

Stress and Health



RELAX. YOU'LL LIVE LONGER

15.1 What is stress?



- Event
- Response
- Perception
- Stress = anxious / threatening feeling resulting from appraisal of a situation and the reaction to demands
- Stressor = stress producing event / situation
- Stress reaction = body's response to a stressor

Two Types of Stress



- Hans Selye
- Distress = negative stress
- Eustress = positive stress
- Examples?
- Decide if the following are diss- or eustressing to you:
 - Caring for an infant
 - Dropping a 5' cliff on skis/snowboard
 - Fixing a vehicle
 - Preparing dinner
 - Cleaning your room
 - Walking the dog
 - Homework
 - Driving downtown
 - Christmas shopping
 - Listening to death metal

Perception of Stress



- Different situations are evaluated differently by different people!
- Primary appraisal = immediate evaluation of a situation
 - Resources to meet challenge/threat?
 - 1964 study—Tribal Rituals, 4 conditions
- Secondary appraisal = assessment of own coping mechanisms
 - High threat + low coping = substantial stress experienced

Conflict Situations Cause Stress



- Approach-approach conflict = choice between two attractive options
- Avoidance-avoidance conflict = choice between two unattractive options
- Approach-avoidance conflict = something that you want to do, but are reluctant or fearful about
- Double approach-avoidance conflict = choosing between three or more alternatives of varying attractiveness

Environmental Stressors



- **Examples:**
 - Noise
 - Crowding
 - Deadlines
- **Life Changes (p 417)**
- **Hassels**
 - Day to day, “minor” stressors
 - Add up
- **Uplifts**
 - Protective effect

15.2 Reactions to Stress



- What are some ways we react to stress (+ and -)
- Physiological responses
 - Inborn
 - Evolved to cope with stress effectively
- Some inborn/natural responses are not helpful anymore, difficult to change
- Psychological
- Behavioural
- All people react differently
 - Definition influences coping

Fight-or-Flight Response



Stress!



Arousal of sympathetic nervous system and endocrine system.



Mobilization of organism to attack stress or flee from it.

Fight-or-Flight Response



- **Adaptive**
 - Infrequent, for life and death
 - Gives organism burst of energy needed for survival.
- **Maladaptive**
 - In small doses, and consistent
 - Puts stress on heart
 - Hormone cortisol retains fat in abdomen and vital organs
 - Can be deadly

General Adaptation Syndrome



- Selye
- Three stages in stress response:
 - alarm, resistance, exhaustion
- 1. Alarm: fight-or-flight response engaged
 - Heart rate and breathing increase
 - Muscles tighten
 - Increased sensory alertness
 - Pupils dilate
 - Digestion slows

General Adaptation Syndrome



- **2. Resistance: coping with stressor**
 - Effective
 - Ineffective
 - Limited in time
- **3. Exhaustion**
 - Adrenal glands can't secrete hormones for fight-or-flight
 - Breaking point
 - Disoriented, delusional
 - Dangerous—extended arousal to the point of exhaustion can be fatal

General Adaptation Syndrome



- People react to different situations differently
- Coping mechanisms vary from person to person
- Endurance of stress varies
- Perceived control over the situation has a positive effect
 - Those who have (perceived) control over their stressors are less stressed
 - Those who have no (perceived) control over their stressors are effected more negatively

General Adaptation Syndrome



Alarm

- Mobilization of fight or flight response
- You constantly procrastinate and stress

Resistance

- Coping mechanism engaged
- Cram, pull all-nighters

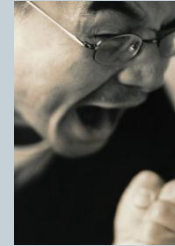
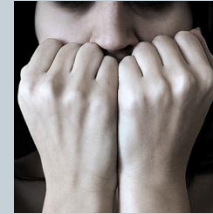
Exhaustion

- Endocrine system is “empty”
- Become physically ill, break down

Emotional Responses to Stress



- Anxiety: imminent but unclear threat
- Anger: results from frustration—failure of coping mechanisms/lack of perceived control
- Fear: when a stressor involves real danger
- Panic: extreme fear that inhibits the ability to act



Emotional Responses to Stress



- **Burnout:**
 - Incapable of doing a job properly
 - Input energy does not equal output gratification
- **Post-Traumatic Stress Disorder (PTSD)**
 - Result of long lasting, traumatic events
 - War, natural disasters, rape, assault
 - Triggers bring about fight-or-flight response
 - Psychosomatic symptoms

Cognitive Responses to Stress



- Difficulty concentrating
- Recurring thoughts
- Poor decision making
- Unjustified suspicion or distrust

Behavioural Reactions to Stress



Short Term

- Increased frequency of habits
- Fatigue
- Loss of interest in pleasurable activities
- Lack of attention to hygiene
- Aggression towards family and close friends

Long Term

- Alcoholism
- Drug addiction
- Chronic underemployment
- Attempted suicide
- Delinquency
- Criminal behaviour
- Aggressive personalities

Physical Reactions to Stress





Chronic stress /
ineffective coping
mechanisms

Psychosomatic
symptoms

Physical Reactions to Stress



- Psychosomatic symptoms are **real** symptoms of pain that are caused by stress or tension.
 - Headaches
 - Stomach aches
 - Muscle pain
- F-o-F response inappropriate for today's stressors—exam preparation?
- Those who give in to F-o-F instincts (in inappropriate situations) not as well adjusted or socially accepted

Physical Reactions to Stress



Prolonged arousal can lead to:

- Difficulty breathing
- Insomnia
- Migraine headaches
- Urinary and bowel irregularities
- Muscle aches
- Sweating
- Dryness of mouth
- Peptic ulcers
- Hypertension
- Types of arthritis
- Asthma
- Heart disease
- Suppression of immune system

Personality Differences in Stress Reactions



Type A personality:

- Impatient
- Excessively time-conscious
- Insecure
- Competitive
- Aggressive
- High-achievers
- Driven
- Productive
- Multi-taskers

Personality Differences in Stress Reactions



Type A Personality and Stress:

- Always in fight-or-flight arousal
- Undirected hostility
- Irritable with even minor delays/setbacks
- Impatient—hate waiting
- Must be busy all the time
- Some suggestions they are at higher risk of coronary heart disease

Personality Differences and Stress Reactions

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Less expressive
people

increased
risk of cancer

Perceived Control and Reactions to Stress



- JM Weiss \Rightarrow physical disorders \uparrow with \downarrow control over stressors.
- Rats stopping shock had fewer ulcers.
- Feedback after stopping shock further reduced ulcers.
- People (and rats) prefer controllable, predictable stress over uncontrollable, unpredictable stress.

Social Support and Reactions to Stress



- **Social support = belief that one is:**
 - Cared for
 - Loved
 - Respected
 - Part of a network of communication and mutual obligation
- **Documented benefits for:**
 - Cancer survivors
 - Crowding
 - Military combat
 - Natural disasters
 - Aids

Social Support and Reactions to Stress



Four kinds of support:

- Emotional:
 - Concerned listening, builds confidence
- Appraisal:
 - Interactive, feedback provided
- Informational:
 - Reacts to information, evaluates coping
- Instrumental:
 - Active: money, shelter, etc.