

Physical Fitness Study Guide



What is "muscular strength?"

Muscular strength is the ability of the muscle to exert force during an activity. The key to making your muscles stronger is working them against resistance, whether that be from weights or gravity. If you want to gain muscle strength, try exercises such as lifting weights or rapidly taking the stairs.

What is "muscular endurance?"

Muscular endurance is the ability of the muscle to continue to perform without fatigue. To improve your muscle endurance, try cardiorespiratory activities such as walking, jogging, bicycling, or dancing.

What is "body composition?"

Body composition refers to the relative amount of muscle, fat, bone, and other vital parts of the body. A person's total body weight (what you see on the bathroom scale) may not change over time. But the bathroom scale does not assess how much of that body weight is fat and how much is lean mass (muscle, bone, tendons, and ligaments). Body composition is important to consider for health and managing your weight!

What is "flexibility?"

Flexibility is the range of motion around a joint. Good flexibility in the joints can help prevent injuries through all stages of life. If you want to improve your flexibility, try activities that lengthen the muscles such as swimming or a basic stretching program.

Physical fitness

Physical fitness is a set of attributes a person has in regards to *a person's ability to perform physical activities* that require aerobic fitness, endurance, strength, or flexibility and is determined by a combination of regular activity and genetically inherited ability.

Regular physical activity

A pattern of physical activity is regular if activities are performed:

- most days of the week, preferably daily;
- 5 or more days of the week if moderate-intensity activities (in bouts of at least 10 minutes for a total of at least 30 minutes per day); or
- 3 or more days of the week if vigorous-intensity activities (for at least 20-60 minutes per session).

Finding your Pulse

Finding your pulse can be tricky. However, there are two spots where you can find your pulse. Each time your heart beats, it squeezes blood through your arteries and veins. These pipes expand and contract. We want to count how many times we feel this beating sensation.



Spot #1 RADIAL PULSE

Using your pointer finger and your middle finger, press on the back of your wrist (so that your finger nails are pointing to the floor), just below the thumb. There is a groove below the bone, underneath of the thumb. Wait a couple of seconds, and do not press too hard. We do not want to stop blood flow!

Spot #2 CAROTID PULSE

Place your thumb onto your chin. Swing the same two fingers onto the side of your neck. On each side of your Adam's Apple, there is a groove. Feel for your pulse. Again, do not press too hard or you will stop the blood flow. Do not press both sides at the same time or you will stop blood flow.

OK, now what?

For 10 seconds, we are going to count how many times we feel that beating sensation. When we get a number, we multiply that number by 6 and come up with a HR. This would be our HR at rest. After exercising, we can do the same. However, this would not be our resting HR, but our exercising HR.

Remember, HRs vary from individual to individual. We want a resting HR below 84 bpm.

10 x 6 = 60 beats per minute

11 x 6 = 66 bpm

12 x 6 = 72 bpm

13 x 6 = 78 bpm

14 x 6 = 84 bpm

15 x 6 = 90 bpm

16 x 6 = 96 bpm

17 x 6 = 103 bpm

Heart Rate

Maximum Heart Rate (MHR)

To find your MHR you must take 220 – your age.

Target heart rate (THR) A rate 60 to 80 percent of the maximum heart rate at which the maximum benefit is derived from exercise.

Finding your Target Heart Rate

Step 1 220- your age = Maximum Heart Rate

Step 2 Multiply your MHR by
• .6 for your low end THR
• .8 for your high end THR

Example: You are 20 years old

Step 1 220 – 20 = 200 MHR
Step 2 200 X .6 = 120 (low end)
200 X .8 = 160 (high end)

Target Heart Zone = 120-160

TRAINING ZONES

Healthy Heart Zone (Warm up) --- 50 - 60% of maximum heart rate: The easiest zone and probably the best zone for people just starting a fitness program. It can also be used as a warm up for more serious walkers. This zone has been shown to help decrease body fat, blood pressure and cholesterol. It also decreases the risk of degenerative diseases and has a low risk of injury. 85% of calories burned in this zone are fats!

Fitness Zone (Fat Burning) --- 60 - 70% of maximum heart rate: This zone provides the same benefits as the healthy heart zone, but is more intense and burns more total calories. The percent of fat calories is still 85%.

Aerobic Zone (Endurance Training) --- 70 - 80% of maximum heart rate: The aerobic zone will improve your cardiovascular and respiratory system AND increase the size and strength of your heart. This is the preferred zone if you are training for an endurance event. More calories are burned with 50% from fat.

Anaerobic Zone (Performance Training) --- 80 - 90% of maximum heart rate: Benefits of this zone include an improved VO2 maximum (the highest amount of oxygen one can consume during exercise) and thus an improved cardio respiratory system, and a higher lactate tolerance ability which means your endurance will improve and you'll be able to fight fatigue better. This is a high intensity zone burning more calories, 15 % from fat.

Principles of Fitness

F = **Frequency** = How often you workout or exercise

I = **Intensity** = How hard or difficult your workout is

T = **Time** = How long your workout will be