

# Chapter 7: Stress and Coping

Chapter themes covered:

What causes stress? Illness as a source of stress; Stress as a cause of illness; What are different types of stress? Biopsychosocial, individual, environmental sources of stress; What's cognitive coping? What's behavioral coping? Is high risk behavior a good form of coping?

# What causes stress?

- Everything!
- Stress is a subjective experience
  - (we will discuss appraisal later)
- What are some of your current stressors?
- Don't forget the LiveWell assignment due 3/19!

Two-way street:

- STRESS → ILLNESS
- (CHRONIC) ILLNESS → STRESS

# Different Types of Stress

- Daily life hassles
- Good stress (focus) vs. bad stress (fear)
- Microaggressions
- Catastrophic events and PTSD
  - Loosely related to high risk health behaviors
  - Comorbidity- meaning and relevance

# Microaggressions & Daily Hassles

## Examples of Racial Microaggressions

Theme	Microaggression	Message
<i>Alien in own land</i> When Asian Americans and Latino Americans are assumed to be foreign-born	"Where are you from?" "Where were you born?" "You speak good English." A person asking an Asian American to teach them words in their native language.	You are not American You are a foreigner
<i>Ascription of Intelligence</i> Assigning intelligence to a person of color on the basis of their race.	"You are a credit to your race." "You are so articulate." Asking an Asian person to help with a Math or Science problem.	People of color are generally not as intelligent as Whites. It is unusual for someone of your race to be intelligent. All Asians are intelligent and good in Math / Sciences.
<i>Color Blindness</i> Statements that indicate that a White person does not want to acknowledge race	"When I look at you, I don't see color." "America is a melting pot." "There is only one race, the human race."	Denying a person of color's racial / ethnic experiences. Assimilate / acculturate to the dominant culture. Denying the individual as a racial / cultural being.
<i>Criminality – assumption of criminal status</i> A person of color is presumed to be dangerous, criminal, or deviant on the basis of their race.	A White man or woman clutching their purse or checking their wallet as a Black or Latino approaches or passes. A store owner following a customer of color around the store. A White person waits to ride the next elevator when a person of color is on it.	You are a criminal. You are going to steal / You are poor / You do not belong / You are dangerous.

## A Version of the Hassles Scale (Uplifts Omitted)

The following table presents a series of hassles that college students commonly found irritating. Indicate how often each item irritates you by entering in the space preceding it one of three numbers: 0 = "almost never", 5 = "sometimes" and 10 = "Frequently"

Once you have completed the table, total your score. If it is 270 or more it is higher than average, whilst a score of 40 or below is very low.

0 5 10 Missing the bus	0 5 10 Other students are unfriendly
0 5 10 Conflicts between job and college	0 5 10 Getting to class on time
0 5 10 Library too noisy	0 5 10 Car problems
0 5 10 Housemate too noisy	0 5 10 Quality of meals
0 5 10 Preparing meals	0 5 10 Future plans
0 5 10 Too little time	0 5 10 Relationships at work
0 5 10 Too little money	0 5 10 Tensions in love relationship
0 5 10 Deciding what to wear	0 5 10 Conflict with family
0 5 10 Laundry	0 5 10 Crowds
0 5 10 Materials unavailable in library	0 5 10 Other drivers
0 5 10 Getting up in the morning	0 5 10 Catching up on missed work
0 5 10 My weight	0 5 10 No mail
0 5 10 Not enough time to exercise	0 5 10 Being lonely
0 5 10 Noisy neighbours	0 5 10 Being unorganised
0 5 10 Conflicts with housemate	0 5 10 Others opinions of me
0 5 10 Teacher not available to help	0 5 10 Housemate's messiness
0 5 10 Boring teacher	0 5 10 Problems with own or roommate's pet
0 5 10 Constant pressures of studying	0 5 10 Too little sleep
0 5 10 Teacher difficult to understand	0 5 10 Shopping
0 5 10 Not enough close friends	0 5 10 Tests and exams
0 5 10 Not enough time to talk with friends	0 5 10 Writing essays
0 5 10 Too few dates	0 5 10 Household chores
0 5 10 Room temperatures	0 5 10 Fixing my hair in the morning
0 5 10 How I look	0 5 10 Physical safety after dark
0 5 10 Too little intimacy	

# Biopsychosocial, Individual, and Environmental Sources of Stress

- Biopsychosocial
  - Diathesis-Stress model of disease
  - E.g., schizophrenia, depression, alcoholism
- Individual
  - Personality type
  - E.g., Type A, Type D
- Environmental
  - Psychosocial events  
E.g., illness of loved one, death of loved one, suicide, poverty, workplace responsibilities

# COPING: Cognitive Coping

- COPING= What we do (our response) in the presence of stress
- Cognitive coping= what we think in the presence of stress
- Engagement (obtain information) or Disengagement (minimize discomfort)
  - These terms can describe both cognitive and behavioral coping
- Two types of **Cognitive Coping**:
  - Problem-focused
  - Emotion focused

# COPING: Behavioral Coping

- Exercise and stress
- Music (interesting one!)
- Humor
- Social support (buffering)
- Spirituality/religion/traditions

# Stress can lead to high risk behavior...

- This is a form of behavioral coping...poor behavioral coping
  - Stress and eating
  - Stress and sleep deprivation
  - Sexual behaviors (escape)
  - Substance abuse (escape)

# Positivity and Stress

- Stress can be positive (focus)
- Positive attitude can reduce perceptions of stress
- More positivity than stress is a form of illness prevention
- How stressed are you? (LIVEWELL ASSIGNMENT)
- Patients Voices:

As a class let's assess both the sources of stress and coping mechanisms displayed in these Patient's Voices of people living with HIV/AIDS

ASSIGNMENT: Read Ahead! Chapter 8– post questions for next guest lecturer by FRIDAY! (3/20/15)

# Stress: Definitions and Theories

How do we define stress? How do we appraise stress? What are the three theories of stress? What can animal-studies tell us about our stress?

# Stress

- Stressful stimulus: An external event that provokes a response
- Stressful response: Physical or emotional reaction to stimulus
  - 1) Acute time-limited stressors
  - 2) Brief naturalistic stressors
  - 3) Stressful event sequences
  - 4) Chronic stress (daily stressor build-up)
  - 5) Distal stressors

# Example of Distal Stressors

- Passing on Experience of Trauma to Offspring
- Study: In Black Men, Internalized Racism Speeds Up Aging

# Stress Appraisal

## Cognitive Appraisal

(how we make sense of events and deem them as stressful or not)

- A) Primary Appraisal
  - Initial thought: is this event harmful or not?
- B) Secondary Appraisal
  - Determination of resources: do I have what it takes to cope?
- C) Cognitive reappraisal
  - Reappraising as the event continues/develops

Stressfulness depends on our perceptions (open to interpretation)

The same situation may be appraised differently based on mood, health, motivation, presence of others, etc.

# Systems Involved...

## 1. Somatic Nervous System (aka skeletal nervous system)



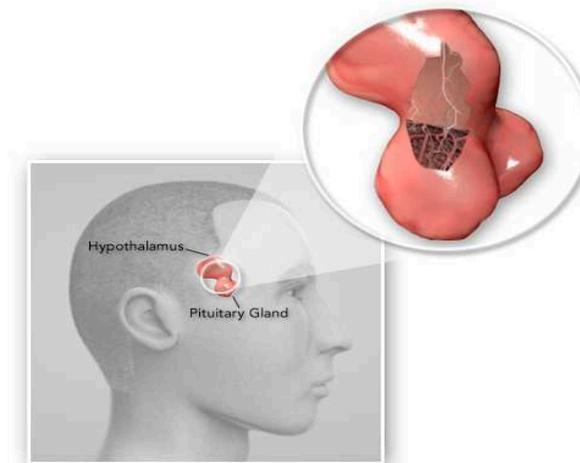
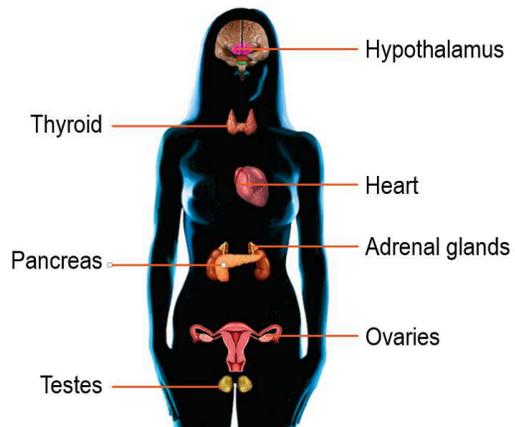
## 2. Autonomic Nervous System (controls glands and organs)

Sympathetic  
Division

Parasympathetic  
Division



## The Endocrine System



Specialized nerve cells descend down from the hypothalamus into the pituitary gland.  
*Illustration not drawn to scale.*

# Fight or Flight Response

PARASYMPATHETIC SYSTEM	BRAIN	SYMPATHETIC SYSTEM
Constricts pupils	vs.	Dilates pupils
Stimulates flow of saliva	vs.	Inhibits flow of saliva
Slows heartbeat	vs.	Accelerates heartbeat
Constricts bronchi	vs.	Dilates bronchi
Stimulates stomach motility and secretion and stimulates pancreas	vs.	Inhibits motility and secretion and inhibits pancreas
Contracts bladder	vs.	Inhibits bladder contractions
Stimulates erection	vs.	Stimulates ejaculation
	vs.	Conversion of glycogen to glucose
	vs.	Secretion of adrenaline and noradrenaline

# Stress Response: All the Players

- Stressors activate the immune system (within minutes <hour)
- Hypothalamus: leader of the stress response
- Adrenal gland secretes epinephrine and norepinephrine (FIRST RESPONDERS) as instructed by Hypothalamus
- Hypothalamus secretes corticotrophin-releasing hormone (Stress hormone: CRH)
- CRH tells neighbor (pituitary gland) to secrete adrenocorticotrophic hormone (ACTH)
- ACTH signals the release of glucocorticoids (LONG TERM RESPONDERS)
- Glucocorticoids relate to decreases in lymphocytes (one of the two types of cells in body's immune system)
  - Lymphocytes help attack foreign organisms (viruses, bacteria) in the body, so a decrease is seen as bad.

# Stress, the Immune System, and Disease: Glucorticoids and Lymphocytes (The Benefits of Animal Studies)

- Altering immune functioning can happen 2 ways:
  - Chronic Stress → reduction of white blood cells (lymphocytes) and poor/supressed immune system
  - Acute stress → redistribution of white blood cells (lymphocytes go elsewhere, specifically skin) results in overactive immune system

If chronic stress is not permanent, then eventually body's immune system will return to normal. (Same for repeated acute stressors)

Problems (diseases) occur when...

- a) Chronic stress remains
- b) Glucorticoid level remains high (decreasing lymphocytes)
- c) The sympathetic nervous system remains activated

# Stress and Disease

- Overactive Immune System → body may attack its own tissues, causing an allergic reaction or diseases such as Lupus, Multiple Sclerosis, or Rheumatoid Arthritis (all chronic)
- Underactive/supressed Immune System → promote bacterial infection, eruption of dormant virus, or reproduction of cancer cells

## **Looking ahead....**

- HIV/AIDS: Stress and negative emotions speed the transition from HIV to AIDS
- Stress predicts a faster decline in those living with AIDS
- Education, support groups, and effective coping mechanisms are an important part to treating the disease(s)