

## CH 2: Stress

- A situation(s) that triggers an emotional rxn
- And the reactions themselves
  - Stressor-the situation; any physiological or physical event or condition that produces stress
  - Stress response- rxn to the stressor; physical and emotional changes associated with stress
  - Stress- general physiological and emotional state that accompanies the stress response

### 2 Systems Responsible for physical response:

- Nervous system
- Endocrine system

### Nervous System

- Autonomic nervous system (involuntary)
  - Controls stress response-controls heart rate, breathing, blood pressure
  - Parasympathetic division
    - In control when we are relaxed
    - Aids in growth, digestion
  - Sympathetic division
    - Mobilizes body into action
    - In times of arousal, emergency, crisis
    - Uses a neurotransmitter called norepinephrine to stimulate a response
- Somatic nervous system

### Endocrine System – triggered by sympathetic nervous system

- Glands, tissues, cells that help control bodily functions
- Releases hormones into bloodstream
- Helps body respond to stress
- Acts like an information signaling system
- The E.S. influences: Tissue fxs, metabolism, growth of cells

### Nervous/Endocrine Working Together

- Chemical msgs of sympathetic nerves cause release of hormones (cortisol and epinephrine) that trigger physiological changes
  - Accelerated heart rate/breathing
  - Hearing/vision more acute
  - Liver releases extra sugar → Energy
  - Perspiration increases → cool skin
  - Brain releases endorphins (pain blockers)
- Flight or fight reaction

- Defense mechanism that prepares for conflict or escape by triggering hormonal, cardiovascular, metabolic, and other changes
- Homeostasis-body recovers
  - Parasympathetic division stops body's response

#### Emotional & Behavioral Responses to Stressors:

- Response to stressors varies from person to person
- Common emotional responses to stressors (we can often moderate or learn to control these)
  - Anxiety, depression, fear
  - Determined partly by personality and temperament
- Common behavioral responses to stressors (controlled by somatic nervous system)
  - Overeating, smoking, drinking, drugs (INEFFECTIVE)
  - Talking, laughing, exercising, etc (EFFECTIVE)

#### Personality and Stress

- Personality- the sum of behavioral, cognitive, and emotional tendencies; effects how people perceive and react to stressors
- Personality types
  - Type A- controlling, schedule driven, competitive, hostile; higher perceived stress level
  - Type B- less hurried, less frustrated, contemplative, more tolerant
  - Type C- suppress anger, difficulty expressing emotions, feelings of hopelessness and despair, exaggerated response to stressors; heightened response may impair immune function
- Personality characteristics
  - Hardiness – form of optimism
    - View potential stressors as challenges to be overcome, opportunities for growth, not a burden
    - React less intensely to stress
    - Commit to tasks, have an internal locus of control (in charge of fate and can change things)
  - Resilience (3 types) – traits associated with social and academic success in at-risk populations (such as low-income families or those with disabilities); these people set goals and face adversity through individual effort
    - Nonreactive- person does not respond to a stressor
    - Homeostatic- person may respond strongly to a stressor, but returns quickly to normal functioning
    - Positive growth resiliency- person learns and grows from a stress experience

#### Emotional and Behavioral Responses to Stress

- Cultural background – harassment, violence, discrimination

- Experience – past experience can influence evaluation of potential stressor
- Gender- gender roles dictated by society

General Adaptation Syndrome Theory (G.A.S.) – universal/predictable response pattern to all stressors

- Eustress- stress triggered by a pleasant stressor, where stress enhances function
- Distress- stress triggered by an unpleasant stressor; persistent, unresolved stress
- **3 Stages** of G.A.S.:
  - alarm-occurs when surprised/threatened- immediate physical response (flight or fight); more susceptible to disease/injury in this stage because the body is geared up to deal with crisis; headaches, indigestion, anxiety, disrupted eating or sleep patterns
  - resistance- if cause of stress is not removed, it enter this stage. Taxes body's systems
  - exhaustion – when stressor persists; life threatening physical state

Links Between Stress and Specific Conditions

- cardiovascular disease
  - chronic high blood pressure
    - atherosclerosis-buildup of plaque in arteries
  - heart attack
  - stroke
    - people who react to situations with anger and hostility are more likely to experience heart attacks and strokes
- psychological problems
  - depression
  - panic attacks/anxiety
  - eating disorders
  - PTSD (post-traumatic stress disorder)
  - Increased PKC from stress can lead to a decrease in focus, judgment, and thinking
- Altered functioning of the immune system; increased vulnerability to:
  - Colds and other infections
  - Asthma and allergy attacks
  - Cancer
  - Chronic disease flare-ups (HIV and genital herpes)
- Other problems
  - Digestive problems
  - Headaches/migraines
  - Insomnia/fatigue
  - Injuries
  - Menstrual irregularities, impotence, pregnancy problems