, but it is done many times over and over again.

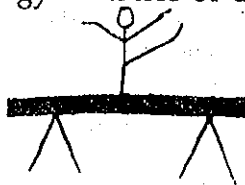
☞ Physical activities such as tennis where a racquet is repeatedly swung or weight lifting where a dumbbell is lifted many times in a row require high levels of muscular endurance.



## IV. Flexibility

Definition: a measure of the ability of a joint to move freely through its full range of motion.

☞ Physical activities such as gymnastics or diving require great flexibility in order to accomplish complex movements.



## V. Body Composition

Definition: a measure of amount of fat tissue and lean body tissue (muscle, organs, and bone) found in your body.

☞ Almost all physical activities require a healthy body composition (usually less than 25% body fat) for participation.

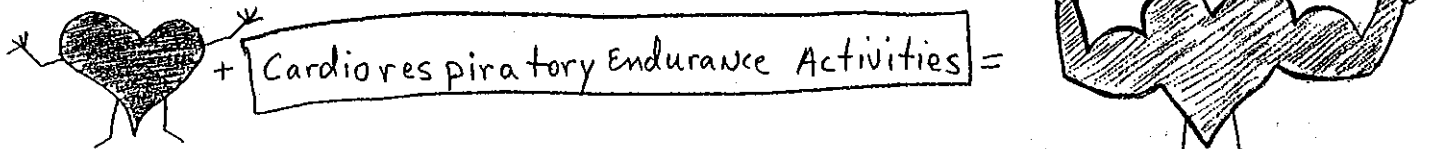
# Cardiorespiratory Endurance

(Remember, Cardiorespiratory Endurance is one of the 5 components of fitness!!)

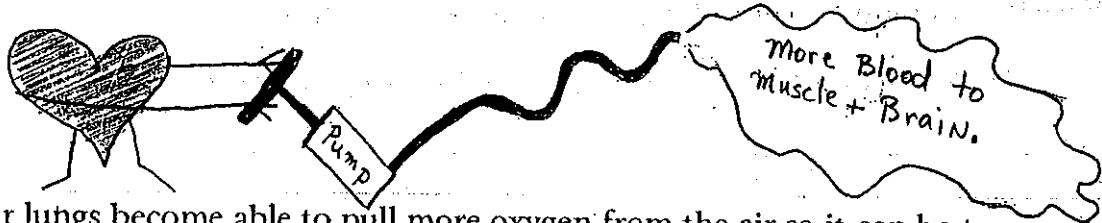
Your body develops cardiorespiratory endurance when you participate in activities for at least 20 minutes where both your heart beat and breathing rate increase during the activity. Swimming, biking, running, soccer, and ultimate frisbee help you to develop cardiorespiratory endurance which makes you able to participate longer in activities without running out of energy.

## Benefits of Cardiorespiratory Endurance Activities

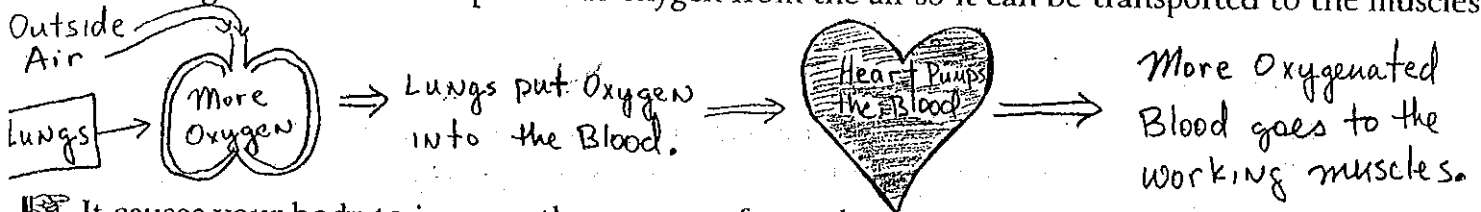
It helps your heart becomes bigger and stronger.



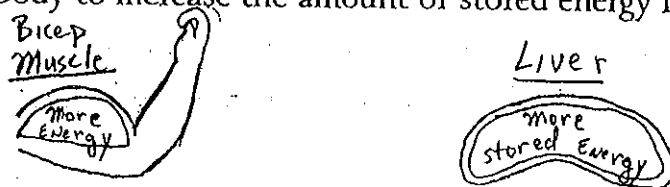
Your heart becomes able to pump more blood per beat (greater stroke volume).



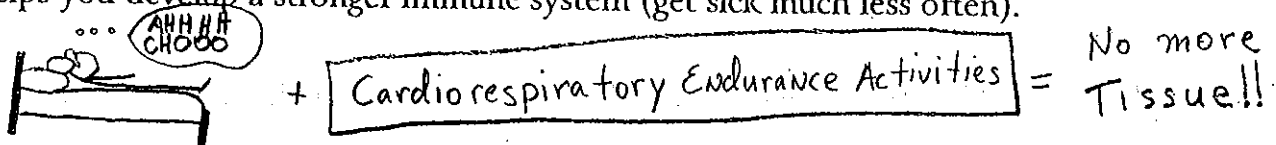
Your lungs become able to pull more oxygen from the air so it can be transported to the muscles.



It causes your body to increase the amount of stored energy it hold in the muscles and liver.



It helps you develop a stronger immune system (get sick much less often).



### Review:

### The Five Components of Fitness

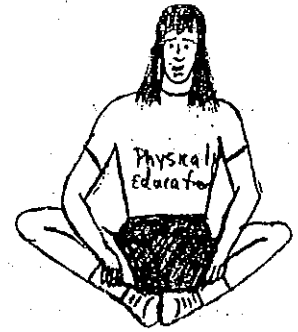
- |                                |   |
|--------------------------------|---|
| 1) Cardiorespiratory endurance | Includes activities like swimming, biking, running, soccer, and ultimate frisbee                  |
| 2) Flexibility                 | Stretching, diving, and gymnastics.   |
| 3) Muscular Endurance          | Tennis, lifting lighter weights many times in a row, crunches (or sit-ups) and push-ups.          |
| 4) Muscular Strength           | Football, shot-putting, and lifting a heavy weight once or twice.                                 |
| 5) Body Composition            | a comparison of the amount of lean tissue (muscle, bone, and organs) to the amount of fat tissue. |

# Flexibility

(One of the Five Components of Fitness)



Tricep Stretch



**Definition of Flexibility:** the ability of a joint (where two bones come together) to move through its full range of motion.

©The ability of a joint to have full range of motion depends on how tight or loose the muscle is surrounding that joint. If the muscle is tight, the range of motion at the joint is smaller.

©*Stretching* helps loosen the muscles around the joint and gives full range of motion to that joint.

## ⊗ Stretching to Improve your Flexibility ⊗

**How often should I stretch to keep full range of motion in my joints?**

A person should stretch three to seven days per week.

**How do I know how far to stretch?**

A person should stretch to the point of slight discomfort, but not pain. If you feel pain during stretching, back off a little until you only feel slight discomfort.

**How long do I need to hold a stretch for it to make my joints more flexible?**

A person should hold a stretch for 10 to 30 seconds. Also, the stretch should be done from 1 to 5 times so that your muscles can receive the most from it.

## BENEFITS OF STRETCHING

### ① **STRETCHING REDUCES MUSCLE SORENESS AFTER PHYSICAL ACTIVITY.**

Sometimes after doing a physical activity that your body is not used to, your body will become sore and stiff. Stretching at the end of an exercise session can decrease the amount of soreness you might have after doing a physical activity.

### ② **STRETCHING REDUCES ACHES AND PAINS.**

Sitting at a desk or in one place for a long period of time can cause your muscles to become tense. Stretching helps relieve muscle tightness, so you can go back to what you are doing feeling refreshed and ready to go.

### ③ **STRETCHING MAKES MOVING MUCH EASIER.**

If your joints are flexible, movements such as running, playing soccer, or even playing ultimate frisbee are much easier. If your joints are tight, you are unable to throw, kick, and run as well as you might be able to if you were more flexible.

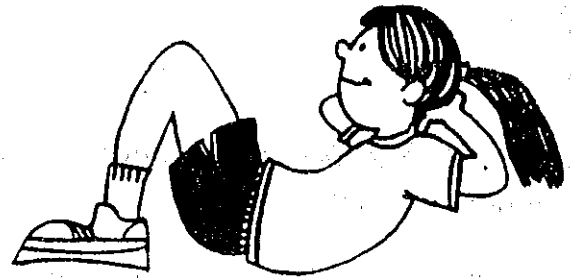
# Muscular Strength and Muscular Endurance

(Two of the Five Components of Fitness)



## Muscular Endurance

*Muscular endurance* is how well a particular group of muscles can work for long periods of time. Muscular endurance can be measured in several ways. One way is to see how many times you can repeat an exercise in a number of seconds or minutes (such as the number of sit-ups you can do in three minutes). Another way to measure muscular endurance is to see how long you can maintain a certain position over a period of time.



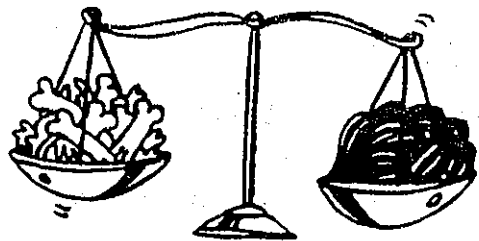
## Muscular Strength

*Muscular strength* is the maximum amount of work a group of muscles can do in a single effort. Muscular strength can be measured by lifting a heavy weight that is so heavy it can only be lifted once, hitting a baseball, or doing a standing broad jump.



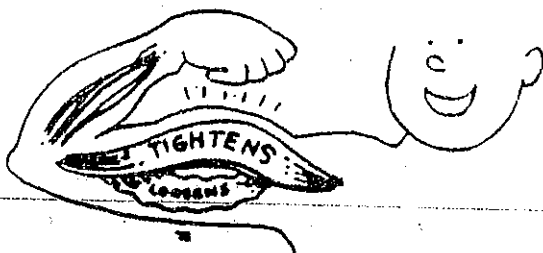
The *cardiac muscle* makes up most of your heart.

It takes 17 muscles to smile and 43 muscles to make a frown.

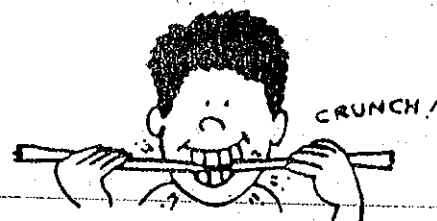


The combined weight of all the muscles in your body is about three times as much as that of all your bones.

The largest mass of muscles in your body is your *gluteals* (buttocks muscles).



Skeletal muscles work in pairs. When one muscle *contracts* or tightens, the other muscle relaxes.



The muscle that closes your jaw is called the *masseter* muscle. It is one of the strongest muscles in your body.