Ch 6
Body Composition and Weight Management

Benefits of Healthy Body Composition

- Better health
- Improved performance of physical activities
- Better self-image

Body Composition
Proportionate amounts of fat tissue and nonfat tissue in the body.

% Body Fat
Adipose tissue as a percent of total body tissue.

Lean Body Mass
Nonfat tissue made up of muscle, bone, blood, and organs (heart, brain, liver, kidneys).

Essential Fat
Body fat needed for normal physiological functioning.

Storage Fat
Subcutaneous fat found beneath the skin and around major organs that acts as an insulator, as padding, and as a source of energy.

Figure 4.7 Typical body composition changes for adults in the United States.

Body Composition

- Fat-free mass (Lean Weight)
  - all the body’s nonfat tissues
  - bone, water, muscle, connective tissue, organ tissues, teeth
- Fat
  - essential fat (needed for body function)
    - found in nerves, brain, heart, lungs, liver, mammary glands
    - makes up 3% of total body weight in males
    - makes up 12% of total body weight in females
  - nonessential (storage) fat (excess body fat)
    - found in adipose tissue
    - makes up 12% of total body weight in males
    - makes up 15% of total body weight in females

Typical Body Composition of Male & Female Young Adults

<table>
<thead>
<tr>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscle – 45%</td>
<td>Muscle – 36%</td>
</tr>
<tr>
<td>Essential Fat – 3%</td>
<td>Essential Fat – 12%</td>
</tr>
<tr>
<td>Non-Essential Fat – 12%</td>
<td>Non-Essential Fat – 15%</td>
</tr>
<tr>
<td>Bone – 15%</td>
<td>Bone – 12%</td>
</tr>
<tr>
<td>Other – 25%</td>
<td>Other – 25%</td>
</tr>
</tbody>
</table>

Overweight and Obesity - Basics

- **Overweight**: body weight in relation to one’s height and frame size (@66% of population)
- **Overfat**: Actual percentage of body mass made up of adipose tissue. Health may be compromised. Can’t be measured with height/weight charts
- **Obesity**: more serious degree of overweight based on percent body fat ($\alpha \geq 25\%$ and $\gamma \geq 32\%$ - @ 30.5% of population)
- **Percent body fat** (proportion of body’s total weight that is fat) is a more accurate measurement of body composition than total body weight

Percent Body Fat Classifications

<table>
<thead>
<tr>
<th>Classification</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unhealthy range</td>
<td>$\leq 5%$</td>
<td>$\leq 8%$</td>
</tr>
<tr>
<td>Acceptable range (lower end)</td>
<td>6-15%</td>
<td>9-23%</td>
</tr>
<tr>
<td>Acceptable range (higher end)</td>
<td>16-24%</td>
<td>24-31%</td>
</tr>
<tr>
<td>Unhealthy range</td>
<td>$\geq 25%$</td>
<td>$\geq 32%$</td>
</tr>
</tbody>
</table>


Body Composition in the United States

- Sedentary lifestyles are on the increase
- Average caloric intake has increased by 100-300 calories/day in last 10 years
- Potential increase in negative health effects:
  - Hypertension (risk is doubled if obese),
  - Elevated cholesterol levels (risk ratio is higher in obese)
  - Diabetes (obese rate is three times higher than non-obese),
  - Certain types of cancers:
    - $\alpha$ = colon, rectum, prostate;
    - $\gamma$ = gallbladder, uterus, cervix, ovaries

Body Composition in the United States

- Distribution of body fat is also important
- Gaining of weight in abdominal area has higher risk of coronary heart disease, high BP, diabetes, and stroke than gaining weight in hip area.
- Problems can also arise if individuals have too little body fat (eating disorders)
  - $\leq 8\%$ for women and $\leq 5\%$ for men

Diabetes

- Diabetes causes disruption of normal metabolism
- Associated with kidney failure, nerve damage, circulation problems, retinal damage, and blindness
- Currently 7th leading cause of death in US.
- Type I Diabetes – more serious (pancreas produces little or no insulin), usually present before age 30, need medication to control
- Type II Diabetes – Develops slowly (often asymptomatic) – individual is often unaware of problem, may need medication to control
- Gestational Diabetes – usually disappears after pregnancy, but can lead to Type II diabetes

Diabetes

- Major factors in development of Diabetes
- Age; Obesity; Physical Inactivity; Family History; Lifestyle
- Warning Signs:
  - Frequent urination; extreme hunger or thirst; unexplained weight loss; extreme fatigue; blurred vision; frequent infections (bladder, gums, skin, vagina); cuts/bruises that are slow to heal; tingling/numbness in hands/feet; generalized itching (no rash)
- Prevention:
  - Moderate diet to control body fat and regular exercise
Assessing Body Composition

Body Mass Index (BMI)
- Not a measure of body composition
- One's weight should be proportional to height
- Body composition or fat distribution are not considered!
- Calculated by dividing weight (kg) by height (meters)^2 or by dividing weight (lbs) by height (inches)^2
  \[ \text{BMI} = \frac{\text{weight (kg)}}{\text{height (meters)}^2} \]
  \[ \text{BMI} = \frac{\text{weight (lbs)}}{\text{height (inches)}^2 \times 705} \]
- If your BMI is less than 18.5, it falls within the "underweight" range.
- If your BMI is 18.5 to 24.9, it falls within the "normal" or Healthy Weight range.
- If your BMI is 25.0 to 29.9, it falls within the "overweight" range.
- If your BMI is 30.0 or higher, it falls within the "obese" range.

Percent body fat
- Calculated using skinfold measurements (± 3% error)
- Men: Chest, Abdomen, Thigh; Women: Triceps, Suprailium, Thigh

Other methods
- Hydrostatic (underwater) weighing (± 2.5% error – H₂O displacement)
- Bioelectrical impedance analysis (BIA) (± 10% error – tends to overestimate body fat in very lean individuals and underestimate body fat in obese)
- Air Displacement Plethysmography - Air displacement (Bod Pod) (± 2.2% error – better accuracy needed for different populations (age groups, ethnic groups, and athletic groups)
- Dual Energy X-Ray Absorptiometry (DEXA) – uses x-ray energy to assess body composition (± 1.8% error)

Measuring Body Fat Distribution

1) \* Waist circumference measurement
   Problem if: ♂ > 40 in; ♀ > 35 in.
2) Waist-to-hip circumference ratio
   Definition: waist circumference measurement divided by the measurement of the widest circumference around the hips.
3) Results that exceed norms are associated with significant health risks (e.g. Type 2 diabetes, hypertension, cardiovascular disease)

Women’s Goal:
- < 0.80
- Android form

Men’s Goal:
- < 0.95
- Gynoid form

Girth Measurements

Lab 6.1

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Gender</th>
<th>Site A</th>
<th>Site B</th>
<th>Site C</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-26</td>
<td>Male</td>
<td>Right Upper Arm</td>
<td>Abdomen</td>
<td>Right Forearm</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>Abdomen</td>
<td>Right Thigh</td>
<td>Right Forearm</td>
</tr>
<tr>
<td>27-50</td>
<td>Male</td>
<td>Hips</td>
<td>Abdomen</td>
<td>Right Forearm</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>Abdomen</td>
<td>Tight Thigh</td>
<td>Right calf</td>
</tr>
</tbody>
</table>

Men’s Goal: < 0.95
- Android form

Women’s Goal: < 0.80
- Gynoid form


Waist –to-Hip Ratio

Lab 6.3

- Waist Circumference __________
- Hip Circumference __________
- Waist-To-Hip Ratio __________

Use Table 6.5 (p. 134) for Disease Risk

Lab 6.2

- Attain accurate measure of your height & weight
- Enter information on the following site:
- Record BMI score: _________
- Copy information from “RESULTS”
- Use chart on p. 133 of text (Table 6.4) to record health category

### Recommended Body Weight

**Lab 6.4**

**Lab 6.4 Recommended Body Weight**

- Body Weight in lbs: __________
- Current % body fat estimate: __________
- Fat Weight: __________
- Lean Weight: __________
- Choose desired fat percent from Table 6.3 (p. 128 of text)
- Recommended Body Weight: __________

### Calculating Daily Caloric Needs

**Lab 6.5**

#### Women:

<table>
<thead>
<tr>
<th>Body Weight in lbs</th>
<th>Height in inches</th>
<th>Age in Years</th>
<th>Basal Metabolic Rate (BMR)</th>
<th>Activity Level % from Lab 6.5 in text</th>
<th>Calories from Activity</th>
<th>Daily Calories Needed to Maintain Weight</th>
</tr>
</thead>
</table>

#### Men:

<table>
<thead>
<tr>
<th>Body Weight in lbs</th>
<th>Height in inches</th>
<th>Age in Years</th>
<th>Basal Metabolic Rate (BMR)</th>
<th>Activity Level % from Lab 6.5 in text</th>
<th>Calories from Activity</th>
<th>Daily Calories Needed to Maintain Weight</th>
</tr>
</thead>
</table>

### Achieving Healthy Body Weight and Composition

- Set an overall goal and realistic intermediate goals
- Calculate a target body weight or percent body fat
- Increase level of activity
- Follow a healthy diet
- Track progress

### Body Composition Considerations

- Body weight measurements do not reveal actual changes in body fat or muscle levels.
- Muscle weighs more than fat and burns more calories at rest.
- Exercise can increase muscle and decrease body fat.
- Dieting can decrease precious muscle in our bodies.

### Effects of a 6-week Aerobics Exercise Program on Body Composition

<table>
<thead>
<tr>
<th>Pounds</th>
<th>Weight Loss</th>
<th>Fat Loss</th>
<th>Lean Tissue Gain</th>
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<tr>
<td>0</td>
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<td>5</td>
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<td>6</td>
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<td>0</td>
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<tr>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
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</table>

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### Body Composition Questions

- What about spot reducing?
- Need to reduce overall amounts of fat by burning more calories than you take in.
- What is cellulite?
- Cellulite is fat deposited under the skin
- Best removed with diet & exercise program
- Liposuction?
- Surgical removal of fat in specific areas.
- Can be risky solution to problem.
Weight Management Basics

- Controlling body weight is controlling body fat
- More important to consider one’s body composition rather than “weight”
- @66% of American adults are overweight (weighing 10% or more over recommended weight or Body Mass Index (BMI) $\geq 25$)
- 14 year study showed greater risk of heart disease & cancer if overweight

Weight Management Basics - continued

- Slow weight gain over time can also lead to problems
- @30% of American adults are obese (weighing 20% or more over recommended weight or having a BMI $\geq 30$)
- One of the most serious and widespread challenges to health and wellness in the United States

Health Risks of Obesity

- Major risk factor for heart disease
- Increased risk of CVD, hypertension, gallbladder disease, diabetes
- Associated with certain types of cancer
- Complications in pregnancy
- Respiratory problems
- Joint disease

Factors Influencing Obesity

Genetic:
- genes influence body size and shape, body fat distribution, and metabolic rate; can account for 75%-80% of percent body fat in children

Environmental:
- lifestyle choices; European vs. USA studies

Metabolism and Energy Balance:
- energy in (as food) versus energy out (resting metabolism, energy to digest food, physical activity)

Resting Metabolic Rate (RMR)

- RMR accounts for 55-75% of daily energy expenditure; 5-15% required for digestion; 10-40% energy expended in physical activity
- Factors affecting RMR
  - Heredity – inherited from parents
  - Gender – males tend to have higher RMR – more muscle
  - Lifestyle – an ongoing commitment
- Exercise increases RMR

Metabolism and Energy Balance

- Metabolism: the sum of all the vital processes by which food energy & nutrients are made available to and used by the body
- Resting Metabolic Rate (RMB): the energy required to maintain vital body functions while the body is at rest (e.g. respiration, heart rate, body temperature, blood pressure)
- High RMB means you burn more calories at rest and can take in more calories
Explanations for Overweight

- To maintain current weight:  
  **Calories in = Calories out**
- We control the food taken in and the energy expended
- Weight cycling (yo-yo dieting); Even small losses in weight (if maintained) can be helpful
- Set-Point Theory – an internal control mechanism to regulate body weight – What weight is right for an individual? Exercise can “reset” this set-point
- Best to combine caloric expenditure with reduction in caloric intake

Explanations for Overweight

- Fat-Cell Theory – obese have more and larger fat cells.
- Weight gain due to fat cell hypertrophy (cells become filled with lipids & enlarge) – Weight loss calls for a reduction in size of fat cells not the number
- Restrained eating (restricting food intake) leads to overeating (binge eating - leads to guilt, shame, etc.) – other causes: emotions, situations, physical states
- Psychological factors – Eating becomes a distraction from difficult feelings, used to combat low moods, low self-esteem
- Socio-economic factors – obesity goes down as income goes up
- Cultural factors – food equates with “love” & caring – part of social gatherings

Hidden Calories

- “Reduced” fat foods – fat often replaced with sugar – Need to check the labels
- Regular sodas – a 12 oz. soda may have 150-200 calories – plain H2O is better
- Alcoholic beverages – wine has about 100 calories; beer or cocktail has about 150 calories; wine coolers about 175 calories – Substitute “light” or non-alcoholic versions
- Fruit juices/drinks – can be high in sugar – more than the “plain” fruit
- Muffins – Large, high in fat, 300-500 calories – better to choose whole grain breads, bagels, English muffins
- Condiments – Most have about 100 calories/tablesquon – use herbs, spices, lemon juice

Changing Your Energy Balance

- For weight loss, a negative calorie balance must be created by expending more calories than are consumed
- Increasing physical activity increases calories expended
- Changing diet can decrease calories consumed

Dietary Guidelines for Weight Management

- Control consumption of calories (average intake increased 100-300 calories/day over past 10 years), fat (no more than 66 grams in 2000 cal. diet), sugar/refined carbs. (may trigger overeating), protein (excess will be stored as fat)
- Monitor portion sizes (smaller than you want; follow food pyramid examples)
- Increase intake of complex carbohydrates – pasta/potatoes (avoid high-fat toppings/sauces)
- Develop regular eating habits
Portion Sizes

- 1 cup = woman’s fist or tennis ball
- 1 ounce = 1 thumb or 4 stacked dice
- 1 ounce snack food = 1 handful nuts or candies
- 1 ounce snack food = 2 handfuls of chips/pretzels
- 3 ounces = palm of hand; deck of cards; audio cassette tape
- 1 tablespoon = 3 thumb tips or ½ ping-pong ball
- 1 teaspoon = 1 thumb tip
- 1 tablespoon = 3 thumb tips or ½ ping-pong ball
- ½ cup rice = ice cream scoop or 1/3 soda can
- 1 medium potato = computer mouse

A Healthy Lifestyle for Weight Management

Diet and eating habits:
- Eat a moderate number of calories & watch portion sizes carefully
- Limit intake of dietary fats and added sugars
- Increase your intake of complex carbohydrates
- Limit protein intake to recommended levels
- Eat small, frequent meals (3-4 + healthy snacks); don’t skip meals – leads to problems
- Maintain a structured pattern of eating

Physical Activity and Exercise:

- Engage in moderate CRE exercise (70% THR) of medium to long duration (90-150 minutes/week) as part of your exercise program
- Include weight training as part of your exercise program

Thoughts and emotions:

- Develop realistic goals for yourself and your behavior
- Think positively about yourself, and praise yourself for your accomplishments
- Positive self-talk

Coping strategies:

- Develop healthy ways of dealing with stress, boredom, fatigue, and loneliness that don’t involve food
- Deal positively with the stresses and challenges of life

Strategies for Weight Management

Doing it alone – can be successful; 64% successful w/o joining a group; limit loss to ½-2 lbs/week; early wt. loss is H2O – later loss is fat

Diet books:
* High protein, low carb diets (Sugar Busters, The Zone, Dr. Atkins’ New Diet Revolution) put body at risk for heart disease, colon cancer; wt loss is due to loss of H2O & protein; reason they work is low number of calories taken in
Strategies for Weight Management

* Low fat, high-carbohydrate diets are hard to follow (New Hilton Head Metabolism Diet & Pritikin Weight Loss Breakthrough)
* “Magic” & fad diets can be dangerous (The Cabbage Soup Diet; Diet based on blood type)

How to spot a “Fad” diet

- It promises super-fast results
  A realistic and safe expectation is to lose about one pound per week
- It limits food choices
  Limiting or banning certain types of foods is potentially nutritionally deficient and not sustainable; best to have variety in foods with healthy portions
- It requires specific meal/food combinations
  No scientific evidence that combining foods help you drop weight or “wrong” combinations will turn food to fat or increase toxin levels
- It included special pills, powders, or herbs
  Some special ingredients are: laxatives or diuretics; others effect metabolism in a potentially harmful way
- It skips exercise
  Exercise is necessary to lose weight and keep it off

From: USA Weekend - Health Smart The Doctors, Initials. (2011, July 31). 5 ways to spot a bogus diet. USA Weekend, 8.

Strategies for Weight Management

- Diet aids – Seeking a quick solution to a long term situation can lead to problems
- Diet pills with phenylpropanolamine hydrochloride (PPA) can cause CV side effects, dizziness, headaches, rapid pulse, heart palpitations
- Ephedrine (ephedra) - appetite suppressant & stimulant to heart & nervous system - serious problems - elevated BP & HR
- Commercial programs: only 10-15% success rate in keeping weight off; check into the costs (foods/supplements) & risks of the program

Prescription drugs: some caused heart valve problems (fen-phen); only for serious weight problems; need lifestyle changes

Surgery: May be necessary for those 100% or more overweight; can have serious side effects

Psychotherapy: if eating disorder is diagnosed; may need the help of a therapist

May need professional help if 20% - 40% overweight

Body Image

- Picture of the body as seen through the mind’s eye
- Negative body image can cause significant psychological distress
- Eating disorders characterized by dissatisfaction with body image and body weight (8 million suffer)

Anorexia Nervosa: effects 1-3 million; 95% female ages 12-18; characterized by intense fear of gaining weight or becoming fat; self-esteem is tied to their evaluation of their body/shape

Bulimia Nervosa: (binge & purge); becoming a problem for young (11-12) & old (40-60); places serious stress on body

binge-eating disorder: uncontrolled eating leads to feeling of shame, guilt, depression; feel rigid dieting is only solution, but can’t/don’t follow through
To Safely Gain Weight

- Program should be gradual and include strength training exercise & high carb/high calorie diet changes
- Limit fats and include complex carbohydrates (60-65% daily calories from carbs)
- Usually enough protein in “regular” diet
- Don’t skip meals; add 2-3 snacks to diet
- Could use sport drink with 60% of calories from carbohydrates; but don’t substitute for meals

Guidelines for Healthy Weight Management

- Assess motivation and commitment
- Set reasonable goals
- Assess current energy balance
- Increase level of physical activity
- Make changes in diet and eating habits
- Put plan into action (keep a log of what eaten & exercise)
- Think positively

Ch 7

Stress Management

General Adaptation Syndrome

**Fight or Flight**

- Three predictable stages:
  - **Alarm** – body is more susceptible to disease or injury – geared to deal with crisis - brain, heart & skeletal muscles receive more glycogen and \(O_2\) due to increased adrenaline; less important organs for defense receive less
  - **Resistance** – allows person to deal with added stress – the continuation of the “stressor” – cannot go on for long – body will seek “homeostasis”
  - **Exhaustion** – If previous two stages are persistent – it can lead to illness or life threatening exhaustion (mental distortions or disorganized thinking)

**Stress Basics**

- **Stressors** are any physical or psychological event or condition that produces stress
- Situations may trigger physical & emotional reactions
- **Stress response** is the physiological and emotional response to stressors
- **Nervous** and **endocrine** systems produce physical reactions to stressors

**General Adaptation Syndrome** (GAS)

- Described by Has Selye as “a universal and predictable response pattern to stressors”

- Two categories of stress:
  1. **eustress**: stress triggered by pleasant stressor
  2. **distress**: stress triggered by unpleasant stressor
**Allostatic Load**
- Allostatic Load – the long-term wear and tear of the stress response
- Depends on one’s genetics, life experiences, emotional, and behavioral responses to stress
- Can be due to frequent stressors, poor adaptation to common stressors, inability to shut down stress response
- High Allostatic Load is linked to heart disease, high BP, obesity, reduced immune system functioning
- If your Allostatic Load exceeds your ability to cope, you are more likely to get sick.

**Physical Responses to Stress**
- Autonomic nervous system (digestion, heart rate, breathing, blood pressure, etc.)
  - parasympathetic (relaxed state – digesting food, storing energy, promoting growth)
  - sympathetic (fight-or-flight reaction – in emergencies)
- Endocrine system
  - releases hormones: cortisol (*hydrocortisone*), epinephrine (*adrenaline*), norepinephrine (*noradrenaline*).

**FIGHT or FLIGHT Reactions**
- Hearing & vision become more acute
- Heart accelerates to pump more oxygen
- Liver releases extra sugar for energy to muscles & brain
- Perspiration increases to cool skin
- Endorphins released to relieve pain in case of injury

**Physical Responses to Stress**
- When stress is ended the parasympathetic division returns body to homeostasis – vital functions return to normal
- Soreness can result the day after
- In today’s society – many stressors (all not appropriate – traffic, test anxiety) can effect the “fight or flight” reaction
- Physical responses may be the same, but emotional responses will vary

**Emotional Responses to Stress**
- Anxiety, depression, fear
- Controlled by the somatic nervous system
- Effective responses include: talking, laughing, exercising, meditating – promotes wellness
- Ineffective responses include: using tobacco, alcohol, drugs, overeating – can be detrimental
- Influenced by our personality (type-A react explosively vs. “hardy” personality react mildly)
- Past experiences (giving a speech),
- Gender (♀ vs. ♂) & cultural background also have an impact

**Signs of Stress**

<table>
<thead>
<tr>
<th>Physiological</th>
<th>Psychological</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headaches/muscle aches</td>
<td>Lack of concentration</td>
</tr>
<tr>
<td>Neck/back pain</td>
<td>Irritability</td>
</tr>
<tr>
<td>Increased heart rate</td>
<td>Restlessness</td>
</tr>
<tr>
<td>Chest pains</td>
<td>Depressed mood</td>
</tr>
<tr>
<td>Upset stomach</td>
<td>Impulsiveness</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>Difficulty in remembering things</td>
</tr>
<tr>
<td>Loss of appetite</td>
<td></td>
</tr>
<tr>
<td>Insomnia</td>
<td></td>
</tr>
</tbody>
</table>
Signs of Stress

Behavioral Changes associated with stress
• Emotional outbursts
• Frequent crying
• Angry outbursts
• Isolation/withdrawal
• Sexual dysfunction
• Communication difficulties
• Use of escape substances (alcohol/drugs)

Stress and Disease/Illness

➢ Psychoneuroimmunology (PNI) – study of the interactions among the nervous system, the endocrine system, and the immune system.
➢ Stress impairs the immune system and can affect one’s health (colds, asthma attacks)
➢ Can lead to digestive problems, tension headaches, insomnia, reproductive complications
➢ Cardiovascular disease – elevated blood pressure and be a result of a stressor due to constricted blood vessels & elevated heart rate – leads to stroke, heart attacks, and death

Personality and Stress

• HARDINESS – personality trait that can mediate the effects of stress
Characteristics:
1. Commitment: sense of dedication to one’s life goals; keeping focus on major goals
2. Challenge: a positive/welcomed view of new events/demands – new opportunities
3. Control: individual has an influence over their life’s events – being proactive vs. reactive
   Try to maintain “social connectedness” to lessen stress

Personality Types

• Type A – aggressiveness, anger, impatience, time urgency, highly competitive, irritability, controlling, hostility, and deep seated insecurity – predisposed to heart disease and a possible second heart attack (but may better survive a first heart attack)
• Type B – contemplative nature, more relaxed, less competitive, less aggressive, less worried about time

Common Sources of Stress

✓ Major life changes (divorce, early adulthood – new relationships/breakups)
✓ Daily hassles (Atlanta traffic)
✓ College stressors (retain a scholarship)
✓ Job-related stressors (boss, salary, job performance, burnout)
✓ Interpersonal and social interactions (family & friends)

College Stress

• Environmental stressors: living conditions, traffic, weather, location of housing, noise levels
• Physiological stressors: sedentary lifestyle, poor nutrition, lack of sleep, physical illness or injury
• Social stressors: difficult relationships (friends, family roommates), work issues, financial problems, academic issues
• Psychological stressors: feelings of inferiority, rejection, negative thinking, “catastrophizing”
Tools for Managing Stress

- Acknowledging & changing the stress causing situation
- Social support (sharing of feelings)
- Clear communication (express yourself)
- Regular exercise in moderation (better adaptation to stress)
- Good nutrition (avoid caffeine & “stress formula” vitamins – they don’t work to reduce stress)
- May need outside support/help
- Learn to manage your time

Time-management Strategies

- Time-management skills (avoid overcommitment, procrastination, & boredom)
- Set priorities and realistic goals
- Budget enough time
- Create short-term goals
- Visualize achievement
- Do least-favorite task first
- Consolidate tasks and delegate responsibility
- Learn to say “No!”
- Give yourself a break
- Just do it!!

Cognitive Strategies for Stress Management

- Modify expectations (avoid unrealistic expectations)
- Monitor self-talk (minimize/avoid hostile, critical, self-deprecating thoughts)
- Live in the present (don’t worry about the past or what’s not under your control)
- Be flexible (go with the flow – can’t do everything for everyone)
- Laugh! (humor can be therapeutic – triggers endorphins)

Relaxation Techniques

- Trigger the relaxation response through:
  - Progressive relaxation (tense & relax muscles – tells body to reduce the stress response)
  - Visualization (imagery – used in sports to enhance performance)
  - Deep breathing (deep, slow breathing promotes relaxation)
  - Music – newborns & stroke victims have benefited from music

Relaxation Techniques

- Meditation – quieting or emptying the mind
- Hatha Yoga – promotes the “union” of mind, body, and soul
- Tai Chi – good health results from a balanced “chi” – the energy force that surrounds and permeates all things
- Biofeedback – becoming more aware of one’s level of physiological arousal
- Hypnosis/self-hypnosis – mental focusing intensifies – helps one to feel something other than stress
- Massage – subdues the stress response