Chapter Four, Physical Activity and Fitness

LESSON PLAN

PART I

Lesson 1: The Benefits of Physical Activity
Instructor: Academic Instructor
Teaching Method: Informal Lecture
Hands-On Health Materials:
   1. watch with a second hand
Visual Aids (VA): PowerPoint Presentation
Student Preparation:
   Reading Assignment: Leadership Education I: Citizenship, Character and Air Force Tradition, Chapter 4, Lesson 1
   Homework Assignment: Instructors may use any or all Student Workbook questions for this lesson as homework or in-class assignment.
Date of Lesson Development/Last Major Revision: 2003/July 2005

PART 1A

Lesson Objectives:
1. Know the importance of physical fitness.
2. Know the measures of physical fitness.
3. Know how to plan and execute a physical fitness plan.

Samples of Behavior/Main Points:
1. Define physical fitness and explain the difference between physical activity and exercise.
2. Identify the benefits of physical activity.
3. Describe how to increase levels of fitness.
4. Explain heart and lung endurance and how it can be measured.
5. Describe muscle strength and endurance and how each can be measured.
6. Explain how to improve body composition.
7. Define flexibility and describe how it can be measured.
8. Explain how to set and achieve fitness goals.
9. Describe how to prepare an activity plan.
10. Identify the three stages of an exercise session.
11. Explain how to check fitness progress.
12. Outline the benefits of individual sports and team sports.
13. Identify ways to become physically fit to participate in a sport.
14. Identify ways to minimize the risk of injury when participating in a sport.
PART IB

Strategy: Your cadets are probably aware of the importance of physical activity and fitness. Emphasize that this lesson will help them plan a physical fitness program that will work for them.

PowerPoint Presentation: Information points will appear on mouse clicks.

Lesson Outline:

1. Quick Write/Motivation (5 min.)

2. Topics (30 min.)
   a. How do the definitions of physical activity, exercise, and physical fitness differ?
   b. What are the benefits of an active lifestyle?
   c. What is the relationship between physical activity and weight control?
   d. How can you increase your level of fitness?
   e. How is staying active a key to fitness?
   f. What are the four elements of fitness?
   g. How can you increase your heart and lung endurance?
   h. How can you increase your muscle strength and endurance?
   i. How can you improve your body composition?
   j. How can you increase your flexibility?
   k. What do you need to know to set fitness goals?
   l. What can you do every day to be active?
   m. What is an activity plan?
   n. What are the three stages of an exercise workout?
   o. How can you check your fitness progress?
   p. How can you choose the right activity?
   q. What is sports conditioning?
   r. How can you avoid injury while exercising or participating in sports?
   t. What are the harmful effects of performance-enhancing drugs?

3. Health Skills Activity (5 minutes or else use this activity as homework)
   a. Relaxation Exercises

4. Hands-On Health Activity (5 minutes or else use this activity as homework)
   a. Your Target Pulse Rate

5. Wrap-up (5 min.)
ATTENTION
Although teens are aware of the need to be physically active, they may not know the specific parts of an activity program that will keep them physically fit throughout their lives.

CHAPTER OVERVIEW
In this chapter of Leadership Education I: Citizenship, Character and Air Force Tradition, we’ll cover the following topics (this lesson’s topics are in bold):

1. The benefits of physical activity
   a. Why are physical activity, exercise, and physical fitness important for a healthy lifestyle?
   b. What are the elements of fitness?
   c. How can you increase your fitness level?
   d. What activities should be included in a weekly activity plan?
   e. What are the three stages of an exercise workout?
   f. What is the right activity for your exercise plan?
   g. What are the elements of sports conditioning?
   h. What safety measures help prevent injuries?
   i. What are the dangers of performance-enhancing drugs?
2. Your body image
   a. What factors influence your appropriate weight?
   b. What problems does being overweight or underweight cause?
   c. What is the relationship between calories and weight?
   d. How can you reach your appropriate weight?
   e. What are the risks of eating disorders?
   f. How can you help someone with an eating disorder?

**MOTIVATION**
Ask students if they think that they are as physically active as they need to be. Tell them that this lesson will help them determine if they need to be more active or change the activities they are doing.

**LESSON OVERVIEW**
Today, we’ll cover the following topics:
1. How do the definitions of physical activity, exercise, and physical fitness differ?
2. What are the benefits of an active lifestyle?
3. What is the relationship between physical activity and weight control?
4. How can you increase your level of fitness?
5. How is staying active a key to fitness?
6. What are the four elements of fitness?
7. How can you increase your heart and lung endurance?
8. How can you increase your muscle strength and endurance?
9. How can you improve your body composition?
10. How can you increase your flexibility?
11. What do you need to know to set fitness goals?
12. What can you do every day to be active?
13. What is an activity plan?
14. What are the three stages of an exercise workout?
15. How can you check your fitness progress?
16. How can you choose the right activity?
17. What is sports conditioning?
18. How can you avoid injury while exercising or participating in sports?
19. What are the harmful effects of performance-enhancing drugs?
QUICK WRITE

How would you measure a person's fitness level? According to your criteria, are you physically fit?

Read the Quick Write assignment aloud, and let students jot down their responses. Then, ask students to share their ideas about what constitutes "enough" physical activity. Also have volunteers discuss the physical activities they enjoy most.

BODY

PRESENTATION

1. How do the definitions of physical activity, exercise, and physical fitness differ?

   a. Physical activity refers to any kind of movement that uses up energy.

      (1) It includes exercising and playing sports.

      (2) It also includes movements such as biking to the store, raking leaves, or walking up and down stairs.

   b. Exercise is a specifically planned and organized session of physical activity that you do to improve or maintain your physical fitness.
c. Physical fitness is the ability to handle the physical demands of everyday life without becoming overly tired.

2. What are the benefits of an active lifestyle?

a. Mental/emotional benefits include

(1) Feeling more alert and energetic
(2) Reducing stress
(3) Learning new things
(4) Getting a sense of accomplishment
(5) Lessening mental fatigue
(6) Building a positive self-image
(7) Increasing self-confidence and self-esteem

b. Physical benefits include

(1) Strengthening heart, lungs, and bones
(2) Managing weight
(3) Controlling blood sugar and blood pressure
(4) Increasing strength, stamina, and resistance to disease

(5) Improving flexibility, muscle tone, and balance (the feeling of stability and control over your body)

(6) Developing coordination, the smooth and effective working together of your muscles and bones

(7) Improving reaction time

(8) Improving sleep

c. Social benefits include

(1) Engaging in enjoyable activities

(2) Meeting and interacting with new people

(3) Using abilities to work with others as a team

(4) Getting support from friends

(5) Sharing goals and achievements with others
3. **What is the relationship between physical activity and weight control?**

a. A sedentary lifestyle and overeating contribute to the large number of adults (more than 50 percent) and teens (14 percent) who are overweight.

b. Understanding how the food you eat gets converted into energy can help you maintain a healthy weight.

1. Metabolism is the process by which your body gets energy from food.

2. Food's energy value is measured in units of heat called calories. Your body needs a certain number of calories each day to function properly.

3. Additional calories over this number must be burned through physical activity or they are stored in the body as fat.

4. Physical activity raises the metabolic rate, and your body burns more calories than when you are resting.

5. After physical activity, the metabolic rate slows down but is still higher than normal for several hours. You continue to burn more calories during this time than you did before the activity.
4. How can you increase your level of fitness?

a. First, recognize that physical activity is important to your lifelong health and well-being.

b. Next, make physical activity part of your daily life.

(1) Take advantage of the opportunities for physical activity that are all around, such as taking the stairs instead of the elevator, or walking or biking to the mall.

(2) Plan regular sessions of exercise.

(a) Start by exercising 10 to 15 minutes at a time and gradually work up to about 60 minutes on most days of the week.

(b) You can break your physical activity into smaller sessions, such as three 10-minute sessions instead of one 30-minute session.

(3) Choose the right activities.

(a) Aerobic exercise is rhythmic, nonstop, moderate to vigorous activity that requires large amounts of oxygen and works the heart. Examples are running, biking, and swimming.

(b) Anaerobic exercise is intense physical activity that requires little oxygen but uses short bursts of energy. Sprinting and gymnastics are examples.
(c) Combine both types to achieve optimum fitness.

5. How is staying active a key to fitness?

   a. Technology has replaced many of the physical activities that were once part of daily life.

   b. People have to make a more conscious effort to be physically active today.

   c. When you compare the time you spend watching television or sitting at the computer with the time you spend being physically active, are you active most of the time or inactive?

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**Health Skills Activity**

**Relaxation Exercises**

Guide students in reading and discussing the instructions for relaxation exercises. Ask volunteers to share what they already know about these and similar exercises. Also, ask students when, where, and why people might want to use them.

Have students try the relaxation exercises at home. During the next class, let students meet in groups to discuss their experiences. If your students know how to take their pulses, have them do so before and after the exercises.
6. What are the four elements of fitness?

   a. Heart and lung endurance

   b. Muscle strength and endurance

   c. Body composition

   d. Flexibility

7. How can you increase your heart and lung endurance?

   a. Endurance is your ability to engage in vigorous physical activity over time without tiring too easily or quickly.

   b. Heart and lung endurance refers to how effectively your heart and lungs work when you exercise and how quickly they return to normal when you stop.

   c. To determine your heart and lung endurance, see how far you can walk in 30 minutes or jog in 20 minutes.

      (1) Team up with a partner. Go to a track or running area with quarter-mile markers. Warm up with walking and gentle stretching exercises for 5 to 10 minutes.

      (2) Walk for 30 minutes or jog for 20 minutes. Have your partner record the distance that you cover. Cool down afterward by walking slowly and doing gentle stretching exercises.
(3) Switch roles and repeat the exercise.

(4) Caution: If you have a heart or lung disease, check with your doctor before attempting this test.

(5) Scoring (miles): If you score within the range given for your age and gender, your heart and lung endurance is acceptable. If not, continue to practice walking or jogging until you can score in the acceptable range.

(a) Females age 12–15: walking 2–2.2 miles; jogging 1.6–1.8 miles

(b) Males age 12–15: walking 2.2–2.4 miles; jogging 1.8–2.0 miles

d. The best way to build up heart and lung endurance is through sustained moderate to vigorous exercise lasting at least 60 minutes on most days.

e. Examples of cardiovascular exercises, which raise your breathing rate and heartbeat, include

(a) Walking/jogging/running: Start off slowly and then gradually increase your pace. Work up to a 30-minute walk, or alternate walking and jogging until you can jog or run for 20 minutes.

(b) Swimming: Swimming provides a total body workout. Gradually work up to 20 minutes of continuous swimming. Swim at a steady pace and vary your routine by using different strokes.
(c) Jumping rope: As you jump, guard your joints against unnecessary strain by raising your feet just high enough to allow the rope to pass.

f. Vary your exercise routine. Switching between different exercises is known as cross-training.

8. How can you increase your muscle strength and endurance?

   a. Strength is the ability of your muscles to exert a force.

   b. Muscle strength measures the most weight you can lift or the most force you can exert at one time.

   c. Muscle endurance is the ability of a muscle to repeatedly exert a force over a prolonged period of time.

   d. To determine your abdominal muscle strength and endurance, measure your ability to do bent-knee curl-ups.

      (1) Team up with a partner.

      (2) Partner A lies on a mat with knees bent and feet flat on the floor. Partner B holds partner A's feet.

      (3) Partner A curls up slowly with arms crossed over the chest and chin tucked to the chest so that the head never touches the mat. The curl-up is completed when partner A's shoulder blades return to the testing surface.
(4) Partner A should do curl-ups at the rate of about 20 per minute, stopping when he or she can no longer continue, or has completed 60 curl-ups.

(5) Partners A and B switch roles and repeat the exercise.

(6) Scoring (number completed): If you score within the range given for your age and gender, your abdominal strength and enduance are acceptable. If you do not score within the range, continue to practice your curl-ups until you can score in the acceptable range.

(a) Females age 12: 20–35; age 13–15: 25–40

(b) Males age 12: 25–40; age 13–15: 30–45

e. To determine upper body strength and endurance, measure the time you can hang from a bar with your chin above the bar.

(1) Team up with a partner.

(2) Partner A grasps horizontal bar with palms facing away and raises body to position where chin is above bar, elbows are flexed, and chest is close to the bar. Partner B spots Partner A and stops Partner A from swinging.

(3) Partner B starts stopwatch. Partner A remains in position for as long as possible.
(4) Watch is stopped when Partner A's chin touches bar, head tilts backward, or chin falls below level of bar.

(5) Partners A and B switch roles and repeat the exercise.

(6) Scoring (seconds): If you score within the range given for your age and gender, your upper body strength and endurance is acceptable. If you do not score within the range, continue to practice your static arm hang until you can score in the acceptable range.

(a) Females age 12–15: 7–14 seconds

(b) Males age 12: 7–14 seconds; age 13–15: 12–20 seconds

f. Three basic strengthening exercises are

(1) Push-ups to strengthen muscles in your arms and chest: Lie facedown on the floor. Bend your arms and place your palms flat on the floor beneath your shoulders. Straighten your arms, pushing your entire body upward, and then lower your body to the floor. Repeat.

(2) Curl-ups to strengthen abdominal muscles: Lie on your back with your knees bent and your heels on the floor. Cross your arms over your chest. Curl your body forward so that both shoulder blades come off the floor. Uncurl and repeat.
(3) Step-ups to strengthen your leg muscles: Step up onto a step with your left foot and then bring your right foot up. Step down with your left foot and bring the right foot down. Repeat, alternating between feet.

g. Weight training is a good way to build muscle strength. Lift light weights multiple times following instructions from an expert.

9. How can you improve your body composition?

a. Body composition is the ratio of body fat to lean body tissue, such as bone, muscle, and fluid.

b. Body composition is measured with the skinfold test. This involves pinching a fold of skin on your upper arm and calf. The folds are measured with a skinfold caliper, and the two numbers are added together.

c. This number tells you if you are carrying too much body fat. If so, eating nutritious low-fat foods and participating in regular physical activity can help you maintain a healthy body composition.

10. How can you increase your flexibility?

a. Flexibility is the ability of your body's joints to move easily through a full range of motion.

b. To determine your flexibility, warm up with some light-and-easy stretches. Move slowly and smoothly. Don't strain your muscles.
(1) Remove your shoes and sit down in front of a 12-inch high box. There should be a ruler on top with the "zero" end against the edge nearest you. Extend both legs and feet flat against box. Your arms should extend over the ruler with one hand on top of the other.

(2) Reach forward with hands along the ruler four times. Hold the position of the fourth reach for at least one second.

(3) Record the number of inches your fingers reach on the ruler.

(4) Scoring for males and females

   (a) Can reach beyond toes at least 1 inch: acceptable flexibility

   (b) Cannot reach toes: low flexibility

   c. You can increase your flexibility through regular stretching, bending, and twisting exercises. Move slowly and gently, and improve the flexibility of different muscle groups gradually.
Hands-On Health

Your Target Pulse Rate

Teaching the Activity
• With students, read and discuss the activity introduction and directions. Help students practice taking their own pulses accurately.
• Have students work together to determine their target pulse rate ranges.
• Have students record their pulse rates during exercise.
• After two weeks, have students discuss their responses to the In Conclusion questions.

Assessment
Check students' pulse records for completeness.

11. What do you need to know to set fitness goals?

a. Which activities will best help you reach your fitness goals?

b. How do you do certain exercises?

c. Who can best help you get started?

d. What equipment should you use?

e. How can you exercise safely?
f. Different activities can be rated to show their benefits.

(1) Handball: high flexibility, high muscle strength and endurance, high heart and lung endurance

(2) Swimming: high flexibility, medium muscle strength and endurance, high heart and lung endurance

(3) Jogging: medium flexibility, high muscle strength and endurance, high heart and lung endurance

(4) Bicycling: medium flexibility, high muscle strength and endurance, high heart and lung endurance

(5) Tennis: high flexibility, medium muscle strength and endurance, medium heart and lung endurance

(6) Brisk walking: medium flexibility, high muscle strength and endurance, high heart and lung endurance

(7) Slow walking: low flexibility, medium muscle strength and endurance, medium heart and lung endurance

(8) Softball: medium flexibility, low muscle strength and endurance, low heart and lung endurance

(9) Weight training: low flexibility, high muscle strength and endurance, low heart and lung endurance
12. What can you do every day to be active?

   a. **Daily activity**: Look for opportunities to be active every day. Take the stairs instead of the elevator. Bike to a friend's home. Walk to the store.

   b. **Aerobic exercise**: Aim to do at least 60 minutes of moderate to vigorous physical activity most days of the week. Swim laps. Join the track team.

   c. **Sports, recreation, leisure activities**: Spend half an hour or more several times a week participating in activities that are fun and get your blood moving. Play soccer. Hike a mountain trail.

13. What is an activity plan?

   a. **An activity plan** is a written plan that will keep you on track and help you exercise consistently.

   (1) Write down all scheduled physical activities or exercise sessions, such as gym team practices or dance classes.

   (2) Pencil in a variety of other physical activities and exercises.

   (3) Try to balance your schedule so that every day contains some activities but no single day is overloaded. Include some choices. See the sample weekly activity plan in the slide.
14. What are the three stages of an exercise workout?

a. The warm-up is a period of low to moderate exercise to prepare your body for more vigorous activity.

(1) The warm-up should last about 10 minutes.

(2) Your heartbeat gradually increases, and your body temperature starts to rise.

(3) Increased blood flow to your muscles makes them more flexible and less prone to injury.

(4) Begin a warm-up with gentle aerobic activities, such as a fast walk, followed by stretching exercises.

(a) Calf stretch: Stand near a wall, and lean toward it with your palms flat against the surface. Bend one leg, and keep the other leg extended. While keeping the heel of the extended leg on the ground, move your hips forward until you feel a stretch in the calf muscle.

(b) Shoulder stretch: Lean against a wall for support. Keep your arms straight while moving your upper body downward. Keep your feet under your hips and your knees slightly bent.

(5) Another way to warm up is to do the actual movements of your planned activity but at a slow and easy pace.
b. The workout itself should start at a comfortable level of physical activity and build up gradually. Some guidelines for starting and increasing your working program include:

(1) Frequency: Gradually increase the number of times you exercise per week. Start by exercising two or three times the first week and work your way up to exercising daily.

(2) Intensity: This refers to the difficulty of your physical activity or exercise session. Intensity is measured by heartbeat rate. You can increase intensity by speeding up or working harder.

(3) Duration: Limit your workout sessions to about 10 to 15 minutes at first. Gradually increase the time until you're exercising for about 30 to 45 minutes each session.

(4) Order: Perform aerobic exercises before anaerobic ones. Your muscles will work more smoothly after aerobic activity.

c. The cool-down is a period of low-to-moderate exercise to prepare your body to end a workout session.

(1) The cool-down returns blood circulation and body temperature to normal.

(2) Continue the movements of your workout activity, but at a slower, easier pace.
15. How can you check your fitness progress?

a. Keep an exercise log or journal. Making performance notes after each workout will help you keep track of exercise sessions.

b. After four to eight weeks, you should observe some improvement in your overall fitness.

(1) Depending on the exercises you have been doing, you should feel stronger, have more endurance, or have greater flexibility.

(2) You may also find that you feel better overall, look fitter, and have more energy.

c. If you see no significant change after eight weeks, you need to evaluate the situation.

(1) Have you been exercising regularly?

(2) Do you need to modify your fitness goals?

d. Another measure of fitness is your resting heartbeat rate, the number of times per minute your heart beats when your body is at rest.

(1) The average heartbeat rate ranges from 72 to 84 beats per minute.
Chapter Four, Physical Activity and Fitness

(2) A resting heartbeat rate less than 72 is generally associated with physical fitness.

e. Once you reach your fitness goals, consider setting new goals for yourself.

16. How can you choose the right activity?

a. Individual sports are physical activities that you can do on your own or with a friend.

(1) Examples include biking, running, swimming, golf, and skating.

(2) Individual sports allow for more flexibility than team sports. You can do them whenever you want and for as long as you want.

(3) One possible disadvantage is that you have to find the time and the motivation to participate in the activity.

b. Team sports are organized physical activities with specific rules, in which groups of people play together against other groups.

(1) Examples include baseball, soccer, basketball, volleyball, and football.

(2) Dual sports require only two to four players and include tennis and racquetball.
(3) Team sports are offered by school, city or town recreation departments, community centers, teen clubs and organizations, sports and fitness centers, and church and synagogue youth programs.

(4) Team sports provide

(a) The excitement of competition

(b) The companionship and support of your teammates and coaches

(c) The opportunity to develop communication and social skills, such as cooperation, compromise, and good sportsmanship

(5) One disadvantage for some teens is having a set schedule of practices and games. Family circumstances may prevent them from committing themselves to a team.

17. What is sports conditioning?

a. Sports conditioning is regular physical activity or exercise to strengthen and condition muscles for a particular sport.

b. An important part of sports conditioning is eating a balanced, nutritious diet.

(1) Eat a variety of food and a limited amount of fat.
(2) Get enough carbohydrates. Your body needs extra energy to play sports. Fruits, vegetables, pasta, and whole-grain breads provide carbohydrates, an excellent energy source.

(3) Get enough vitamins and minerals. Calcium, potassium, fiber, magnesium, and vitamin E are essential to a balanced diet and to sports conditioning.

(4) Don't eat too much protein. Athletes do not need extra protein to build muscle tissue. Exercise and training are the only ways to develop your muscles.

(5) Drink water! Consume fluid regularly during the activity and drink several glasses of water after you're done playing sports. Avoid dehydration, which is excessive water loss from the body that can lead to dizziness, muscle cramps, and heatstroke.

18. How can you avoid injury while exercising or participating in sports?

a. Practice safe behavior.

(1) Exercise where and when it's safe. A soft, even surface is easier on your legs, knees, and feet than a hard or uneven surface. Exercise with another person and avoid deserted places. Exercise in the mornings or evenings when it is cooler. Wear sunscreen outdoors.

(2) Always warm up and cool down.
(3) Practice your sport regularly. Team practices help you maintain your physical fitness levels and help you and your teammates learn to work together effectively and safely.

(4) Learn the proper techniques and rules of the game.

(5) Keep your emotions under control. Anger and frustration can lead to unsafe or unwise actions. Stay calm and relaxed.

b. **Use safe equipment.**

(1) Wear loose-fitting or stretchable clothes as appropriate.

(2) If you exercise outdoors, make yourself visible. Wear light-colored and reflective clothing so you'll be visible to drivers.

(3) When exercising in cold weather, dress in layers.

(4) Wear protective equipment as required.

(5) Choose shoes carefully. Shoes should fit properly, feel comfortable, provide adequate support, and be suitable for the activity you have chosen.
c. **Know your limits.**

(1) Listen to your body. Mild breathlessness or tired muscles are normal sensations. Pain is not. If pain persists, see a doctor.

(2) Stop if you get injured or feel ill. Consult a coach, fitness instructor, or doctor.

(3) Use the R.I.C.E. formula. If you have a minor sports injury, follow the Rest, Ice, Compression, Elevation formula.

19. **What are the harmful effects of performance-enhancing drugs?**

a. **Anabolic steroids** are drugs that cause muscle tissue to develop at an abnormally fast rate.

b. **Side effects that users may experience include**

(1) Liver and brain cancers

(2) Weakening of tendons, leading to joint or tendon injuries

(3) Cardiovascular damage and high blood pressure, raising the risk of heart attack

(4) Mental and emotional effects, such as anxiety, severe mood swings, uncontrolled rage, and delusions
(5) Severe acne

(6) Trembling

(7) Bone damage

(8) Facial hair growth in females and breast development in males

REVIEW

- Physical activity refers to any kind of movement that uses up energy; exercise is an organized session of physical activity; physical fitness is the ability to handle the physical demands of everyday life without becoming overly tired.
- An active lifestyle provides mental/emotional, physical, and social benefits.
- Physical activity burns calories that would otherwise be stored in the body as fat and could lead to weight gain.
- Making physical activity a part of your daily life will increase your level of fitness.
- Aerobic exercise is continuous movement that requires large amounts of oxygen and exercises the heart.
- Anaerobic exercise uses little oxygen but requires short bursts of energy.
- Technological advances have led to a more sedentary lifestyle. It takes a conscious effort to be physically active each day.
The four elements of fitness are heart and lung endurance, muscle strength and endurance, body composition, and flexibility.

The best way to build up heart and lung endurance is through sustained moderate to vigorous exercise lasting at least 60 minutes on most days.

Three exercises that build muscle strength and endurance are push-ups, curl-ups, and step-ups.

Improving body composition involves reducing the amount of fat in your body by eating low-fat foods and participating in regular physical activity.

Flexibility can be increased through regular stretching, bending, and twisting exercises.

Setting fitness goals involves knowing the best activities to do, who can help get you started, what equipment you need, and how you can exercise safely.

To be active every day, look for opportunities such as taking stairs instead of elevators and engaging in aerobic exercise and sports, recreation, or leisure activities.

An activity plan is a written plan that will keep you on track and help you exercise consistently.

The three stages of an exercise workout are the warm-up, the workout itself, and the cool-down.
Check your fitness progress by keeping an exercise log or journal with performance notes made after each workout. If you do not see significant fitness changes after eight weeks, reevaluate your routine.

Choose the right activities. Individual sports are better for some people; team sports work better for others.

Sports conditioning is regular physical activity or exercise to strengthen and condition muscles for a particular sport.

A balanced, nutritious diet is an important part of sports conditioning.

You can avoid injury while exercising or participating in sports by practicing safe behaviors, using safe equipment, and knowing your limits.

Performance-enhancing drugs, such as anabolic steroids, have harmful side effects, such as liver and brain cancer, cardiovascular damage, mental and emotional effects, bone damage, and facial hair in females and breast development in males.
CONCLUSION

In this lesson, we discussed the following:
1. How do the definitions of physical activity, exercise, and physical fitness differ?
2. What are the benefits of an active lifestyle?
3. What is the relationship between physical activity and weight control?
4. How can you increase your level of fitness?
5. How is staying active a key to fitness?
6. What are the four elements of fitness?
7. How can you increase your heart and lung endurance?
8. How can you increase your muscle strength and endurance?
9. How can you improve your body composition?
10. How can you increase your flexibility?
11. What do you need to know to set fitness goals?
12. What can you do every day to be active?
13. What is an activity plan?
14. What are the three stages of an exercise workout?
15. How can you check your fitness progress?
16. How can you choose the right activity?
17. What is sports conditioning?
18. How can you avoid injury while exercising or participating in sports?
19. What are the harmful effects of performance-enhancing drugs?
REMOTIVATION
How does your exercise and physical activity program compare with the guidelines discussed in this lesson? What changes, if any, do you need to make to your exercise routine?

CLOSURE
We’ve learned about the guidelines for a successful exercise and physical activity program. Next, we’ll learn about the role of body image as well as guidelines for maintaining an appropriate weight.
Checkpoints

Below are the answers to the questions at the end of Chapter 4, Lesson 1 in the student edition of Leadership Education I: Citizenship, Character and Air Force Tradition. These end-of-lesson questions are not assigned in the lesson plans or student workbooks. The answers are provided here in case you want to assign any of them in your classes, for homework, or if your students ask you about them. The answers are in the same order as the questions on pages 200–201 of the student book.

1. Physical activity refers to any kind of movement that uses up energy. Exercise is a specifically planned and organized session of physical activity that you can do to improve or maintain your physical fitness. Physical fitness is the ability to handle the physical demands of everyday life without becoming overly tired. P 184

2. Answers may vary. Students should show an understanding of what it means to be physically fit, such as being healthy and having enough energy to do what they want to do. P 184

3. Answers may vary. Mental and emotional benefits of physical activity include reducing stress, feeling more energetic, and increasing self-confidence. Social benefits include meeting and interacting with new people, using abilities to work with others as a team, and sharing goals and achievements with others. P 184, 186

4. Aerobic exercise is rhythmic, nonstop, moderate to vigorous activity that requires large amounts of oxygen and works the heart. Anaerobic exercise is intense physical activity that requires little oxygen but uses short bursts of energy. P 185

5. Heart and lung endurance refers to how effectively your heart and lungs work when you exercise and how quickly they return to normal when you stop. The best way to build heart and lung endurance is through sustained moderate to vigorous exercise lasting at least 60 minutes on most days. P 187

6. Muscle strength measures the most weight you can lift or the most force you can exert at one time. Muscle endurance is the ability of a muscle to repeatedly exert a force over a prolonged period of time. P 188

7. Curl-ups strengthen the abdominal muscles; step-ups strengthen the leg muscles. P 190

8. Good flexibility allows you to move, bend, turn, and stretch your body with ease. P 190

9. When preparing an activity plan, you should keep in mind that it should meet your personal fitness goals. You should also consider your own physical abilities and limitations and set a flexible and varied schedule of activities. P 190, 192–193

10. The three stages of an exercise workout are warming up, working out, and cooling down. P 194–195
11. A warm-up is a period of low to moderate exercise to prepare your body for more vigorous activity; a cool-down is a period of low to moderate exercise to prepare your body to end a workout session. Both involve low to moderate exercise that serves as a transition from one level of activity to another, but a warm-up begins a workout session while a cool-down ends it. P 194–195

12. It would be unwise to skip the cool-down stage because if you do, your muscles might tighten up and you may feel faint or dizzy. Cooling down helps return blood circulation and body temperature to normal. P 195

13. Sports conditioning is a regular physical activity or exercise to strengthen and condition muscles for a particular sport. P 197

14. Dehydration is excessive water loss from the body. It is dangerous because it can lead to dizziness, muscle cramps, and heatstroke. P 198

15. Answers may vary. Examples of safe behavior in sports include warming up and cooling down, practicing the sport regularly, and exercising where and when it is safe. P 198

16. Anabolic steroids can damage your body and destroy your athletic career. Using them can lead to cancer; high blood pressure; mental and emotional problems; and damage to the bones, tendons, and cardiovascular system. P 199

17. Answers may vary. Students should list their physical activities of the past week and draw logical conclusions from them. P 190–193

18. Answers may vary. Students should show an understanding of how staying fit could help them manage stress and how exercise has helped them manage tension or anger. P 184–186

19. The friend should be advised to exercise more vigorously. To benefit her heart and lungs, she should raise her heartbeat during exercise to above 50 percent of its maximum rate. The greatest benefit would come from exercising at her target pulse rate, which would be between 60 and 80 percent of the maximum rate. P 191

20. Strength, endurance, and flexibility are related because they are all elements of fitness that complement one another. Fitness in one of these areas allows someone to do physical activities that benefit the other two. P 187–190, 192

21. Answers may vary. Students should show an understanding of their own fitness needs and of how they should adjust their physical activities to meet those needs. P 192–196

22. It is important to set fitness goals before starting an exercise program so that you can assess just what activities you need to do in order to meet those goals. Setting goals will also help keep you motivated. P 190–196
23. Answers may vary. Advice to the teammate may include preparing an activity plan and carefully scheduling other activities around team practice. Students may remind the teammate that regular practice is important for proper sports conditioning and for the team to work together effectively and safely. They might also suggest looking into individual sports, which could be more flexible and fit the teammate’s schedule better than the team practices. P 193, 196–198

24. Carlton is risking injury, because sports equipment and shoes will not support and protect him properly if they are much too big for him. P 198–199

Applying Health Skills

25. Answers will vary. Students should ask physically active people why they maintain an active lifestyle; students should then compare the responses clearly with the benefits listed in Figure 4–1 of this lesson. P 184–186

26. Answers will vary. Each student’s collage should show a variety of physical activities and have clear captions explaining the health benefits of these activities. P 184–190, 192–193

27. Answers will vary. Students should draw up a workable activity plan and discuss with another student possible changes and improvements in each others’ plans. P 190–193

28. Answers may vary. Students should make a comprehensive list of local places where one can join a sports team, along with details about hours and fees. P 196–197