

## Chapters Eight and Nine - Nutrition

### Nutrients

- ✓ body needs to regulate bodily functions
- ✓ promote growth
- ✓ repair body tissue
- ✓ obtain energy
- ✓ over 40 different nutrients
- ✓ 6 classes of nutrients

### Class of Nutrients

- ✓ Carbohydrates
- ✓ Fats
- ✓ Proteins
- ✓ Vitamins
- ✓ Minerals
- ✓ Water

### Carbohydrates

- ✓ Supply energy for bodily functions
- ✓ Two types of carbs: simple & complex
- ✓ 45-65% of food intake should come from carbohydrates

### Simple Carbohydrates

- ✓ "sugars"
- ✓ quick burst of energy
- ✓ occur naturally in fruits, vegetables, milk
- ✓ added to many manufactured foods
- ✓ Glucose
  - a simple carb
  - very important
  - main supplier of energy
  - all other sugars convert to glucose

### Complex Carbohydrates

- ✓ "starches"
- ✓ long-lasting energy
- ✓ mainly found in plant foods (potatoes, grains)
- ✓ Fiber
  - a complex carb
  - found in fruits, vegetables, nuts, beans, seeds, whole-grain
  - not a nutrient

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- necessary for body to properly digest food
- helps prevent constipation
- reduces risk of colon cancer
- helps prevent heart diseases

### Fats

- ✓ supply energy to the body
- ✓ form cells
- ✓ maintain body temperature
- ✓ protect nerves
- ✓ 20-35% of calorie intake should come from fats

### Unsaturated fats

- ✓ liquid at room temperature
- ✓ found in vegetables, nuts, seeds
- ✓ help fight heart disease

### Saturated Fats

- ✓ solid at room temperature
- ✓ found in animal and dairy
- ✓ too much can lead to heart disease

### Trans Fat

- ✓ hydrogen added to unsaturated fat
- ✓ food with trans fat stay fresh longer
- ✓ same negative effects as saturated fat

### Cholesterol

- ✓ waxy fat-like substance
- ✓ found in animal products
- ✓ body needs a certain amount
  - make cell membrane
  - make nerve tissue
  - help create some hormones
  - aids digestion of fat
- ✓ liver makes all the cholesterol that the body needs

### High Cholesterol

- ✓ high cholesterol diets are dangerous
  - plaque builds in vessels

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- plague can stop blood flow
- lead to heart attack
- ✓ high cholesterol is genetic
- ✓ h.c. increases with age
- ✓ personal diet affects level of cholesterol
- ✓ reduce meat and dairy intake

### Proteins

- ✓ growth and repair of body's tissue
- ✓ provides energy
- ✓ eat wide variety of foods to get proteins
- ✓ found in nuts, dried beans, eggs, milk, meats
- ✓ 10-35% food intake should come from protein
- ✓ Complete proteins = animal products, have all 9 essential amino acids
- ✓ Incomplete proteins = plant products, don't contain all 9 amino acids in one food

### Vitamins

- ✓ help body use other nutrients
- ✓ enables various chemical reactions in body
- ✓ body can make some vitamins
- ✓ two classes of vitamins:
  - fat-soluble & water-soluble

### Fat-soluble Vitamins

- ✓ A,D,E,K
- ✓ found in veg oils, liver, eggs, some vegetables
- ✓ can be stored in body
- ✓ (chart page 203)

### Water-soluble Vitamins

- ✓ B,C, Folate, Biotin, Pantothenic Acid
- ✓ found mainly in fruits and vegetables
- ✓ cannot be stored in body
- ✓ (chart page 204)

### Minerals

- ✓ body requires small amounts
- ✓ occur naturally in rock and soil
- ✓ 24 minerals needed for good health

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- ✓ 7 minerals needed in large amounts
- ✓ (chart page 207)

### Water

- ✓ all body chemical reactions need water
- ✓ regulate body temp
- ✓ help digest food
- ✓ carries dissolved waste products out of body

### Make Smart Food Choices

- ✓ eat wide variety of foods
- ✓ eat foods rich in fiber and complex carbs
- ✓ eat whole-grain foods, fresh fruits and veggies
- ✓ consume milk and dairy products that are low or reduced in fat
- ✓ eat nutrient-dense foods
- ✓ balance calorie intake (what you eat) with output (exercise/activity)

### Overweight vs. Obesity

- ✓ overweight = 10% over
- ✓ obesity = 20% over
- ✓ (BMI charts page 227)
- ✓ Health risks
  - high blood pressure
  - high cholesterol
  - type 2 diabetes
  - heart diseases
  - stroke
  - some cancers

### Underweight

- ✓ weigh less than ideal weight for height, age, gender
- ✓ health risks
  - anemia
  - heart irregularities
  - regulating body temperature

### Healthy Weight Management

- ✓ concerns with fad diets
  - diet w/o proper regard to nutrition
  - often exclude nutrients
  - temporary

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- severe restriction of food options
  
- ✓ concerns with diet aids
  - pills, candies to suppress appetite
  - ineffective long-term
  - can be habit forming
  - unwanted side effects
  
- ✓ concerns with fasting
  - not eating
  - can lead to health problems
  - body begins to break down muscles to obtain nutrients
  - stunts growth
  - strains kidneys
  - cause hair loss
  - irregular menstrual periods

## Sensible Weight Management

- ✓ identify eating patterns
- ✓ plan helpful strategies
- ✓ exercise