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## Healthy Body Image: A Lesson Plan for High School Students

Steven P. McKenzie

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# Healthy Body Image

## A Lesson Plan for High School Students

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There are three companion pieces to this publication:

- ▶ **CFS-738-W, Healthy Body Image:**  
*Healthy Exercises for Every Body*  
[www.ces.purdue.edu/extmedia/CFS/CFS-738-W.pdf](http://www.ces.purdue.edu/extmedia/CFS/CFS-738-W.pdf)  
This 17-page publication explains and illustrates various cardiorespiratory, flexibility, and resistance exercises. It also discusses who should get a doctor's advice before beginning an exercise program, lists exercises to avoid, and outlines recommended lifting techniques.
- ▶ **CFS-735-W, Healthy Body Image:**  
*Being an Advocate for Your Child or Grandchild*  
[www.ces.purdue.edu/extmedia/CFS/CFS-735-W.pdf](http://www.ces.purdue.edu/extmedia/CFS/CFS-735-W.pdf)  
This 15-page publication contains four main sections: 1) understanding weight-related concerns; 2) role modeling a healthy body image; 3) providing a healthy environment; and 4) recognizing signs of a possible eating disorder.
- ▶ **CFS-736-W, Healthy Body Image:**  
*A Lesson Plan for Middle School Students*  
[www.ces.purdue.edu/extmedia/CFS/CFS-736-W.pdf](http://www.ces.purdue.edu/extmedia/CFS/CFS-736-W.pdf)  
This 17-page publication provides background information, a lesson plan outline, plus four activities and handouts to teach groups of young teenagers that society often places an unhealthy emphasis on an idealized body image. It teaches that eating nutritious foods and being physically active are the keys to good health.

The main sections of this publication are:

- ▶ Background for Facilitators, p. 2
- ▶ Activity 1: Celebrate Your Unique Qualities
  - Facilitator's Notes, p. 4
  - Discussion Outline, p. 5
- ▶ Activity 2: Mixed Messages: Living in a Supersized World
  - Facilitator's Notes, p. 6
  - Discussion Outline, p. 7
  - Advertising Questionnaire Handout, p. 9
- ▶ Activity 3: Healthy Eating in a Nutshell
  - Facilitator's Notes, p. 10
  - Discussion Outline, p. 10
- ▶ Activity 4: An Ounce of Exercise Keeps the Doctor Away
  - Facilitator's Notes, p. 13
  - Discussion Outline, p. 14

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## Background for Facilitators

The materials in this four-activity unit on healthy body image are intended for use with high school participants. A separate publication lists activities for middle school participants. Activities 1 and 2 are different, based on the intended age level, but the rest of the materials are the same for both age groups. Each activity begins with notes for the facilitator, followed by an outline for a discussion on that topic and, in Activity 2, a master copy of a handout. You will have to provide magazine ads for Activity 2, and you may want to provide copies of CFS-738-W for each participant as part of Activity 4. What follows here is some general background information about body image.

Few things are more central to our long-term health and happiness than how we view ourselves. Our body image is a vitally important part of our self-image. Our perception of our body often is influenced by how we think others view us. Many people feel driven to comply with their perception of how society expects them to look. Not meeting these expectations frequently places people in a state of conflict that results in reduced self-esteem and leads to unhealthy diet and exercise practices. The unhealthy practices commonly associated with body image issues may lead some people to become extremely underweight, while others become overweight or obese. Issues involving body image are present in all age groups and both genders in our society. A healthy body image should be a goal of everyone, regardless of his or her circumstances.

Today, we know a great deal about how lifestyle behaviors (including good nutrition and physical activity) can help us stay healthy (ACSM, 2006, USDA, 2005a). Unfortunately, knowledge alone is not enough to motivate most people to adopt a healthy lifestyle. The number of teenagers who are overweight has risen steadily over the past two decades. In Indiana, 15 percent of teenage respondents to the Youth Risk Behavior Survey conducted by the Centers for Disease Control and Prevention were overweight in 2005, up from 11.5 percent just two years earlier (Indiana State Department of Health, 2005a).

The actual number of Hoosier teens who are overweight contrasts dramatically with the percentages who describe themselves as overweight (the reality versus perception gap), as illustrated in Table 1.

Table 1 illustrates that a significantly high number of teens view themselves as overweight whether they actually are or not. This is especially true among females.

Table 1.  
**Indiana Teens: Actual Versus Perceived Overweight 2005**

	Actual Percent Overweight	Percent Describing Themselves as Overweight
Both genders	15.0%	31.9%
Males	20.5%	26.9%
Females	9.2%	37.2%

(Data from: ISHD, 2005a)

An even more exaggerated contrast between reality and perception is apparent when we compare the self-reported diet and exercise behaviors of Hoosier teens with their actual overweight status (see Table 2 on next page).

Table 2 illustrates that there is clearly something other than being overweight that is causing teens to be dissatisfied with their body and motivating them to use diet and exercise to accomplish their perceived need for weight loss.

Table 2.

**Indiana Teens and Weight Loss-Related Behaviors**

	Actual Percent Overweight	Currently Trying to Lose Weight	Through Exercise	Through Diet
Both genders	15.0%	46.5%	62.3%	41.8%
Males	20.5%	30.5%	51.6%	27.0%
Females	9.2%	63.1%	73.3%	57.2%

(Data from: ISHD, 2005a)

Since many Indiana teenagers state that they are using diet and exercise to reach their weight loss goals, one might ask, “Are they dieting and exercising in line with current national recommendations?” One key recommendation for weight management is to consume the recommended amounts of fruits and vegetables each day (USDA, 2005b). The CDC survey asked Indiana teens whether they ate at least five fruit and vegetable servings per day. Eighty-four point five percent of Hoosier teens surveyed in 2005 said they did not (ISHD, 2005a). Milk consumption is another important dietary indicator. The 2005 survey reports that 16.2 percent of Indiana teens report drinking at least the recommended three 8-ounce glasses of milk per day (ISHD, 2005a), suggesting that 83.8 percent do not. Also high on the list of concerns about the diet practices of Hoosier teens is that 6.8 percent of them say that they take diet pills or use powder or liquid weight loss aids without consulting a physician. Another 5.5 percent admit to vomiting or using laxatives as weight loss strategies (ISHD, 2005a). Clearly, a gap exists between what experts consider to be healthy and the diet and weight loss strategies actually used by Indiana teens.

So what about exercise? According to the 2005 Youth Risk Behavior Survey, 60.2 percent of Indiana teens report receiving an adequate amount of physical activity based on the recommended standards of Healthy People 2010 (ISHD, 2005b). On the flip side, 31.9 percent of Indiana teens report watching at least three hours of television per day on a typical school day, and 10.5 percent state they engage in no regular physical activity. Clearly, a significant portion of Indiana teens can benefit from clearly understanding the recommended quantities of healthy exercise and the role of exercise in weight management.

Teenagers in Indiana, as elsewhere, appear to feel a significant amount of pressure to conform to their perception of how society wants them to look. This pressure, whether self-imposed or external, leads many teens to participate in unhealthy diet and exercise practices. By accepting their body image and clearly understanding what constitutes healthy behavior (including healthy nutrition and physical activity) they can learn to lead healthier and happier lives.

### Selected references

American College of Sports Medicine (ACSM) (2006). *ACSM's Guidelines for Exercise Testing and Prescription*. Philadelphia: Lippincott, Williams and Wilkins.

Indiana State Department of Health (ISDH) (2005a). *Youth Risk Behavior Survey: Nutrition and Health*. [www.in.gov/isdh/dataandstats/yrbs/NutWtFS2005.pdf](http://www.in.gov/isdh/dataandstats/yrbs/NutWtFS2005.pdf)

Indiana State Department of Health (ISDH) (2005b). *Youth Risk Behavior Survey: Physical Activity*. [www.in.gov/isdh/dataandstats/yrbs/PhyActFS2005.pdf](http://www.in.gov/isdh/dataandstats/yrbs/PhyActFS2005.pdf)

United States Department of Agriculture (USDA) (2005a). *Dietary Guidelines for Americans*. [www.health.gov/DietaryGuidelines](http://www.health.gov/DietaryGuidelines)

United States Department of Agriculture (USDA) (2005b). *MyPyramid.gov*. [www.mypyramid.gov](http://www.mypyramid.gov)

## Activity I: Celebrate Your Unique Qualities

### Facilitator's Notes

#### *Purpose*

This introductory activity is designed to help participants recognize that people are different in many ways, including physically. Some of these differences can be changed by our conscious actions and efforts, while others are outside of our ability to change. Changes in our physical traits during growth and maturation (especially during puberty) are natural, inevitable, and beyond our control. We need to focus on accepting others and ourselves and being the best that we can be, including maintaining our health.

#### *Materials needed*

- Paper
- Pens or pencils
- Chalkboard, marker board, easel and pad, or other large writing surface or masking tape to attach papers to the wall

#### *Suggested delivery format*

This activity is meant to be a discussion. A group discussion is suggested, but small groups may be used where applicable. Efforts should be made to engage as many participants as possible in the discussion while being sure to cover the key points.

#### *Objectives*

By the conclusion of today's discussion, participants will be able to:

- List three ways different people are unique from each other.
- Be able to list three differences or similarities between the normal growth and development of boys and girls.
- List three things they can do that will promote acceptance and appreciation of unique qualities in others and within themselves.

## Discussion Outline

### I. In what ways are people different from each other?

- A. List three to five ways that people are different. Write responses on the board or paper. Possibilities are:
1. Different heights.
  2. Different weights.
  3. Different body builds (slender, muscular, etc.).
  4. Different complexions.
  5. Different hair colors/types (straight, curly, etc.).
  6. Different eye colors.
  7. Different preferences.
  8. Different likes/dislikes.
  9. Different abilities (some of us are good in math, some in writing, some in art, some in sports, some in music, etc.).
  10. Different interests.
- B. Some things we can change through effort (by studying, practicing, etc.).
- C. Some things we can't change, even if we want to (height, eye color, etc.).
- D. Some things will change naturally over time whether we want them to or not (height and weight as we grow, preferences, interests, etc.).

### II. List three things that you are good at. Of these, what are you best at?

- A. Ask volunteers to list their No. 1 item on the board or pad.
- B. Discuss that everyone has his or her strengths (and weaknesses).
- C. A person's strengths and weaknesses are part of what defines them as a person (these are among their unique qualities).
- D. One thing that makes the world interesting is that everyone has his or her own set of unique qualities.

### III. Just as with other traits, each of us grows, develops, and matures at different rates.

- A. Normal physical growth and development:
1. Involves rapid changes in height, weight, and weight distribution.
    - a. In girls:
      - Begins earlier than in boys.
      - Usually begins between 10.5 and 11.5 years (but may be as early as 8 or 9 and as late as 12 or older).
      - Full physical growth/development is usually reached by age 15.5.
      - Maturation often accompanies a drop-off in physical activity.

- b. In boys:
  - Usually begins between 11 and 13.5 years.
  - Full physical development is usually reached by age 16 or 17.
  - Is accompanied by a dramatic increase in muscle and strength.
  - Early physical maturity gives a great advantage in sports.
- 2. Is often accompanied by substantial increases in appetite.
- B. Healthy growth and physical development depend on:
  - 1. A healthy diet that satisfies your hunger (but not dieting). The word “diet” does not always mean losing weight. It also means the usual food and drink that a person consumes, so a “healthy diet” is just another way of saying good nutrition.
    - a. Normal growth and physical development require increased amounts of calories.
    - b. Restriction of calories or nutrients during growth and maturation may lead to growth problems or even health problems later in life.
  - 2. Regular, enjoyable physical activity.
- C. We will be most satisfied with our growth and development if we:
  - 1. Recognize that we are all different physically (just as we are different in many other ways).
    - a. We each naturally have a certain body type, and that is OK.
      - Body type (build) is largely hereditary.
      - Physical fitness is a factor that is within our control.
    - b. Our No. 1 priority should be to stay healthy.
  - 2. Recognize that change is unavoidable and is OK.
  - 3. Accept others for who they are and not how they look. This is the first step in respect. Showing respect for others will help earn their respect for you.

### Take-home message

All of us are different in many ways, both physically and in terms of ability. Some of these qualities are within our power to influence, while others are out of our control. Each of us should focus on staying healthy, being the best we can be, and showing respect for others and their abilities. With maturity comes the capacity to think about how our actions toward others make them feel. And as we learn to think for ourselves, we are better able to cope with how we perceive that others view us.

### Selected reference

Cooper, Kenneth H. (1991). *Kid Fitness: The Complete Shape-Up Program from Birth through High School*. New York: Bantam Books.

## Activity 2: *Mixed Messages: Living in a Supersized World*

### Facilitator's Notes

#### *Purpose*

This activity is intended to raise teens' awareness about tactics used by advertisers to sell their products and to help teens look critically at the messages these ads convey. In magazines (and other media) frequented by teens, advertising models represent a homogeneous group of body types. Promotion of certain body types in the mass media makes these the ideal that many teens become highly motivated to strive for. By challenging stereotypes presented in popular media advertising, we can help teens recognize that there is no ideal body type. This may help them move in the direction of accepting their own body type and making the best of it.

#### *Materials needed*

- Pens or pencils
- Copies of Advertising Questionnaire handout (page 10)
- Chalkboard, flip chart, marker board, or other large writing surface
- Copies of recent magazines that teens are likely to read, such as *Seventeen*, *Sports Illustrated*, *Teen People*, *ESPN*, *Skateboarding*, etc. One copy of a magazine should be available for each three or four participants.

#### *Suggested delivery format*

This activity is designed to be a participatory discussion. Goals include raising awareness and deflating the myth of the ideal body type presented in the mass media.

#### *Objectives*

By the conclusion of this activity participants will be able to:

- Describe the ideal media body image for males and females.
- Describe how media images may be enhanced.
- List three implied messages about body type in advertising.

### Discussion Outline

- I. **Divide into small groups of three or four persons per group. Give each group one copy of a recent issue of a popular magazine for teens and two copies of the Advertising Questionnaire handout (at the end of this section). Ask each group to select two ads in the magazine and to discuss and answer the questions about each ad.**



**II. Ask one representative from each group to briefly present their conclusions about one or both of the ads critiqued by their group. Make tallies of the responses to each question (1–6).**

A. Ask to the group to summarize the tallies. Likely responses are:

- 1 & 2. Most advertising models appear either normal weight or thin (rarely overweight or other than tall and lean).
3. Often the product and the body type of advertising models are in conflict (i.e.: slim people are eating unhealthy food or healthy-looking people are smoking)
4. Advertisers want people to think advertising models look good naturally, however most models rely on heavy makeup and/or computer-enhanced photography to look the way they do in an advertisement.
5. Most often advertising models appear to be having fun while using the product.
6. Whether the product is healthy or unhealthy, most advertising models appear thin and look as if they are having fun.

B. What messages do magazine, TV, and Internet advertisements send to people about body image? Possible responses may include, but are not limited to:

1. It is not OK to be overweight (or even to have a large body frame).
2. It is not OK to be shorter or have a stocky build.
3. Slim people are the norm.
4. There is an ideal body type that is illustrated in advertisements.
  - a. For women: Like a fashion model.
  - b. For men: Lean, muscular, athletic.
5. If you want to have fun, achieving the ideal body type should be a goal.
6. Sometimes media messages may be reinforced by peers, friends, parents, family members, teachers, or coaches.

**III. Challenging the advertising myths.**

A. Do you believe there really is an ideal body type?

B. Is it realistic for everyone to try to achieve the look of advertising models?

1. Everyone has a specific body type (including models), which is largely inherited.
2. For most people, achieving the appearance of advertising models is not a realistic goal.
3. There is no ideal body type. Ideally, everyone should strive to maintain a healthy weight and strive to be physically fit, whatever their body type.

## Take-home message

Body images commonly presented in advertising are of lean to normal-weight people who are having fun using products. The ads present stereotypical ideal body images that often cause a person to be dissatisfied with his or her own body and to try to achieve this perceived ideal. In reality, there is no ideal body type. We all need to strive to be physically fit while maintaining our health.

## Selected references

National Eating Disorders Association (NEDA) (2006). *Media Watchdog Program*. [www.nationaleatingdisorders.org/p.asp?WebPage\\_ID=300](http://www.nationaleatingdisorders.org/p.asp?WebPage_ID=300)

Neumark-Sztainer, D. (2005). *"I'm, Like, So Fat!" Helping Your Teen Make Healthy Choices about Eating and Exercise in a Weight-Obsessed World*. New York: The Guilford Press.

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## Healthy Body Image Advertising Questionnaire

Answer each question below for the ad your group is analyzing.

1. Does the ad include people with a variety of body shapes and sizes?
  - A. Yes
  - B. No
  
2. How do the people look in the advertisement? (What is their body type?)
  - A. Normal weight
  - B. Unusually thin
  - C. Overweight
  
3. Do you think people who actually use the product being advertised typically have the body type shown in the advertisement?
  - A. Yes
  - B. No
  
4. Do you think the models in the ad naturally look the way they appear or do you think their picture or their appearance has been enhanced in some way?
  - A. This is their natural look.
  - B. The picture (or their appearance) was probably enhanced.
  
5. How would you say the people appear in this ad?
  - A. Happy/having fun
  - B. Unhappy
  - C. Neither happy nor unhappy
  
6. How would you describe the product being advertised?
  - A. Healthy
  - B. Unhealthy
  - C. Neither healthy nor unhealthy

## Activity 3: *Healthy Eating in a Nutshell*

### Facilitator's Notes

#### *Purpose*

This activity is designed to ensure that participants are aware of where to find dietary information that they can depend on. A secondary purpose is to be sure that participants know what components make up a healthy diet and are aware of some behavioral approaches they can use to help achieve a healthy body weight.

#### *Materials needed*

- Chalkboard, marker board, easel and pad, or other large writing surface or masking tape to attach papers to the wall
- Computer with Internet connection (optional)

#### *Suggested delivery format*

This activity is designed to be a participatory, dialogue-type discussion.

#### *Objectives*

By the conclusion of today's discussion, participants will be able to:

- Describe what is meant by the "diet myth."
- Describe where to find dependable information on healthy eating habits.
- List at least three characteristics of a healthy diet.
- List at least four behavioral keys to achieving a healthy body weight.

### Discussion Outline

*Note:* If you intend to have the teens practice proper exercise techniques during the next session, tell them to dress in exercise clothing for that session.

**I. What do you think is the key factor in maintaining a healthy body weight? Write responses on the board or paper, then ask the group to reach a consensus about the most important factor. Possible responses:**

1. What you eat.
2. Physical activity.
3. A combination of diet and exercise.
4. Eating behaviors (i.e.: time of day you eat, portion sizes, etc.).
5. Diet supplements.
6. Dieting.
7. Heredity.

A. The National Weight Control Registry is:

1. A national database established in 1994 by university researchers.
2. A list of adults (18 and over) who have lost at least 30 pounds and kept it off for at least a year.

B. The National Weight Control Registry counters the “diet myth” that the best way to lose weight is through dieting.

1. The database shows that:
  - a. Successful weight loss maintainers almost always use a combination of diet and exercise.
  - b. Successful weight loss maintainers continue to eat lower calorie and lower fat diets and exercise to maintain their loss.
2. Although dieting may lead to short-term weight loss, very few people are able to maintain losses based on diet alone.
3. Diet and exercise are essential parts of long-term weight management. No “magic pills” for long-term weight management have been identified.

**II. Where can I find nutrition information that I can depend on?**

- A. MyPyramid.gov ([www.mypyramid.gov](http://www.mypyramid.gov)) includes information on the 2005 Dietary Guidelines ([www.health.gov/DietaryGuidelines](http://www.health.gov/DietaryGuidelines)) established through a very thorough process carried out by leading nutrition experts and the U.S. Department of Agriculture.
- B. MyPyramid.gov contains information on foods to eat.
- C. MyPyramid.gov contains information on portion sizes.
- D. MyPyramid.gov contains recommendations for adults, teens, and children.

**III. What are the keys to healthy eating?**

- A. Use the information provided in MyPyramid.gov.
- B. Eat a variety of foods.
- C. Eat the amounts of fruits and vegetables that are recommended for you by MyPyramid.gov.
- D. Become knowledgeable about portion sizes.
- E. Drink three 8-ounce glasses of milk (or its equivalent) each day (it is essential for healthy bone growth).
- F. Eat breakfast – adults who eat breakfast have been found to be better weight maintainers than those who don’t (Wyatt et. al., 2002).

#### IV. What eating behaviors are keys to a healthy body weight?

- A. Don't diet to lose weight.
- B. Eat when you're hungry, stop when your hunger is satisfied (it is normal to be hungry when your body is growing).
- C. Eat slowly. It takes about 20 minutes for your body to let you know your hunger has been satisfied.
  - 1. Try setting your spoon or fork down between each bite to remind yourself to slow down.
  - 2. Don't watch TV or read while you eat. These types of distractions tend to make us less conscious of how fast we are eating.
- A. Restrict your eating to one place in your home, such as the kitchen table.
- B. Have nutritious snacks ready for when you need something to eat.
- C. Don't skip meals.
- D. Look for nutritious choices when you eat away from home.
- E. Get an adequate amount of sleep.
- F. Limit TV and Internet time.
- G. Remember that a healthy diet and regular physical activity are necessary for maintaining a healthy weight.

#### Take-home message

Good nutrition and regular physical activity are essential for long-term weight management and good health. Many people mistakenly try to use either diet alone or exercise alone to manage their weight. As people grow and mature, healthy eating and regular physical activity are essential for normal growth and development. MyPyramid.gov provides a wealth of dependable information about diet (and exercise) developed by nutrition experts.

#### Selected references

National Weight Control Registry (2006). [www.nmcr.ws/default.htm](http://www.nmcr.ws/default.htm)

United States Department of Agriculture (USDA) (2005). MyPyramid.gov. [www.mypyramid.gov](http://www.mypyramid.gov)

Wyatt, H.R., Grunwald, G.K., Mosca, C.L., Klem, M.L., Wing, R.R., & Hill, J.O. (2002). Long-term weight loss and breakfast in subjects in the National Weight Control Registry. *Obesity Research*. 10:78-82.

## Activity 4: *An Ounce of Exercise Keeps the Doctor Away*

### Facilitator's Notes

#### **Purpose**

This activity is designed to make sure participants have a clear picture of what is meant by physical fitness. It includes discussion about the health benefits of physical activity. The components of a physical fitness program to improve and/or maintain health are included to give participants a clear idea about how to turn fitness information into action.

As a supplementary activity, participants can take part in demonstrations of proper exercise techniques for cardiorespiratory, flexibility, and muscle strengthening exercises. Emphasis is on safety and maximizing the effectiveness of the exercises. It is best to perform the exercises on a carpeted floor or on exercise mats. The exercises can be done at the end of the discussion, or they can be interspersed in the discussion as it deals with the three specific types of exercises.

#### **Materials needed**

- Chalkboard, marker board, easel and pad, or other large writing surface or masking tape to attach papers to the wall
- Copies of CFS-738-W, *Healthy Exercises for Every Body*, ([www.ces.purdue.edu/extmedia/CFS/CFS-738-W.pdf](http://www.ces.purdue.edu/extmedia/CFS/CFS-738-W.pdf)) if students will be doing the supplementary exercises.

#### **Appropriate dress**

Because the supplementary activities are designed to demonstrate proper exercise techniques through direct participation, participants should come dressed in exercise clothing in which they can move freely.

#### **Suggested delivery format**

This activity is designed to be a participatory discussion. An optional activity is to give the teens hands-on experience in designing and participating in a health-related physical activity program.

#### **Objectives**

By the conclusion of today's activity, each participant will be able to:

- List the three main components of health-related physical fitness.
- List at least three ways that exercise can help a person maintain health and a healthy body weight.
- List the three main components that should be included in an exercise program to promote health.

## Discussion Outline

### I. What do we mean when we say “physical fitness”? Write responses on the board or paper. Possible responses:

1. Cardiorespiratory (aerobic or endurance) fitness.
2. Muscular fitness.
  - a. Muscular strength.
  - b. Muscular endurance.
  - c. Flexibility.
3. Body composition.
  - a. Measured as a percentage of body fat.
  - b. Measured as body mass index (BMI) using height and weight — this is not ideal for young, muscular, or athletic people.

### II. How does physical activity help maintain health and a healthy body weight? Write responses on the board or paper. Possible responses:

1. It helps make the heart and lungs more efficient.
2. It helps make the muscles more efficient.
3. It burns calories, reducing storage of energy as fat.
4. It makes the muscles and joints stronger, thus reducing chance of injuries.
5. It makes lifting feel easier.
6. It helps make everyday activities feel easier.
7. It reduces the chances that a person will develop diabetes, heart disease, and certain types of cancer later in life.
8. It helps people be less depressed/anxious and more positive.
9. It helps people generally feel better and have more energy.

### III. What counts as physical activity?

- A. At least 30 minutes of moderate-intensity physical activity is recommended for everyone on most days of the week.
  1. The 30 minutes can be accumulated in shorter bouts during the day, but each bout should last at least 10 minutes.
  2. The exercise does not need to be performed in a gym: Work or play activities such as mowing the lawn, gardening, walking the dog, walking to the store, or riding bicycles in the neighborhood all count as physical activity.
- B. An alternative is to participate in vigorous-intensity exercise, such as running or brisk cycling, for at least 20 minutes, at least three days per week (on alternate days).



#### IV. What should be included in a formal exercise program to promote health?

##### A. Aerobic exercise.

1. Uses the large muscles in the body repeatedly over an extended time (examples: walking, running, cycling, aerobic dance, distance swimming, soccer, volleyball, etc.)
2. Should be performed at least three or four days per week, 30 minutes per day.

##### B. Flexibility exercises.

1. Do a mild warm-up to increase muscle temperature before stretching.
2. Include six to eight exercises to stretch major muscle groups.
3. Use static stretching (slowly move to stretched position, hold for 15 to 30 seconds, and slowly return to the starting position). Do not bounce.
4. Stretch to the point of tightness, but not to discomfort or pain.
5. Breathe normally during stretching.
6. Perform two to four repetitions of each stretch.
7. Stretch at least two or three times per week (five to seven times per week is ideal).

##### C. Resistance exercises.

1. May include callisthenic exercises (such as push-ups or sit-ups).
2. May include weightlifting exercises using free weights or machines.
  - a. Should include eight to 10 exercises using all major muscle groups.
  - b. Should include one to three sets of each exercise with eight to 12 repetitions of each exercise per set.
  - c. Should be performed with proper breathing procedure (exhale during the highest force production in each exercise).

#### V. **Supplementary activity: Distribute copies of CFS-738-W, Healthy Exercises for Every Body, to each participant and have them practice one or two exercises from each section. (For the resistance exercises, only No. 10, the abdominal curls, can be done with no need for weights or other equipment.)**

- A. Point out the Personal Cardiorespiratory Exercise Plan and the Ratings of Perceived Exertion on page 4 of the handout.
- B. Also note that the last two sections of the handout list exercises that should be avoided and proper lifting techniques.

## Take-home message

Engaging in regular physical activity can help a person maintain a healthy body weight and generally feel better. Physical activity does not have to be exercise in a gym; work or play activities such as mowing the lawn, gardening, walking the dog, walking to the store, or riding bicycles in the neighborhood all qualify. Some people may choose to participate in exercise activities to improve their cardiorespiratory (endurance) fitness, their muscular fitness through strengthening and flexibility exercises, and their body composition. Regular physical activity helps people not only maintain physical fitness, but also helps improve their psychological outlook. Along with healthy eating, physical activity is a cornerstone in helping people maintain a healthy body weight.

## Selected references

American College of Sports Medicine (2006). *ACSM's Guidelines for Exercise Testing and Prescription*, 7th ed. Philadelphia: Lippincott, Williams and Wilkins.

American College of Sports Medicine (2005). *ACSM's Health-Related Physical Fitness Assessment Manual*. Philadelphia: Lippincott, Williams and Wilkins.

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<http://win.niddk.nih.gov/publications/active.htm>

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