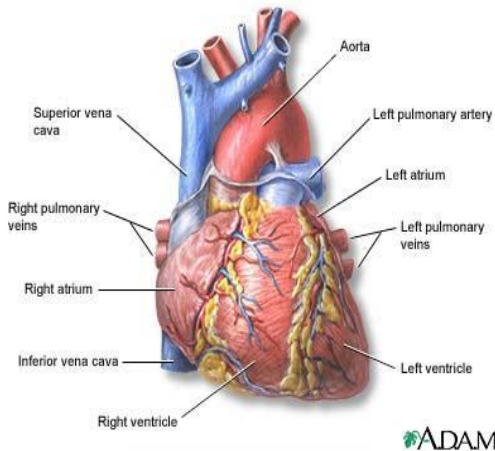


CARDIOVASCULAR FITNESS STUDY GUIDE



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What is Cardiovascular/Cardiorespiratory Fitness?

- It is one main component of overall physical fitness.
- It involves the circulation between your heart and lungs and means they are in good shape and are able to supply your muscles with lots of oxygen and nutrients.

So then, What is Cardiovascular Endurance?

- It is the ability to keep moving aerobically for long periods of time.
- “**Aerobic**” exercises are steady activities in which the heart can supply all the oxygen the muscles need.
- Below are some examples that qualify as aerobic activities as long as you keep your heart rate elevated the whole time.
 - swimming
 - playing basketball
 - biking
 - playing soccer
 - jumping rope
 - rollerblading
 - jogging
 - zumba

How do I measure my cardiovascular fitness?

- At OOJH we measure your cardiovascular endurance by testing the mile run.

How will I measure my heart rate?

- One way this can be measured is by wearing a heart rate monitor.
- Another way is to take your pulse:
 - taking your pulse will let you know how many times your heart beats.
 - you can take your pulse at the carotid artery next to your throat or
 - you can take your pulse on the inside of your wrist.
 - never use your thumb to take your pulse since it has its own pulse.
 - if you take a six (6) second count, then multiply by 10 (or simply add a zero), this will tell you how many times your heart is beating per minute.

OK, so now I know how to take my pulse, but how will I know if it is high enough?

- In order to get optimal aerobic benefits at a safe, comfortable pace, you should keep your heart rate within your *Target Heart Range* when exercising.
- Ideally you should be working between 60-80% of your maximum heart rate.
- Your **INTENSITY** or *how hard you are working* is determined by calculating your **TARGET HEART RATE RANGE**. Here is the formula:

A. You must first calculate your Maximum Heart Rate (MHR):

1. Take 220 and subtract your age.
2. The result equals the *maximum* number of times your heart should beat per minute.

B. To calculate your Target Heart Range (THR) for aerobic exercise:

3. Take your maximum heart rate and multiply it by .6 or 60% to determine the low end of your range, and then
4. Take your maximum heart rate and multiply it by .8 or 80% to determine the high end of your range.

$$60\% \text{ maximum} = \underline{\hspace{2cm}} \times .6 = \underline{\hspace{2cm}} \text{ beats per minute}$$

(minimum)

$$80\% \text{ maximum} = \underline{\hspace{2cm}} \times .8 = \underline{\hspace{2cm}} \text{ beats per minute}$$

(maximum)

5. Your target heart range for aerobic exercise is between
 $\underline{\hspace{2cm}}$ and $\underline{\hspace{2cm}}$ beats per minute.

How does Cross Country fit into the picture?

- Cross Country focuses on long distance running and qualifies as an aerobic activity that we can easily measure for our students.
- As we learn how to PACE, or spread our energy out in order to last longer, we are also working toward improve cardiovascular endurance through running, jogging and walking.

Are there steps to follow to learn how to pace and last?

- Start out slowly, pick up your pace gradually
- Have a positive attitude
- Increase distance
- Increase time spent on activity
- Increase Intensity
- NOTE: Always try to work within your Target Heart Rate Range (THR)

Any tips to focus on running form?

- Breathing cycles should be even and steady.
 - inhale through nose and mouth-take 4 – 5 seconds to get a full breath in
 - exhale through nose and mouth-take 4 – 5 seconds to exhale breath out
 - your lungs are like a balloon, fill them to the maximum on the breath in
 - and when you exhale, shrink your balloon completely, blow out all CO₂
- Arms pump forward and back, hands held like a loose fist
- Foot placement to ground, heel, ball, toe
- Keep head steady.

Why is it important to cool down after a workout?

- It gives your body time to return to its normal level.
- It lowers your pulse and breathing rate slowly.
- It helps reduce your chance of injury.

What is the F.I.T.T Formula?

- It is an acronym used to help you determine how much exercise is enough for you to build good fitness.
- Below are what each of the letters stands for and means:
- **“F” = FREQUENCY IN THE F.I.T.T. Formula**- or how often a person exercises aerobically per week. You must exercise often enough to build fitness. A minimum of three to five times per week is recommended to improve and maintain good fitness
- **“I” = INTENSITY IN THE F.I.T.T. Formula**-or how hard a person exercises aerobically during a workout. During aerobic exercise, you should be exercising within your Target Heart Range which is somewhere between 60-80% of your maximal heart rate. Exercising too easily or not hard enough will NOT improve fitness. How hard you are working can be measured by taking your pulse.
- **“T” = TIME IN THE F.I.T.T. Formula** -or how long you exercise for; the duration of one exercise session. To develop good fitness, you should exercise aerobically keeping your heart rate in the “Target Heart Range,” for a minimum of 20 minutes.
- **“T” = TYPE IN THE F.I.T.T. Formula**- or what kind of activity you choose to participate in.

...AND FINALLY AND MOST IMPORTANTLY...

Why is it important to build endurance and have good heart health?

- You'll have more energy and feel better about yourself.
- Burns calories and helps keep your weight under control
- Lowers your blood pressure.
- Increases strength and muscle tone.
- Increases your metabolism, meaning that when you exercise or are at rest, you will automatically burn more calories than someone who is not physically active.

- Increases your immunity to common diseases.
- Decreases your resting heart rate, meaning that while you are at rest your heart will beat at a slower, but more powerful rate. This is because you are building a stronger heart muscle.
- Decreases the risk of coronary and other diseases.
- Decrease stress, one of the leading causes of heart disease.

Additionally regular exercise can:

- Increase your feelings of happiness and well being.
- Increase self-esteem, which in turn, increases work performance, success at relationships, and sports performance. Good feelings about yourself make every aspect of life more productive and enjoyable.
- Give you an outlet for social contact or alone time, whichever you prefer.
- Helps you feel good and look good in your clothes.
- Increase your quality of life.

FITNESS TERMINOLOGY

AEROBIC ACTIVITY: are steady activities in which the heart can supply all the oxygen the muscles need.

CARDIOVASCULAR FITNESS: the ability of the heart, lungs and blood vessels to function efficiently when a person exercises the body.

ENDURANCE: the ability to move for long periods of time.

PACING: spreading out your energy throughout an entire race so that you can last the distance; each individual's pace may vary; pace should be a steady flow for the entire distance

PULSE RATE: the number of times that your heart beats each minute. (Never use your thumb to find your pulse since it has its own pulse.)

STITCH: or cramp in the side may be caused by a lack of oxygen getting to your muscles. As your body gets more efficient in bringing oxygen to your muscles, this will not happen as frequently. Should this occur, raise arms overhead and keep moving.

TARGET HEART RANGE: In order to get optimal aerobic benefits at a safe, comfortable pace, you should keep your heart rate within 60-80 of your maximum heart rate when exercising.