

HEALTH RELATED FITNESS COMPONENTS

NAME: _____

In this Unit you will learn:

1. Components of Health Related Fitness
2. How evaluate your level in each of the Health Related components of fitness.

Read the 5 Components of Fitness article (below) to learn:

1. The **5 components of fitness**
2. The importance of each component of fitness.

Five Components of Health Related Fitness

What does it mean to be physically "fit?" Physical fitness is defined as "a set of attributes that people have or achieve that relates to the ability to perform physical activity" (USDHHS, 1996). In other words, it is more than being able to run a long distance or lift a lot of weight at the gym. Being fit is not defined only by what kind of activity you do, how long you do it, or at what level of intensity. While these are important measures of fitness, they only address single areas. Overall fitness is made up of five main components:

- Cardiorespiratory endurance
- Muscular strength
- Muscular endurance
- Flexibility
- Body composition

Why you should evaluate your health related fitness:

- To learn your physical condition
- To gain information to help you in setting goals & develop an exercise program
- To collect beginning data & follow up data to help evaluate your progress.
- To help you become motivated to establish achievable fitness goals.

What is "cardio-respiratory endurance (cardio-respiratory fitness)?"

Cardio-respiratory endurance is the ability of the body's circulatory and respiratory systems to supply fuel during sustained physical activity (USDHHS, 1996 as adapted from Corbin & Lindsey, 1994). To improve your cardio-respiratory endurance, try activities that keep your heart rate elevated at a safe level for a sustained length of time such as walking, swimming, or bicycling. The activity you choose does not have to be strenuous to improve your cardio-respiratory endurance. Start slowly with an activity you enjoy, and gradually work up to a more intense pace.

You can measure Cardio-respiratory endurance using:

- One Mile Run/Walk Test - <https://www.youtube.com/watch?v=YE8eEOUb5Ws>
- Pacer Test - https://www.youtube.com/watch?v=_XJAUKjxk4
- VO₂ Max test (most accurate measure of Cardio-respiratory fitness) - https://www.youtube.com/watch?v=fn3Yr-LS_I0

Having good Cardio-respiratory endurance is good because it helps to reduce your chances for heart disease.

HEART DISEASE IS THE LEADING CAUSE OF DEATH IN THE UNITED STATES.

What is "muscular strength?"

Muscular strength is the ability of the muscle to exert force during an activity (USDHHS, 1996 as adapted from Wilmore & Costill, 1994). The key to making your muscles stronger is working them against resistance, whether using weights or gravity. If you want to gain muscle strength, try exercises such as lifting weights or rapidly taking the stairs. You can measure muscular strength by using the:

- Curl up test - https://www.youtube.com/watch?v=_XJAtUKjxk4
- Push up test - https://www.youtube.com/watch?v=5_D3bacZ7u0

What is "muscular endurance?"

Muscular endurance is the ability of the muscle to continue to perform without fatigue (USDHHS, 1996 as adapted from Wilmore & Costill, 1994). To improve your muscle endurance, try cardio-respiratory activities such as walking, jogging, bicycling, or dancing. You can measure muscular endurance by using the:

- Curl up test - https://www.youtube.com/watch?v=5_D3bacZ7u0
- Push up test - https://www.youtube.com/watch?v=5_D3bacZ7u0

What is "flexibility?"

Flexibility is the range of motion around a joint (USDHHS, 1996 as adapted from Wilmore & Costill, 1994). 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. You can measure flexibility using the:

- Backsaver Sit & Reach Test - <https://www.youtube.com/watch?v=TgaGCX20UIQ>
- Shoulder Stretch - https://www.youtube.com/watch?v=Vue_8KqEmkQ
- Trunk lift - <https://www.youtube.com/watch?v=PvYI3iPUHpY>

References

U.S. Department of Health and Human Services. *Physical activity and health: a report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion; 1996.
<http://www.myteacherpages.com/webpages/machramovitch/five.cfm>

What is "body composition?"

Body composition refers to the relative amount of muscle, fat, bone, and other vital parts of the body (USDHHS, 1996 as adapted from Corbin and Lindsey, 1994). 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! You can measure Body Composition by using the:

- BMI - <https://www.youtube.com/watch?v=na0NDBjFFQs>
- Fat Calipers - <https://www.youtube.com/watch?v=e8x1rj3p-sl>
- Waist Circumference - <https://www.youtube.com/watch?v=e05UTesRt5g>
- Bioelectric Impedance Analysis - <https://www.youtube.com/watch?v=dRNleNVKTYw>
- Hydrostatic weighing (most accurate measure of body fat) - <https://www.youtube.com/watch?v=Q3gjS0wxVXY>

Read the Body Mass Index (BMI) article below to learn:

1. What is How to calculate your BMI.
2. What BMI tells about your overall health.

How Are Overweight and Obesity Diagnosed?

The most common way to find out whether you're overweight or obese is to figure out your body mass index (BMI). BMI is an estimate of body fat, and it's a good gauge of your risk for diseases that occur with more body fat. BMI is calculated from your height and weight. You can use the chart below or the National Heart, Lung, and Blood Institute's (NHLBI's) [online BMI calculator \(Links to an external site.\)](#) to figure out your BMI. Or, your health care provider can measure your BMI.

Body Mass Index for Adults

Use this table to learn your BMI. First, find your height on the far left column. Next, move across the row to find your weight. Weight is measured with underwear but no shoes.

Once you've found your weight, move to the very top of that column. This number is your BMI.

Height	21	22	23	24	25	26	27	28	29	30	31
4'10"	100	105	110	115	119	124	129	134	138	143	148
5'0"	107	112	118	123	128	133	138	143	148	153	158
5'1"	111	116	122	127	132	137	143	148	153	158	164
5'3"	118	124	130	135	141	146	152	158	163	169	175
5'5"	126	132	138	144	150	156	162	168	174	180	186
5'7"	134	140	146	153	159	166	172	178	185	191	198
5'9"	142	149	155	162	169	176	182	189	196	203	209
5'11"	150	157	165	172	179	186	193	200	208	215	222
6'1"	159	166	174	182	189	197	204	212	219	227	235
6'3"	168	176	184	192	200	208	216	224	232	240	248

The above table offers a sample of BMI measurements. If you don't see your height and/or weight listed on this table, go the NHLBI's complete table at: www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmi_tbl.htm.

What Does Body Mass Index Mean?

BMI	
18.5–24.9	Normal weight
25.0–29.9	Overweight
30.0–39.9	Obese
40.0 and above	Extreme obesity

Although BMI can be used for most men and women, it does have some limits. It may overestimate body fat in athletes and others who have a muscular build. BMI also may underestimate body fat in older people and others who have lost muscle.

Body Mass Index for Children and Teens

Overweight and obesity are defined differently for children and teens than for adults. Children are still growing, and boys and girls mature at different rates.

BMI for children and teens compares their heights and weights against growth charts that take age and sex into account. This is called BMI-for-age percentile. A child or teen's BMI-for-age percentile shows how his or her BMI compares with other boys and girls of the same age.

For more information about BMI-for-age and growth charts for children, go to the Centers for Disease Control and Prevention's [BMI-for-age calculator](#)

What Does the BMI-for-Age Percentile Mean?

BMI-for-Age Percentile	
Less than 5th percentile	Underweight
5th percentile to less than the 85th percentile	Healthy weight
85th percentile to less than the 95th percentile	Risk of overweight
95th percentile or greater	Overweight

Waist Circumference

Health care professionals also may take your waist measurement. This helps screen for the possible health risks related to overweight and obesity in adults.

If you have abdominal obesity and most of your fat is around your waist rather than at your hips, you're at increased risk for [coronary heart disease \(Links to an external site.\)](#) and type 2 diabetes. The risk goes up with a waist size that's greater than 35 inches for women or greater than 40 inches for men.

You also can measure your waist size. To do so correctly, stand and place a tape measure around your middle, just above your hipbones. Measure your waist just after you breathe out.

- _____ 16. Which health related component of fitness is assessed by the back saver/sit and reach test?
A. body composition B. flexibility C. cardiorespiratory endurance D. muscular strength
- _____ 17. Dayna is trying to increase her cardiorespiratory fitness. What piece of equipment would help her ?
A. Dumb bells B. Weight bench C. Treadmill D. Resistance bands
- _____ 18. Brent is a soccer player and has been training for overall fitness using weights. He does not have access to the weight room for one week. What is his **BEST** training alternative to continue increasing his muscular strength?
A. playing video games B. stretching exercises
C. bowling D. exercise bands
- _____ 19. Which type of exercise **BEST** improves cardiorespiratory fitness?
A. stretching B. bowling C. swimming D. weight lifting
20. Calculate your BMI.
You will need: Your Height _____ Your Weight _____ Your age _____
Refer to the BMI chart to calculate, YOUR BMI _____