

## OVERVIEW – CHAPTER 13

---

Weight Control  
Body Shapes  
    Apple/Pear-shape  
    Endo/Meso/Ecto-morph  
Waist-to-Hip Ratio  
Set-Point Theory  
Body Mass Index (BMI)  
Overweight/Overfat/Obese

Body Composition  
    Fat Weight/Lean Body Mass  
Measuring Body Composition  
Weight Management  
    Weight loss/gain, Caloric Expenditure  
    Diet Fads/Spot Reduction  
Eating Disorders  
    Anorexia/Bulimia

## SUMMARY

---

### WEIGHT CONTROL

- excessive weight, especially fat, can be harmful to your health
- there are no magical diets that take off fat quickly and keep it off
- various contributing factors; genetics, environment, race, gender, economic status, and psychological factors

### Body Shapes

#### *Apple-Shape*

- carry extra fat around the abdomen
- higher incidence of heart disease versus pear-shape

#### *Pear-Shape*

- tend to store extra fat in the lower body

*Endomorph* – soft and round-looking with excess of adipose or fatty tissue

*Mesomorph* – muscular-looking (best for activities requiring strength, speed and agility)

*Ectomorph* – very thin and lean (do well in endurance activities)

### Waist-to-Hip Ratio

- measure your waist at your navel and then your hips at the greatest circumference around the buttock
- waist-to-hip ratio greater than 1.0 for men and 0.8 for women indicates an increased cardiac risk

### Set-Point Theory

- genetic-based theory; we have preset level of fat in the body and it works to ensure this level
- some evidence that aerobic exercise can lower the set point

### Body Mass Index (BMI)

- method to calculate and provide an estimate of “healthy” weight when other methods are unavailable
- calculated by dividing your weight in (kg) by the square of your height (m) =  $\text{kg/m}^2$
- a higher BMI value indicates greater risk for health problems (refer to Figure 13.3 – page 154)
- doesn't take into account where extra fat is stored and it can't tell you how many pounds are fat vs. lean body mass

### Overweight

- weight is over the “ideal” weight (as defined by height/weight chart)

### Overfat

- condition in which the fat weight is higher than the desired body fat percentage

### Obese

- medical term that refers to the storage of excess body fat
- men >25% fat = obese
- women >30% fat = obese

## Body Composition

- measurement of percentage of fat weight and lean body mass
- desirable fatness for good health men = 10-25% women = 18-30%

*Fat Weight (FW)* – subcutaneous fat and intramuscular fat

*Lean Body Mass (LBM)* – weight of skeleton, muscles, water, organs and connective tissue

## Methods to Measure Body Composition (*Indirect Measures*)

*Hydrostatic (underwater weighing)*

- one the more accurate indirect measures
- fairly costly in both facility and time

*Skin-fold Techniques*

- calipers used to measure the thickness and subcutaneous fat at several specific sites
- less accurate than underwater weighing
- less expensive, quicker, and more convenient method to assess body fat

*Body analyzer or Impedance machine*

- sends a small, harmless electrical impulse through the body and a computer calculates body composition
- dependent on total body water values (hydration factor)

## Weight Management

- diet and exercise can be used to maintain, gain, or lose weight

Energy Balance = number of calories you consume matches the number of calories you expend

*Positive energy balance* = consumption of calories greater than expense (gain weight)

*Negative energy balance* = consumption of fewer calories than expense (lose weight)

## Weight Loss

- gradual weight loss, about 1-2 pound(s) a week
- 1 lb of fat = 3,500 calories
- REVIEW short list of helpful hints for eating fewer calories (*page 157*)
- aerobic exercise 5-6 times/week, for 30-60 minutes, at 70% MHR
- note muscle gained burns an additional 50 calories

## Weight Gain

- geared for undernourished individuals, people recovery from illness; athletes and bodybuilders
- increase your caloric consumption to exceed caloric expenditure while maintaining an exercise regimen
- muscle is most effectively increased through weight training

## Caloric Expenditure

- expend approx. 300-500 calories per exercise session

*Estimation of your Caloric Expenditure (page 158)*

- divide calories/hour for your weight by 60 to get calories/minute
- multiply calories/minute by the number of minutes perform in class
- yielding an approximation of your caloric expenditure from you class/workout

## Unbalanced diets, Fads and Gimmicks

- weight loss fads are easy to spot; they promise quick weight loss and advocate unbalanced diets
- when you loss more than 1-2 pounds/week, you will lose beneficial muscle and water weight
- near-starvation, crash diets and prolonged fasting, signals the body to conserve energy it has available and begins to store the energy as fat in order to compensate weight loss
- if you eat more calories than you expend, you will gain weight
- origin of calorie doesn't matter, "a calorie is a calorie" too many will result in storage as fat

## Spot Reduction

- all-time biggest diet and exercise myth
- you cannot choose areas to reduce or get rid of fat

## **Eating Disorders**

### *Anorexia Nervosa*

- eating disorder characterized by continual desire to lose weight because of fear of being fat
- women and men are both targets, but predominantly women
- get professional help before your body starves itself to death

### *Bulimia*

- eating disorder characterized by binge-purge behavior
- seek immediate psychological and medical attention

### *If you overeat/binge:*

- buy limited amount of food – don't shop when you're hungry
- avoid impulse buying – make a shopping list and stick to it
- stabilize your eating habits – eat at regular times and choose healthful foods
- put your meal on your plate before you sit down and don't bring extra food to the table
- eat slowly
- stop as soon as you feel full – you can always eat again
- keep healthful snacks handy

## **Resources**

National Associations of Anorexia Nervosa & Associated Disorders – [www.anad.org](http://www.anad.org)

National Eating Disorders Association – [www.nationaleatingdisorders.org](http://www.nationaleatingdisorders.org)

Overeaters Anonymous – [www.overeatersanonymous.org](http://www.overeatersanonymous.org)

Food Addicts Anonymous – [www.foodaddictsanonymous.org](http://www.foodaddictsanonymous.org)

Will exercise increase your appetite?

Is yo-yo dieting dangerous to your health?

Should you eat more when you exercise?

How can you get rid of cellulite?

When should you drink water?

Will a candy bar before class give you a quick boost of energy?

Do you need to eat breakfast before you morning aerobic class?

Does caffeine improve your exercise performance?