Chapter 7: Cardiovascular Fitness

Lesson 7.1: Cardiovascular Fitness Facts

Self-Assessment 7: Cardiovascular Fitness—Step Test and One-Mile Run
Lesson 7.1: Cardiovascular Fitness Facts

Lesson Objectives:

• Describe the benefits of cardiovascular fitness to health and wellness.
• Explain the relationship between physical activity and good cardiovascular fitness.
• Describe and demonstrate some methods you can use to assess your cardiovascular fitness.
• Determine how much cardiovascular fitness is enough.
Lesson 7.1: Cardiovascular Fitness Facts

Question

Why is CV fitness considered the most important fitness component?
Lesson 7.1: Cardiovascular Fitness Facts

Answer

- A high level of fitness means that you have a healthy cardiovascular system.
- Cardiovascular disease is the leading cause of death in the United States.
Lesson 7.1: Cardiovascular Fitness Facts

Question

Describe the components of the cardiovascular and respiratory systems.
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Answer

• The heart, lungs, and blood vessels make up these systems (the cardiorespiratory system).
• The heart transports blood (carrying oxygen and nutrients) around the body.
• The lungs oxygenate the blood and remove carbon dioxide.
Lesson 7.1: Cardiovascular Fitness Facts

Question

How does good cardiorespiratory fitness benefit each of the following: the heart, the lungs, the blood, and the cells?
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Answer

• The heart benefits by being able to pump more blood per beat.

• The lungs are able to increase the amount of oxygen that diffuses into the blood.
Lesson 7.1: Cardiovascular Fitness Facts

Answer (continued)

- The blood can carry more oxygen to the working muscles.
- The cells adapt by being able to extract and use more oxygen.
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Question

What types of activities are likely to improve aerobic fitness?
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Answer

• Aerobic activities (jogging, swimming, biking, hiking) of a sufficient intensity and duration.
• An exercise session of 20 minutes or more, at a heart rate in the target zone, will improve aerobic fitness.
Lesson 7.1: Cardiovascular Fitness Facts

Question

Why does the cardiovascular system benefit from the activities mentioned earlier?
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Answer

The cardiovascular system benefits because

• the stress of exercise causes adaptations (changes) to the cardiovascular system.

• the body adapts to the stress of exercise by becoming stronger and more efficient.
Lesson 7.1: Cardiovascular Fitness Facts

Question

What is the definition of resting heart rate?
Lesson 7.1: Cardiovascular Fitness Facts

Answer

• Your resting heart rate is how many times your heart beats in 1 minute while you are resting.

• Resting heart rates for teenagers may range between 60 and 90 beats per minute.
Lesson 7.1: Cardiovascular Fitness Facts

Question

What is the role of the arteries, and what is the buildup of fatty deposits on arterial walls called?
Lesson 7.1: Cardiovascular Fitness Facts

Answer

• The arteries transport blood to the muscles and organs.
• The process of fatty deposits building up on the walls of the arteries is known as atherosclerosis.
Lesson 7.1: Cardiovascular Fitness Facts

Question

• What are the two types of cholesterol called?
• What are the effects of each type of cholesterol on CV disease risk?
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Answer

- LDL cholesterol (this cholesterol damages arteries)
- HDL cholesterol (this cholesterol helps get rid of LDL cholesterol)
- It is important for LDL cholesterol not to be too high, and HDL cholesterol not to be too low (suggested ratio of no greater than 4:1).
Lesson 7.1: Cardiovascular Fitness Facts

Question

What is the role of the veins? What is the significance of the one-way valves?
Lesson 7.1: Cardiovascular Fitness Facts

Answer

• The veins transport deoxygenated blood back to the heart.
• The one-way valves prevent the blood from flowing backward through the circulatory system.
Lesson 7.1: Cardiovascular Fitness Facts

Question

What are some of the ways to assess cardiovascular fitness?
Lesson 7.1: Cardiovascular Fitness Facts

Answer

- In a laboratory, a running or cycling test can measure how much oxygen you can use when exercising (special equipment is needed for this test). This test is called maximal oxygen uptake.
Lesson 7.1: Cardiovascular Fitness Facts

Answer (continued)

• On a playing field, you can complete an aerobic run (usually one mile) in the quickest time possible or do the walking test.
• In the gymnasium, there are other aerobic tests (step test, PACER test) that can estimate how fit you are.
Lesson 7.1: Cardiovascular Fitness Facts

Question

How fit do you need to be in order to obtain health and wellness benefits?
Lesson 7.1: Cardiovascular Fitness Facts

Answer

• Aerobic exercise on a regular basis (3-5 times per week, heart rate in the target zone, for 20 min or more) should provide you with a good level of fitness.

• Fitness standards identified with different physical fitness tests are given in your text and relate to health and wellness benefits.
Self-Assessment 7: Cardiovascular Fitness—Step Test and One-Mile Run

Question

What are advantages of the one-mile run and the step test?
Self-Assessment 7: Cardiovascular Fitness—Step Test and One-Mile Run

Answer

• They are simple and reasonably quick to perform.
• They provide you valid information on your aerobic fitness.
Self-Assessment 7: Cardiovascular Fitness—Step Test and One-Mile Run

Question

How is the step test different from the one-mile run test?
Self-Assessment 7: Cardiovascular Fitness—Step Test and One-Mile Run

Answer

• It is done indoors, so weather is not a factor.
• People do not find stepping onto a box as hard as running.
• Motivation is not as big a factor as in running tests.
Self-Assessment 7: Cardiovascular Fitness—Step Test and One-Mile Run

Question

What is important about the one-mile run test?
Self-Assessment 7: Cardiovascular Fitness—Step Test and One-Mile Run

Answer

• It is not a race. Your goal is a good fitness rating.
• It is important to practice pacing this test.
• Give your best effort on this test.