



#9629

CARDIOVASCULAR FITNESS

HUMAN KINETICS, 2002

Grade Levels: 7-12

21 minutes

2 Instructional Graphics Enclosed

DESCRIPTION

Defines cardiovascular fitness and demonstrates ways to assess it. Describes each level of the physical fitness pyramid and the three components of a basic fitness exercise.

ACADEMIC STANDARDS

Subject Area: Physical Education

- ★ Standard: Understands the benefits and costs associated with participation in physical activity
 - Benchmark: Understands long-term physiological benefits of regular participation in physical activity (e.g., improved cardiovascular and muscular strength, improved flexibility and body composition) (See Instructional Goal #2.)
- ★ Standard: Understands how to monitor and maintain a health-enhancing level of physical fitness
 - Benchmark: Engages in more advanced activities that develop and maintain cardiorespiratory endurance (e.g., timed or distance walk/run and other endurance activities at specified heart rate-heart rate recovery) (See Instructional Goal #3.)
 - Benchmark: Understands basic principles of training that improve physical fitness (e.g., threshold, overload, specificity, frequency, intensity, duration, and mode of exercise) (See Instructional Goals #4 and 5.)
 - Benchmark: Knows how to differentiate the body's response to physical activities of various exercise intensities (e.g., measurement of heart rate, resting heart rate, heart rate reserve; taking pulse at rest and during exercise) (See Instructional Goals #3 and 4.)
 - Benchmark: Understands how to maintain an active lifestyle throughout life (e.g., participate regularly in physical activities that reflect personal interests) (See Instructional Goal #5.)

INSTRUCTIONAL GOALS

1. To observe the different types of cardiovascular exercise.
2. To understand the benefits of cardiovascular fitness.
3. To evaluate own cardiovascular fitness level through the use of either a step test or a one-mile run test.
4. To evaluate own resting heart rate and calculate target heart rate zone.
5. To introduce the application of the FIT Formula to various types of cardiovascular activities.
6. To illustrate the three components of a cardiovascular fitness program.
7. To create own fitness program incorporating the FIT Formula.

BACKGROUND INFORMATION

This film is part of a series: Chuck Corbin's fitness for life. Each video in the series individually address the four health-related parts of fitness: cardiovascular fitness, muscular fitness, flexibility, and body composition. The *Introduction to Lifelong Physical Fitness* video gives a general overview of all of these components. A few of the activities described in this video refer to the fitnessgram program. However, most of the ideas presented can be implemented without the use of the fitnessgram materials. Discussion questions are shown on the screen at the end of the video.

VOCABULARY

1. cardiovascular fitness
2. pulse
3. target heart rate
4. maximum
5. minimum
6. warm up
7. cool down
8. frequency
9. intensity
10. endurance



BEFORE SHOWING

1. Discuss cardiovascular fitness. What is it? How is it a benefit? How is it measured? How can it be developed?
2. Make a list of all the activities you participate in at school and at home during a typical week.

DURING SHOWING

1. View the video more than once, with one showing uninterrupted.
2. During the discussion of the Physical Activity Pyramid, list activities shown that fit Levels 1 and 2.
3. Stop the video after the demonstration of counting the heart rate. Determine your own pulse rate using either the neck pulse or wrist pulse. (See Instructional Graphics.)

AFTER SHOWING

► Discussion Items and Questions

1. What is cardiovascular fitness? What body systems must be healthy to have good cardiovascular fitness?
2. What other names are used for cardiovascular fitness? What does aerobic mean?
3. How does cardiovascular fitness relate to good health?
4. What are some good tests of cardiovascular fitness?
5. How is a maximal oxygen uptake test administered?
6. What steps do you take to do the 12-minute run test properly? To do the walking test properly? To do the step test properly? To do the PACER test properly?

7. From which levels of the pyramid should you select physical activities to build cardiovascular fitness?
8. What is the FIT Formula for lifestyle physical activities? For active aerobics? For active sports and recreation?
9. How do you count resting and exercise heart rates?
10. How do you determine your heart rate target zone?
11. What exercises would provide a good warm-up before a workout?
12. Why is a cool-down a good idea after a workout?
13. What are some of the physical activities that you would choose to build cardiovascular fitness?

► **Applications and Activities**

1. Review activities listed before showing the video. Match each activity to the level(s) of the physical fitness pyramid to which it belongs. (See Before Showing #2.)
2. Take the Step Test or the One Mile Run test. Use the charts to determine your cardiovascular fitness rating. (See Instructional Graphics.)
3. Determine your target heart rate zone. (See Instructional Graphics.)
4. Plan a personal fitness program, including the application of the FIT Formula.

RELATED RESOURCES



- [Flexibility #9742](#)
- [Muscle Fitness #9743](#)
- [Body Composition #9628](#)



World Wide Web

The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

• **THE FITNESS JUMPSITE**

<http://www.primusweb.com/fitnesspartner/>

The Fitness Partner Connection Jumpsite includes a fitness library, a fitness forum, bulletin boards, specific fitness and training activities as well as information about food, nutrition, and general fitness.



- **THE PRESIDENT'S COUNCIL ON PHYSICAL FITNESS AND SPORTS**

<http://www.fitness.gov/index.html>

Describes the goals of the President's Challenge and provides links to resources for coaches and teachers as well as tips for students on keeping fit.



- **AMERICAN HEART ASSOCIATION**

<http://www.americanheart.org>

Gives information about upcoming local activities such as American Heart Walks, fundraisers that can be done by students such as Hoops For Heart, and has links to resources and articles relating to heart disease and fitness tips.



INSTRUCTIONAL GRAPHICS

- **CARDIOVASCULAR FITNESS TESTS**
- **YOUR HEART RATE**



Cardiovascular Fitness Tests



STEP TEST (for beginners)

Equipment: 12" bench and stopwatch or clock with second hand

1. Warm up.
2. Step on 12" bench for 3 minutes at a rate of 24 steps per minute. (One step has 4 beats: up with right foot, up with left foot, down with right foot, down with left foot.)
3. Immediately after, sit down and relax without talking.
4. Find your pulse in the first 5 seconds after stepping. Count your pulse for 60 seconds.
5. Find your pulse recovery rate on the chart below.

SCORING (# of heartbeats)	RATING
85-95	Excellent
96-105	Good
106-125	Fair
126 or more	Needs Improvement



ONE MILE RUN TEST (for physically active people)

Equipment: 1 mile track and stopwatch

1. Warm up.
2. Run the mile as fast as you can. Alternate walking and running if necessary.
3. Record the time in minutes and seconds.
4. Find your time on the chart.

GIRLS	BOYS	RATING
Under 8:00	Under 7:00	Excellent
8:01-8:30	7:01-7:30	Good
8:31-9:00	7:31-8:00	Average
9:01-9:30	8:01-8:30	Fair
9:31-10:00	8:31-9:00	Low
10:01 plus	9:01 plus	Very Low





Your Heart Rate

Find your "resting heart rate". Take your pulse. You can take your pulse two different ways:



Neck or Carotid Pulse



Wrist or Radial Pulse



Move your fingers until you feel your pulse. Count the pulse for 60 seconds when you are rested.



Your resting heart rate = Number of beats per minute (BPM)



Find your "target heart rate zone". This will tell you what the intensity level of your exercise activities should be.



$220 - (\text{your age}) = (\text{your maximum heart rate})$



My maximum heart rate is _____.

$(\text{Your maximum heart rate}) \times .55 = \text{Your Minimum Heart Rate (Y)}$



My minimum heart rate is _____.



$(\text{Your maximum heart rate} \times .90 = \text{Your upper-limit heart rate (Z)})$

My upper-limit heart rate is _____.



You will get maximum cardiovascular benefits if you exercise with your heart rate between (Y) and (Z).



My resting heart rate is _____ BPM.

My target heart rate zone is _____ to _____ BPM.
(Y) (Z)

