

Ch. 13 Body Composition

Leon High School

Physical Education Department

LESSON

1

Body Composition Facts

Can You . . .

- . . . define *body composition* and identify three factors that contribute to it?
- . . . explain the difference between being overweight and being obese?
- . . . identify two methods that can be used to determine body fat levels?

**What is body composition, and
what factors contribute to it?**

Facts About Body Composition

- **Body composition is a part of health-related physical fitness. It refers to all the tissues that make up the body.**
- **Factors influencing body composition:**

Heredity

Metabolism

Maturation

Early fatness

Diet

Physical activity

**What is the difference between
being overweight and being
obese?**

Overweight and Obesity

- **Overweight is body weight that is above normal ranges and is often determined by body mass index.**
- **Obesity is the condition of being especially overweight or high in body fat.**

IDEAL BODY WEIGHT

FOR MALES			FOR FEMALES		
Height	Weight		Height	Weight	
	Pounds	Kilos		Pounds	Kilos
5' 0"	106	48.1	4' 8"	80	36.3
5' 1"	112	50.8	4' 9"	85	38.5
5' 2"	118	53.5	4' 10"	90	40.8
5' 3"	124	56.2	4' 11"	95	43.1
5' 4"	130	59.0	5' 0"	100	45.3
5' 5"	136	61.7	5' 1"	105	47.6
5' 6"	142	64.4	5' 2"	110	49.9
5' 7"	148	67.1	5' 3"	115	52.2
5' 8"	154	69.8	5' 4"	120	54.4
5' 9"	160	72.6	5' 5"	125	56.7
5' 10"	166	75.2	5' 6"	130	59.0
5' 11"	172	78.0	5' 7"	135	61.2
6' 0"	178	80.7	5' 8"	140	63.5
6' 1"	184	83.5	5' 9"	145	65.8
6' 2"	190	86.2	5' 10"	150	68.0
6' 3"	196	88.9	5' 11"	155	70.3

NOTE: IF YOU WEIGH MORE THAN 10% OF YOUR IDEAL BODY WEIGHT, THEN YOU ARE OVERWEIGHT. IF YOU WEIGH MORE THAN 20% OF YOUR IDEAL BODY WEIGHT, THEN YOU ARE CONSIDERED OBESE.

**What are anorexia nervosa,
bulimia, and anorexia athletica?**

Anorexia Nervosa, Bulimia, and Anorexia Athletica

- **Anorexia nervosa is an eating disorder in which a person severely restricts the amount of food eaten in an attempt to be exceptionally low in body fat.**
- **Bulimia is an eating disorder in which a person binges, or eats very large amounts of food within a short time, followed by purging.**
- **Anorexia athletica has symptoms similar to anorexia nervosa and is most common among athletes involved in sports in which low body weight is desirable (such as gymnastics or wrestling).**

What are some methods that can be used to determine body fat levels?

Body Composition Assessment Techniques

- **Advanced techniques:**
 - DXA
 - Underwater weighing
- **Common techniques:**
 - Skinfolds
 - Body measurements
 - Bioelectrical impedance analysis

Media Misrepresentation



Science in Action: Media Misrepresentation

- **Images in the media have been altered to enhance appearance.**
- **Photos are manipulated to change the size of body parts and features and to airbrush imperfections.**
- **Images online and in video games often represent impossible standards of femininity or muscularity.**
- **Many teens compare themselves to these images and feel bad about themselves as a result.**

LESSON

2

Energy Balance

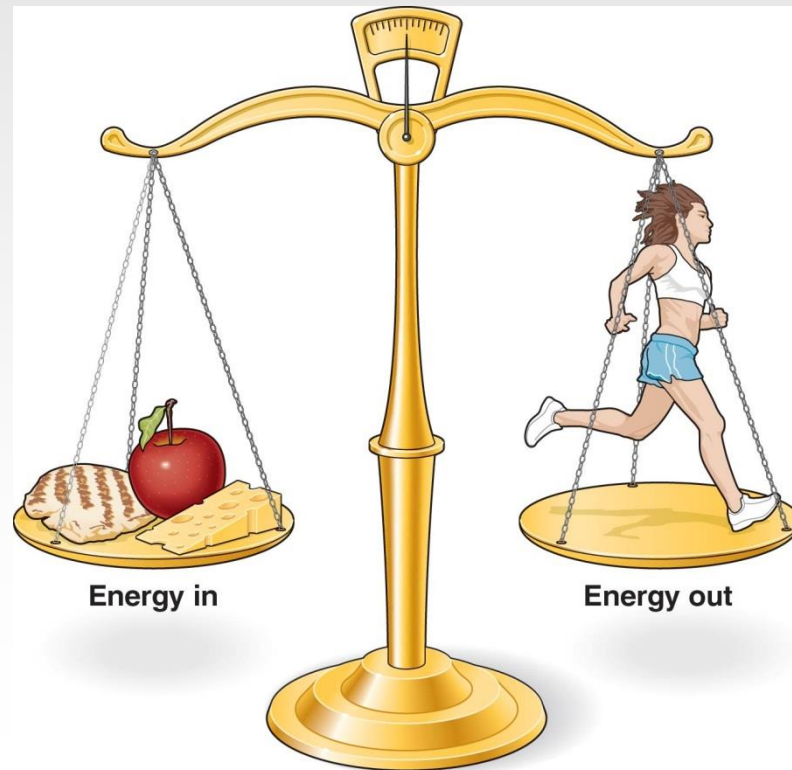
Can You . . .

- . . . define *energy balance* and explain how to use the FIT formula to lose a pound of fat?
- . . . correct common myths about fat loss?
- . . . define *physical self-perception* and explain why it is important?

What is energy balance, and how do you use the FIT formula to lose a pound of fat?

Energy Balance

Refers to balancing calorie intake and calorie expenditure



FIT Formula for Energy Balance

	Diet	Physical activity
Frequency	Eat three regular meals or four or five small meals daily. Regular, controlled eating is best for losing fat. Skipping meals and snacking are usually not effective.	Participate in physical activity daily. Regular physical activity is best for losing fat. Short or irregular physical activity does little to control body fat.

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FIT Formula for Energy Balance (continued)

	Diet	Physical activity
Intensity	<p>To lose 1 pound (about 0.5 kg) of fat, you must eat 3,500 fewer calories than normal over a given span of time.</p> <p>To gain 1 pound (0.5 kg) of fat, you must eat 3,500 more calories than normal over a given span of time.</p> <p>To maintain your weight, you must keep eating the same number of calories over a given span of time.</p>	<p>To lose 1 pound (0.5 kg) of fat, you must use 3,500 more calories than normal over a given span of time.</p> <p>To gain 1 pound (0.5 kg) of fat, you must use 3,500 fewer calories than normal over a given span of time.</p> <p>To maintain your weight, you must keep your level of physical activity the same over a given span of time.</p>

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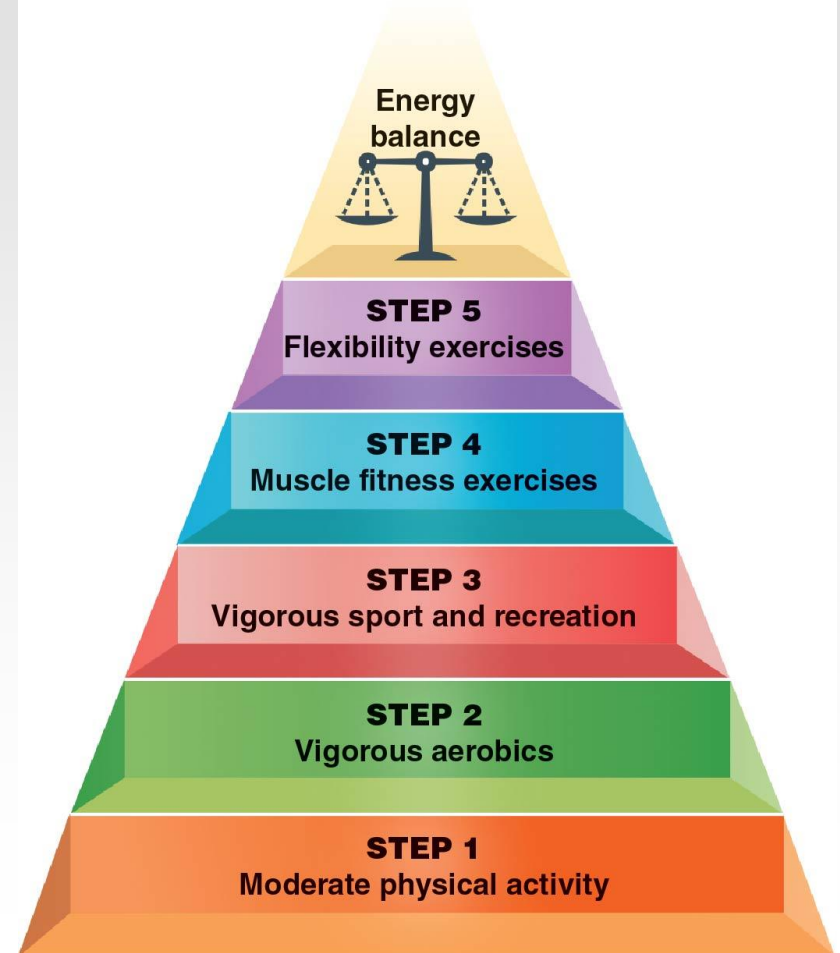
FIT Formula for Energy Balance (*continued*)

	Diet	Physical activity
Time	Neither dietary change nor physical activity results in quick fat loss. Medical experts recommend that a person lose no more than 2 pounds (1 kg) per week without medical supervision.	Together diet and physical activity can be used to safely lose 1 or 2 pounds (0.5–1.0 kg) per week.

What type of exercises are good for helping you to maintain energy balance?

Physical Activity for Energy Balance

All activities in the physical activity pyramid will burn calories and help you maintain energy balance.



**Can you correct common myths
about fat loss?**

Common Myths About Fat Loss

Myth

- Exercise cannot be effective for fat loss because it takes many hours of exercise to lose even 1 pound (0.5 kg) of fat.

Fact

- You can lose body fat over time with regular physical activity if your calorie intake remains the same. Fat lost through physical activity tends to stay off longer than fat lost through dieting alone.

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Common Myths About Fat Loss

(continued)

Myth

- **Exercise does not help you lose fat because it increases your appetite and encourages you to overeat.**

Fact

- **If you are moderately active instead of inactive, your appetite should not increase. People who overeat usually do so for reasons other than appetite.**

(continued)

Common Myths About Fat Loss

(continued)

Myth

- **Most overfat people have glandular problems.**

Fact

- **While a some people do have glandular problems, most people who are high in body fat eat too much, do too little physical activity, or both.**

(continued)

Common Myths About Fat Loss

(continued)

Myth

- **You can spot-reduce by exercising a specific body part to lose fat in that area.**

Fact

- **Any exercise that burns calories will cause the body's general fat deposits to decrease. A given exercise does not cause one area of fat to decrease more than another.**

What is the definition of *physical self-perception*, and why is it important?

Physical Self-Perception

- **It is the way you view your physical self, including your strength, fitness, skill, and physical attractiveness.**
- **Those with higher physical self-perception are more likely to be physically active.**

Group Activity

- 1. Read the Taking Charge feature: Improving Physical Self-Perception.**
- 2. Answer the For Discussion questions.**
- 3. Be prepared to discuss your answers with the class.**

Taking Charge: Improving Physical Self-Perception

- **For Discussion:**

- Michael had a negative self-perception because of his height. What can he do to change his negative perception?
- How does Raul keep a positive self-perception?
- What else can a person do to develop a positive self-perception?

**What are some skills for
improving physical self-
perception?**

Skills for Self-Perception

- **Assess your physical self-perceptions.**
- **Consider your self-assessment results.**
- **Perform regular physical activity to improve your physical fitness or practice regularly to improve your physical skills.**
- **Consider a new way of thinking about yourself.**

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Skills for Self-Perception (*continued*)

- **Think positively.**
- **Do not let the actions of a few insensitive people cause you to feel negatively about yourself.**
- **Consider how your behavior and actions influence the way other people view you.**
- **Realize that all people have some imperfections.**
- **Find a realistic role model and be a role model for others.**