

## 14. Maintaining a Healthy Weight

**For the Teacher** According to the Centers for Disease Control and Prevention, there has been a significant rise in obesity in adults over the last 20 years. Data from the National Center for Health Statistics indicate that more than 60 million adults age 20 and older are obese. This is approximately 30 percent of the U.S. adult population. This problem is not limited to adults. In the last 20 years the percentage of overweight young people has more than tripled, to the point where more than nine million children and teens, or 16 percent, are overweight.

Body Mass Index, or BMI, is used to determine healthy body weights. A BMI between 25.0 and 29.9 is considered “overweight,” while a BMI of 30.0 or greater can be classified as “obese.” Anyone more than 100 pounds overweight is considered “morbidly obese.”

Obesity and overweight occur when excess calories are taken into the body. The basic daily nutritional need is 2,000 calories for women and 2,500 calories for men. (Note that individual needs will vary, depending on the person’s metabolism and activity level.) If excess protein and carbohydrates are taken into the body, they will be converted into fat for storage, resulting in weight gain.

Maintaining a healthy weight will keep a person’s heart healthy. However, there is a greater risk of illness and death for people who are overweight or obese due to coronary artery disease, stroke, hypertension and high cholesterol. The risk of other illnesses such as diabetes, kidney and gall bladder disorders, osteoarthritis, sleep apnea, respiratory problems and some cancers also increases when a person is overweight or obese.

Additional steps can be taken to prevent excessive weight gain. These include avoiding foods which are high in fat and sugar; reducing alcohol intake; avoiding stress; seeking medical attention for depression; and not smoking. In addition, physical activity should aim for 30 minutes of aerobic exercise every day. Lowering body weight by as little as 10 to 20 pounds can significantly decrease an individual’s health risks. Taking these steps can also improve high blood pressure and high cholesterol.

### Illnesses and Diseases that Can Occur as a Result of Obesity

- **High Blood Pressure** (hypertension) – [*see Session 8, Medical Screenings*]
- **High Cholesterol** – [*see Session 8, Medical Screenings*]
- **Diabetes** – Being overweight may interfere with the body’s usage of insulin.

### **Stroke**

There are several ways that obesity is linked to stroke. One of the primary risk factors for stroke is high blood pressure, and obesity increases the chance of one's blood pressure being elevated. A report published in the Journal of the American Heart Association found that even when diabetes, high blood pressure and high cholesterol (all considered risk factors for stroke) are screened out, a high BMI remains a risk factor for stroke.

### **Heart Disease**

Coronary artery (heart) disease is more prevalent in obese individuals for a number of reasons, including higher cholesterol and high blood pressure, and because the excess weight puts a strain on the heart by forcing it to work harder.

### **Osteoarthritis**

Osteoarthritis can occur because the added fat puts a strain on the joints.

### **Some Cancers**

The risk of breast, colon, endometrial, esophageal and kidney cancer increases in people who are overweight or obese. However, a 2002 study by the American Cancer Society found that only one percent of the population is aware of this risk. In fact, about one-third of cancer deaths are related to diet and level of activity.

Esophageal cancer risk increases because excess abdominal fat can lead to acid reflux into the esophagus, which is associated with increased cancer risk.

Obesity contributes to other cancers because it can increase circulating levels of hormones such as estrogen and insulin, which stimulate cancer growth.

### **Sleep Apnea**

Obstructive sleep apnea is a condition where an individual has episodes of stopped breathing while sleeping. Excess fat in the neck may constrict the airway and create breathing problems.

### **Kidney Disorders**

People who are obese are seven times more likely to develop kidney failure. What's more, individuals who are somewhat overweight have a higher risk than those at normal weight.

### **Gall Bladder Disorders**

Being obese puts one at a much higher risk of developing gall stones..

## **A Healthier Diet**

Diet recommendations from *MedlinePlus*:

- Do not eat meat more than once a day. Fish and poultry are recommended instead of red or processed meats.
- Avoid frying food because food absorbs the fats from cooking oils, which increases dietary fat intake.
- Include adequate fiber in your diet. Fiber often makes you feel "full" without having to eat excess calories.
- Do not eat more than four eggs per week.
- Choose fresh fruit for desserts rather than cookies, cake or pudding.

- Cut down on salt.
- Too much of anything has its drawbacks. A well-balanced diet with creativity and variety is best.

**Sources**

[www.nlm.nih.gov/medlineplus/ency/article/000457.htm](http://www.nlm.nih.gov/medlineplus/ency/article/000457.htm)

[www.nlm.nih.gov/medlineplus/ency/article/003101.htm](http://www.nlm.nih.gov/medlineplus/ency/article/003101.htm)

[www.nlm.nih.gov/medlineplus/ency/imagepages/19473.htm](http://www.nlm.nih.gov/medlineplus/ency/imagepages/19473.htm)

<http://win.niddk.nih.gov>

[www.cdc.gov/nccdphp/dnpa/obesity](http://www.cdc.gov/nccdphp/dnpa/obesity)

[www.cancer.org/docroot/NWS/content/update/NWS\\_1\\_1xU-](http://www.cancer.org/docroot/NWS/content/update/NWS_1_1xU-Obesity_linked_to_Cancer_Other_Chronic_Disease_Risk.asp)

[Obesity\\_linked\\_to\\_Cancer\\_Other\\_Chronic\\_Disease\\_Risk.asp](http://www.cancer.org/docroot/NWS/content/update/NWS_1_1xU-Obesity_linked_to_Cancer_Other_Chronic_Disease_Risk.asp)

*Diet, Physical Activity and Cancer: What's the connection?* by Dr. Tim Byers and Colleen Doyle MS RD (American Cancer Society)

# 14. Maintaining a Healthy Weight

**Note:** If you have not done #7, **Filling Out a Health History**, you may need to pre-teach some vocabulary.

## Objectives

Learners will:

- Be able to give two reasons for maintaining a healthy weight.
- Know their own weight in pounds and height in feet inches.
- Recognize the words “underweight” “overweight” and “obese.”
- Be able to read a Body Mass Index (BMI) chart.
- Know their own weight status (underweight, normal, overweight or obese”).
- Name three kinds of exercise.

## Materials Needed

Before the class, download Kate Singleton’s picture story “Snack Attack,” from [www.cal.org/caela/esl\\_resources/Health/healthindex.html#Snack](http://www.cal.org/caela/esl_resources/Health/healthindex.html#Snack).

Board or chart paper

Markers

Pictures: “Healthy”; “Overweight”; “Obese” [Teacher only]

Waist size chart [15 copies]

BMI charts [15 copies]

Weight graphs (How’s your weight?) [15 copies]

Overhead of BMI chart

Scale

Yardstick or folding ruler

Ball (*optional*)

Masking tape

Computer with Internet access (*optional*)

Handouts: Copies of Kate Singleton’s picture story “Snack Attack,” from the web; 14a (Healthy-Overweight-Obese chart), 14b (kg/lb conversions), 14c (How tall are you?), 14d (BMI exercise)

## Activity 1 Picture Story

### Snack Attack

Hand out Kate Singleton’s picture story “Snack Attack.”

1. Talk about each picture. Write some of the words.
2. Ask: “What happened to the boy? Why?”
3. Ask: “Do you know a story like this?” Give learners the opportunity to tell stories about weight problems — their own, or someone they know.
4. As a class or in small groups, write the story.

## Activity 2 Vocabulary

1. Show a picture of an “Overweight” person. Ask: “What’s the problem?” [Probably learners will say “fat.” Introduce “overweight.” Write the word.]
2. Show a picture of “Healthy” weight, “Overweight” and “Obese.” Write the words on the board. [Note: If you need images, use pictures from magazines or newspapers, or do an image search online.]
3. Hand out worksheet 14a, the chart with drawings of three people. Match: “Healthy Weight,” “Overweight” and “Obese.”

- On worksheet 14a, you will see circles at the waist with numbers. Ask: “What do the numbers mean?” [Answer: *Waist size in inches*] If your waist is up to 33 inches, you are “normal” weight. If it is up to 34–45 inches, you are “overweight.” Larger than that is “obese.”
- If you wish, hand out measuring tapes for learners to take their own waist measurements.



### Activity 3 Listening

- Put this chart on the board. Ask the learners to copy it. You may also wish to write the instruction: *Listen to the conversation. Fill in the chart.*

	Mr. Smith	Mrs. Brown	Ms. Lee
<b>Height</b>			
<b>Weight</b>			
<b><i>Is this person overweight?</i></b>			

- Play the audio CD. Ask learners to listen to the dialogues and fill in the chart. Repeat the listening as needed.

**Nurse:** You need to lose weight, Mr. Smith.

**Mr. Smith:** *Me? I'm not fat.*

**Nurse:** Here, let me show you this chart. Your height is 5'10". Your weight is 200.

**Mr. Smith:** *Oh — you are right. I guess I am overweight.*

**Nurse:** Mrs. Brown, how tall are you?

**Mrs. Brown:** *I'm five feet three inches.*

**Nurse:** What is your weight?

**Mrs. Brown:** *One hundred twelve pounds.*

**Nurse:** Okay. That is a good weight for you.

**Nurse:** Okay, Ms. Lee, please stand on the scale. You are very tall! Five feet nine inches. Your weight is 164.

**Ms. Lee:** *Is that okay for me?*

**Nurse:** It's a little bit overweight.

- Check as a class. *Answer key:*

	Mr. Smith	Mrs. Brown	Ms. Lee
Height	5'10"	5' 3"	5'9"
Weight	200	112	164
Is this person overweight?	yes	no	yes

## Activity 4 Healthy Weight

1. Write on the board: “healthy weight.” Ask: “Why is this important?” Elicit from learners why it is important to have a healthy weight. [Answers: *prevent diabetes, high blood pressure, some cancers, heart problems, osteoporosis, arthritis*]
2. Briefly discuss each condition. [Refer to Health History worksheets (session 7, included here) if learners don’t remember the terms.]

## Activity 5 What’s your height and weight?

1. Do you know your weight in pounds?
2. Hand out the kilogram-to-pounds conversion chart (14b). To practice, call out some weights and ask learners to tell you the equivalent in pounds. [Note: 1 kg = 2.2 lbs]
3. Bring in a scale. Allow each person to take their own weight, and record it. [Note: Because weight may be a sensitive issue for some learners, allow them to keep their numbers private, if they prefer. But it is important that they do know both their height and weight numbers. This may be a good opportunity to introduce “private/privacy.” Ask: “Do you like to tell your weight?” Some may say “Yes, no problem.” Others may say “No.” Some people prefer to keep this information private. Give an example — use yourself and one other person (e.g., “I’ll tell you my weight — no problem. I weight 125 pounds. But my brother doesn’t like to tell his weight. He keeps it private.”) Of course, you can reverse the roles if you are uncomfortable telling something close to your realistic weight!]
4. Hand a yardstick to each group. As a group, have learners measure each other’s height. Make a group chart using worksheet 14c, “How tall are you?”

### Optional Homework

Using the scale, encourage learners to find their own height and weight, and to write it down.

## Activity 6 Body Mass Index

1. Using the overhead projector (if available), show the Body Mass Index (BMI) chart. Cover up the worksheet questions. [Note: If a projector is not available, hand out BMI charts and worksheet 14d.]
2. Ask: “What is this chart? What does it tell us?” [Elicit: *This table tells us if we are overweight, underweight, normal weight or obese.*]
3. Ask the class: “Max weighs 200 pounds and is 6 feet tall. How is his weight?” “Lisa is 200 pounds and five feet seven inches. How is her weight?”
4. Write the three examples below on the board. Ask learners to decide if each person is overweight, obese, etc., based on the BMI chart.
  - Person 1: 5'2", 107 pounds
  - Person 2: 5'5", 155 pounds
  - Person 3: 6'0", 200 pounds
5. Ask learners to complete the examples on their worksheets (14d).
6. Discuss: “Did any of the answers surprise you?”

## Optional Homework

Ask learners to find own weight status by using the BMI chart. Discuss their results, if it seems appropriate. Since weight can be a sensitive issue, you may want to ask a very general question, such as “Does anyone want to say anything?”

## Activity 6 Weight in the United States

### Information for the Teacher

- Percentage of adults age 20 years and older who are overweight or obese: 64%\*
  - Percentage of adults age 20 years and older who are obese: 30%\*
  - Percentage of adolescents age 12–19 years who are overweight: 15%
  - Percentage of children age 6–11 years who are overweight: 15%
- \*Source: NHANES data on the Prevalence of Overweight and Obesity Among Adults – United States, 1999–2002.

1. Hand out the weight graphs, “How’s your weight?”
2. Explain the first graph and discuss it.
3. Either alone or with a partner, ask learners to write two sentences about people in the United States. You may want to write some “sentences starters” on the board, or do one sentence together first. Examples:
  - *Most people are \_\_\_\_\_.*
  - *Some children are \_\_\_\_\_.*
  - *A lot of people \_\_\_\_\_.*

Refer to the BMI chart. Ask: “Look at the graph. Where would most people be on the BMI chart?”

## Activity 7 Exercise

1. Ask: “Why is exercise important?” [Possible answers: *maintain healthy weight; prevent osteoporosis; lower risk of heart disease, colon cancer and type 2 diabetes; control blood pressure; reduce feelings of depression and anxiety*] Also, exercise helps you sleep better, experience reduced stress and feel more energetic.
2. Ask: “How much exercise do we need?” Elicit answers, then write on the board: “We should exercise for 30 minutes every day.”
3. Ask: “Who needs exercise?” [Answer: *Everybody!*]
4. Ask: “What can we do for exercise?” As a class or in small groups, brainstorm different activities that can be done for exercise. Write a list on the board. [Some ideas are listed below. *You do not need to cover all of them!*]

### Ways to exercise:

- *Go swimming.*
- *Join a gym.*
- *Play sports (tennis, basketball, badminton, table tennis, bowling, soccer, football).*
- *Do karate.*
- *Go for a run or jog.*
- *Ride a bicycle or skate.*
- *Do yoga.*
- *Take a dance class.*
- *Go dancing.*
- *Do gardening.*
- *Lift weights.*
- *Do Pilates.*
- *Do calisthenics.*

**Assessment** Administer the quiz on health. Note: Learners can use the BMI chart. Check as a class.

According to the U.S. Centers for Disease Control and Prevention, “There are 1,440 minutes every day. Schedule 30 of them for physical activity.”

**Ways to “sneak” exercise into your day:**

- *Walk or bike to work, school or the store.*
- *Park the car farther away from your destination.*
- *Get on or off the bus or subway several blocks away.*
- *Take the stairs instead of the elevator or escalator.*
- *Play with children or pets.*
- *Take exercise breaks at work — walking or doing desk exercises — instead of taking cigarette or coffee breaks.*
- *Exercise while watching TV (Examples: Use hand weights, stationary bicycle, treadmill or stairclimber machine; or stretch.)*
- *Dance to music.*
- *Keep a pair of walking or running shoes in your car and at work.*
- *Find friends or family members to take walks with you.*
- *Walk to your errands.*

(Adapted from the CDC’s “Make Physical Activity a Part of Your Life.”)

**Activity 8  
Game**

1. You can do this either as a ball-toss game or as a question circle (one person asks the next). Write on the board: “Do you \_\_\_\_\_?” “Yes, I do.” “No, I don’t.”  
Throw the ball to someone and ask, “Do you swim?” For a lower-level class, first keep the question the same (e.g., continue asking “Do you swim?” to each learner). Higher-level classes can immediately vary the questions (e.g., “Do you swim?” “Do you dance?” “Do you play tennis?”). That person answers and throws the ball back to you. Ask a second person. After alternating between teacher and learners, you may want to do a second set, just learner-to-learner. Encourage a variety of questions about exercise. (“Do you swim?” “Do you ride a bicycle?” “Do you run?” etc.)
2. *A Challenging Variation:* Introduce “Every day,” “Once a week,” “3 times a week,” “Once in a while” and “Never.” Repeat the activity with the question, “How often do you \_\_\_\_\_?” Write the question and possible answers on the board.

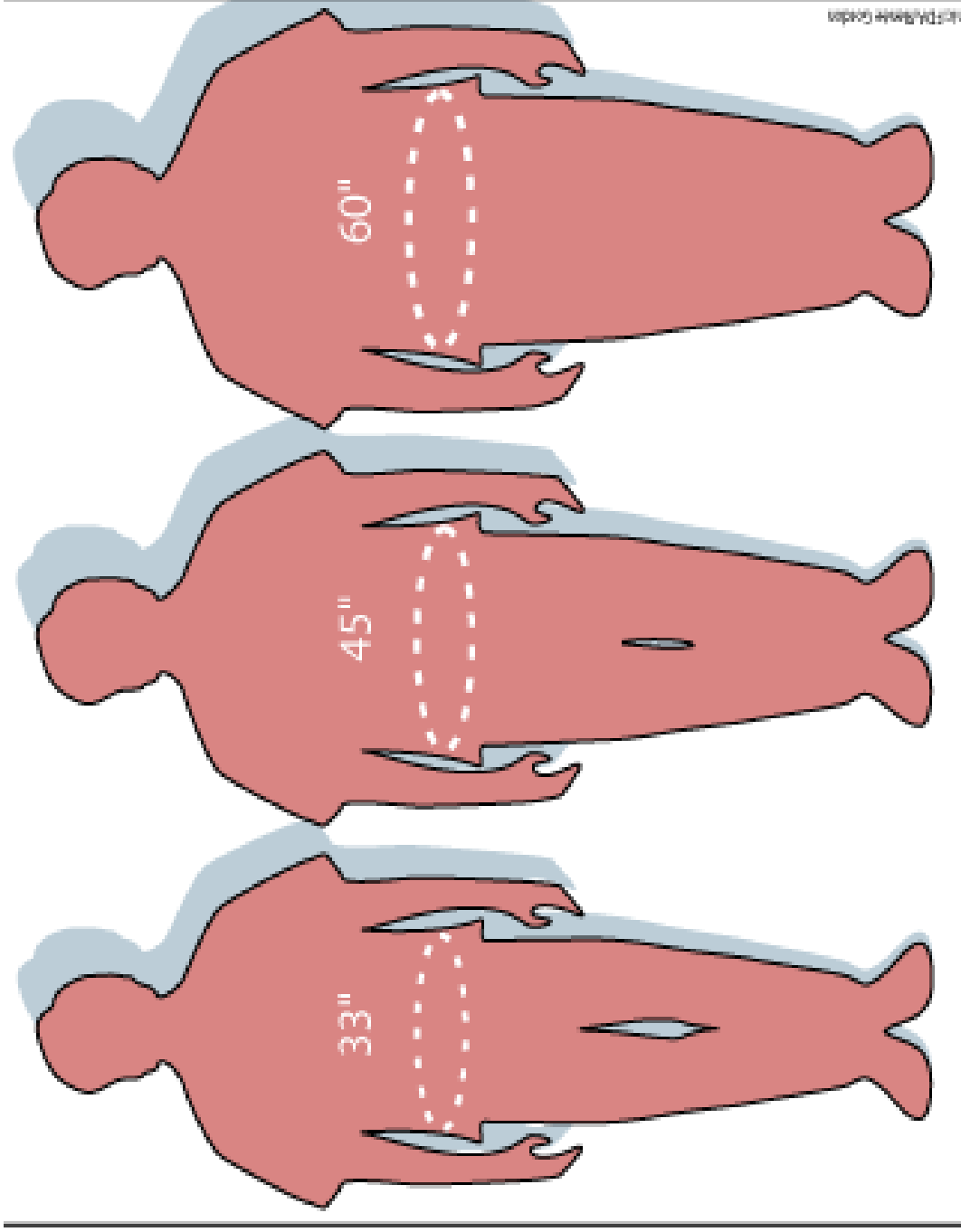
**Technology**

If a computer with Internet access is available, calculate the number of calories based on BMI, using the calculator at: [www.mayoclinic.com/health/calorie-calculator/NU00598#resulttext](http://www.mayoclinic.com/health/calorie-calculator/NU00598#resulttext).

Ask learners to enter height and weight, and to calculate actual caloric intake. Then, re-enter the information using “ideal weight.” To obtain an “ideal” weight, choose a healthy weight within the BMI.



Write the correct words under the picture: Overweight, Obese, Healthy Weight



Picture adapted from the FDA consumer magazine, May-June 2004

<b>HOW MUCH DO YOU WEIGH?</b>			
<u>KILOGRAMS</u>		<u>POUNDS</u>	
48	=	106	
50	=	110	
52	=	115	
54	=	119	
56	=	123	
58	=	128	
60	=	132	
62	=	137	
64	=	141	
66	=	146	
68	=	150	
70	=	154	
72	=	159	
74	=	163	
76	=	168	
78	=	172	
80	=	176	
82	=	181	
84	=	185	
86	=	190	
88	=	194	
90	=	198	
92	=	203	
94	=	207	
96	=	212	
98	=	216	
100	=	220	
105	=	231	
110	=	243	
115	=	254	
120	=	265	

1 kilogram = 2.2 pounds

*Example:* John weighs 68 kilograms. How many pounds does he weigh?

$$68 \times 2.2 = 150$$

John weighs 150 pounds.

## How tall are you?

I am \_\_\_\_\_ feet \_\_\_\_\_ inches.

Classmate's name	Height				
		feet			inches
		feet			inches
		feet			inches
		feet			inches
		feet			inches

Name \_\_\_\_\_

Date \_\_\_\_\_

Check the correct answers.

Use the BMI Chart to help you.

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Cara is five feet four inches tall. Her weight is 132.

She is...

underweight  healthy weight  overweight  obese

Sam is 6 feet tall. His weight is 130 pounds.

He is...

underweight  healthy weight  overweight  obese

Kyung is five feet five inches tall. Her weight is 155.

She is...

underweight  healthy weight  overweight  obese

Joe is 5'9" tall. His weight is 205.

He is...

underweight  healthy weight  overweight  obese

Monica is five feet five inches tall. Her weight is 185.

She is...

underweight  healthy weight  overweight  obese

I am \_\_\_\_\_ tall. My weight is \_\_\_\_\_.

I am...

underweight  healthy weight  overweight  obese

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Visit this website to find your actual BMI!

<http://www.shapeup.org/bodylab/frmst.html> or <http://www.dr-bob.org/tips/bmi.html>

Adapted from <http://www.shapeup.org/bodylab/tools/bmi2.php>

Name \_\_\_\_\_ Date \_\_\_\_\_

Check the correct answers.  
Use the BMI Chart to help you.

---

Cara is five feet four inches tall. Her weight is 132.

She is...

underweight       healthy weight       overweight       obese

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I am \_\_\_\_\_ tall. My weight is \_\_\_\_\_.

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Visit this website to find your actual BMI!

<http://www.shapeup.org/bodylab/frmst.html> or <http://www.dr-bob.org/tips/bmi.html>

Adapted from <http://www.shapeup.org/bodylab/tools/bmi2.php>

## How's Your Weight?

BMI*	19	20	21	22	23	24	25	26	27	28	29	30	35	40
Height	Weight (lb.)													
4'10"	91	96	100	105	110	115	119	124	129	134	138	143	167	191
4'11"	94	99	104	109	114	119	124	128	133	138	143	148	173	198
5'0"	97	102	107	112	118	123	128	133	138	143	148	153	179	204
5'1"	100	106	111	116	122	127	132	137	143	148	153	158	185	211
5'2"	104	109	115	120	126	131	136	142	147	153	158	164	191	218
5'3"	107	113	118	124	130	135	141	146	152	158	163	169	197	225
5'4"	110	116	122	128	134	140	145	151	157	163	169	174	204	232
5'5"	114	120	126	132	138	144	150	156	162	168	174	180	210	240
5'6"	118	124	130	136	142	148	155	161	167	173	179	186	216	247
5'7"	121	127	134	140	146	153	159	166	172	178	185	191	223	255
5'8"	125	131	138	144	151	158	164	171	177	184	190	197	230	262
5'9"	128	135	142	149	155	162	169	176	182	189	196	203	236	270
5'10"	132	139	146	153	160	167	174	181	188	195	202	207	243	278
5'11"	136	143	150	157	165	172	179	186	193	200	208	215	250	286
6'0"	140	147	154	162	169	177	184	191	199	206	213	221	258	294
6'1"	144	151	159	166	174	182	189	197	204	212	219	227	265	302
6'2"	148	155	163	171	179	186	194	202	210	218	225	233	272	311
6'3"	152	160	168	176	184	192	200	208	216	224	232	240	279	319

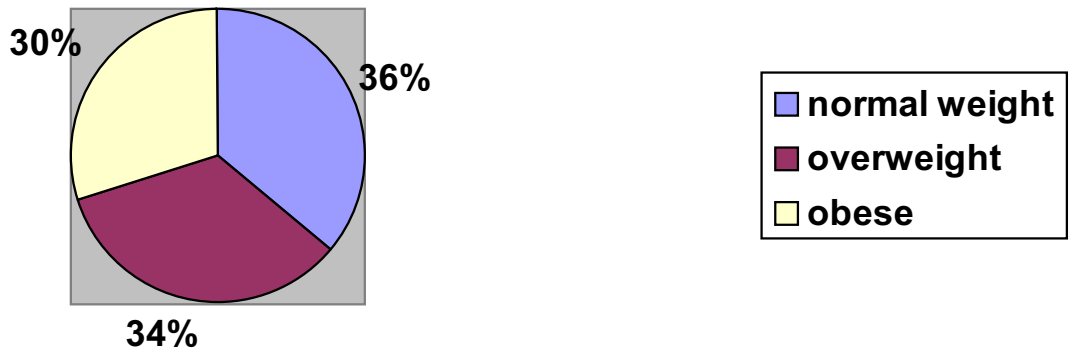
\*Body Mass Index

<b>Key</b>	
Less than 18.5	Underweight
18.5-24.9	Normal Weight
25-29	Overweight
30 or more	Obese

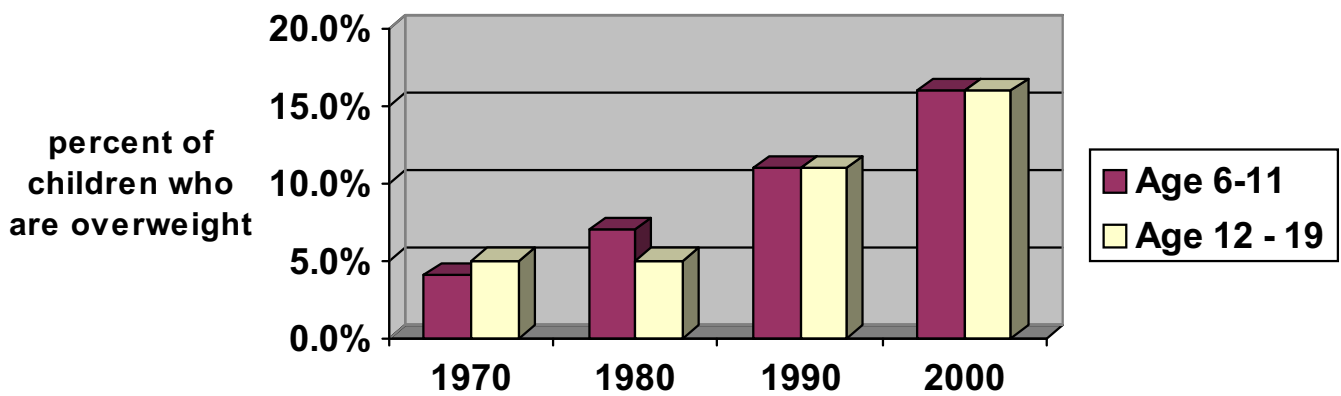
Adapted from <http://www.shapeup.org/bodylab/tools/bmi2.php>

# How's your weight?

## Adults in the US



## Children in the US



Source: US Dept. Of Health and Human Services, Center for Disease Control and Prevention, National Center for Health Statistics