STRESS: THE CONSTANT CHALLENGE

Chapter Two
What is Stress?

- Stress = 1) Situations that trigger physical and emotional reactions and 2) The reactions themselves
- Stressor — that triggers stress
  - Eustress Anything vs. Distress
- Two Systems Oversee the Physical Responses to stressors
  - Nervous system
  - Endocrine system
Components of the Central Nervous System

- **Brain**
  - Receives information from internal & external environment &
  - Integrates and makes decisions about incoming information

- **Spinal Cord**
  - Connects brain w/ peripheral nerves

- **Nerves**
  - Send & receive messages (chemical/electrical)
Divisions of the Nervous System

Peripheral Nervous System
- Autonomic (Involuntary)
  - Parasympathetic
    “Rest & Digest”
  - Sympathetic
    “Fight/Flight”
- Somatic (Voluntary)

Central Nervous System
Components of the Endocrine System

- Scattered glands, cells, tissues that release hormones into bloodstream
- Hormones regulate & control body functions
The CNS & Endocrine System Work Together to respond to Stress

- Nervous system operates fast, endocrine system is slower
- Both systems act simultaneously to bring about change during a stress response
  - Ex. Release of cortisol and adrenaline during a stress response
Physical Responses to Stress

- **Cortisol and Adrenaline cause:**
  - Acute hearing and vision (pupils dilate)
  - Increased HR
  - Release of sugar into bloodstream (by liver)
  - Digestion to halt
  - The release of endorphins (pain reliever)
  - Bronchi to dilate
Emotional & Behavioral Responses to Stress

- Behavioral responses to stress are controlled by the Somatic N.S.

  - Effective responses to stress: Talking, laughing, exercise, time management

  - Ineffective responses to stress: Eating, procrastination, frustration
What determines how we respond to stress?

Personality
- Type A, B and C personalities
- Resilient personality

Cultural background

Gender

Past Experiences
Return to Homeostasis

- What is Homeostasis?
  - The body’s ability to maintain internal stability, while our environment constantly changes.

- Why is it important to return to homeostasis?
The General Adaptation Syndrome

Pattern of all stressors

- Alarm
- Resistance
- Exhaustion
General Adaptation Syndrome (G.A.S.), a theory of Stress and Disease

- Alarm
- Resistance
- Exhaustion
Stress and Disease

- Several components interact with stress to increase vulnerability to disease
  - Genetic predisposition
  - Personality
  - Social environment
  - Health related behaviors
Women, Men, and Stress

- **Women and stress**
  - Balancing multiple roles

- **Men and stress**
  - Compelled to be in charge at all times

- **American Psychological Association’s “Stress in America” survey**
  - 82% of female and 71% of male Americans reported stress-related health problems.

- **Physiological Differences**
  - Testosterone – men
  - Oxytocin – women
Psychoneuroimmunology (PNI)

- Definition: Study of complex interactions between N.S, endocrine and immune system
- Specific connections between stress & immune system exist
  - Chronic high blood pressure
    - Atherosclerosis
  - Strokes
  - Psychological problems brought on by hormones released during stress response
  - Colds and other infections
  - Cancer
Managing Stress

- Social Support
- Communication
- Exercise
- Nutrition
- Sleep
Managing Stress

- How sleep works
  - Two phases: REM and NREM
- Sleep problems
  - Insomnia
  - Sleep apnea
Cognitive Techniques

- Think and act constructively
- Take control
- Problem-solve
- Modify your expectations
- Stay positive
- Cultivate your sense of humor
- Focus on what’s important
Relaxation Techniques

- Progressive relaxation
- Visualization
- Meditation
- Deep breathing
- Yoga
- Music
- Tai chi (Taijiuan)
- Biofeedback