Chapter 11

Stress and Health
Health and Stress

• **Psychoneuroimmunology** – The study of the effects of psychological factors such as stress, emotion, thoughts, and behaviors on the immune system.

• **Stress** – The physical, emotional, cognitive and behavioral responses to events that are appraised as threatening or challenging.

• **Stressors** – The events that causes a stress reaction

• **Distress** – The effect of unpleasant and undesirable stressors.

• **Eustress** – The effect of positive events, or the optimal amount of stress that people need to promote health and well being.

• **Catastrophe** – an unpredictable large scale event that creates a tremendous need to adapt and adjust as well as overwhelming feelings of threat. *(Wars, Katrina)*
Major Life Changes

- **Social Readjustment Rating Scale (SRRS)**
  - Assesses the stress in a person’s life over a 1 year period.

- **College Undergraduate Stress Scale (CUSS)**
  - Assesses the stress in a college student live over 1 year period

- **Hassles Scale** – The daily annoyances of everyday life.
  - misplace or losing things
  - troublesome neighbors
  
  Rate (0) no hassle to (3) extremely severe

Hassle varies by developmental stage
# Major Life Changes

Sample Items From the Social Readjustment Rating Scale (SRRS)

<table>
<thead>
<tr>
<th>MAJOR LIFE EVENT</th>
<th>LIFE CHANGE UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death of spouse</td>
<td>100</td>
</tr>
<tr>
<td>Divorce</td>
<td>75</td>
</tr>
<tr>
<td>Marital separation</td>
<td>65</td>
</tr>
<tr>
<td>Jail term</td>
<td>63</td>
</tr>
<tr>
<td>Death of a close family member</td>
<td>63</td>
</tr>
<tr>
<td>Personal injury or illness</td>
<td>53</td>
</tr>
<tr>
<td>Marriage</td>
<td>50</td>
</tr>
<tr>
<td>Dismissal from work</td>
<td>47</td>
</tr>
<tr>
<td>Marital reconciliation</td>
<td>45</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>40</td>
</tr>
<tr>
<td>Death of close friend</td>
<td>37</td>
</tr>
<tr>
<td>Change to different line of work</td>
<td>36</td>
</tr>
<tr>
<td>Change in number of arguments with spouse</td>
<td>36</td>
</tr>
<tr>
<td>Major mortgage</td>
<td>31</td>
</tr>
<tr>
<td>Foreclosure of mortgage or loan</td>
<td>30</td>
</tr>
<tr>
<td>Begin or end school</td>
<td>26</td>
</tr>
<tr>
<td>Change in living conditions</td>
<td>25</td>
</tr>
<tr>
<td>Change in work hours or conditions</td>
<td>20</td>
</tr>
<tr>
<td>Change in residence/schools/recreation</td>
<td>19</td>
</tr>
<tr>
<td>Change in social activities</td>
<td>18</td>
</tr>
<tr>
<td>Small mortgage or loan</td>
<td>17</td>
</tr>
<tr>
<td>Vacation</td>
<td>13</td>
</tr>
<tr>
<td>Christmas</td>
<td>12</td>
</tr>
<tr>
<td>Minor violations of the law</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: Adapted and abridged from Holmes & Rahe (1967).
Major Life Changes

• Social Readjustment Rating Scale (SRRS)
  – www.stresstips.com/lifeevents.htm
  – Complete quiz is 43 events

• Scoring:
  – 150 or below – no significant problems
  – 150 -199 – mild life crisis
  – 300 – above – very high chance of becoming ill

• College Stress Test
  – http://highered.mcgraw-hill.com/sites/0073382736/student_view0/health_psychology/college_stress_test__/


## College Undergraduate Stress Scale (CUSS)

<table>
<thead>
<tr>
<th>EVENT</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being raped</td>
<td>100</td>
</tr>
<tr>
<td>Finding out that you are HIV-positive</td>
<td>100</td>
</tr>
<tr>
<td>Death of a close friend</td>
<td>97</td>
</tr>
<tr>
<td>Contracting a sexually transmitted infection (other than AIDS)</td>
<td>94</td>
</tr>
<tr>
<td>Concerns about being pregnant</td>
<td>91</td>
</tr>
<tr>
<td>Finals week</td>
<td>90</td>
</tr>
<tr>
<td>Oversleeping for an exam</td>
<td>89</td>
</tr>
<tr>
<td>Flunking a class</td>
<td>89</td>
</tr>
<tr>
<td>Having a boyfriend or girlfriend cheat on you</td>
<td>85</td>
</tr>
<tr>
<td>Financial difficulties</td>
<td>84</td>
</tr>
<tr>
<td>Writing a major term paper</td>
<td>83</td>
</tr>
<tr>
<td>Being caught cheating on a test</td>
<td>83</td>
</tr>
<tr>
<td>Two exams in one day</td>
<td>80</td>
</tr>
<tr>
<td>Getting married</td>
<td>76</td>
</tr>
<tr>
<td>Difficulties with parents</td>
<td>73</td>
</tr>
<tr>
<td>Talking in front of a class</td>
<td>72</td>
</tr>
<tr>
<td>Difficulties with a roommate</td>
<td>66</td>
</tr>
<tr>
<td>Job changes (applying, new job, work hassles)</td>
<td>65</td>
</tr>
<tr>
<td>A class you hate</td>
<td>62</td>
</tr>
<tr>
<td>Confrontations with professors</td>
<td>60</td>
</tr>
<tr>
<td>Maintaining a steady dating relationship</td>
<td>55</td>
</tr>
<tr>
<td>Commuting to campus or work, or both</td>
<td>54</td>
</tr>
<tr>
<td>Peer pressures</td>
<td>53</td>
</tr>
<tr>
<td>Being away from home for the first time</td>
<td>53</td>
</tr>
<tr>
<td>Getting straight A's</td>
<td>51</td>
</tr>
<tr>
<td>Fraternity or sorority rush</td>
<td>47</td>
</tr>
<tr>
<td>Falling asleep in class</td>
<td>40</td>
</tr>
</tbody>
</table>

Psychological Stressors: What Me Worry?

- **Pressure** – psychological experience produced by urgent demands or expectations for a person’s behavior.
- **Frustration** – psychological experience produced by the blocking of a desired goal or fulfillment of a perceived need.
  - Internal – want to be astronaut but gets car sick
  - External – losses, rejection, failure, delays
- **Uncontrollability** – degree of control over event or situation
  - + control = - stress
  - - control = + stress
- **Aggression** – an action meant to harm or destroy
- **Displaced aggression** – taking out one’s frustration on some less threatening or more available target
- **Escape or Withdrawal** – leaving the presence of stressor
  - Fantasy (psychological withdrawal)
  - Drug abuse
  - Apathy
Displacement or Withdrawal
Displacement

Father angry at boss

Who yells at wife

Yells at child

Who bites the father

Father kicks the dog

Who kicks the dog
Physiological Factors: Stress & Health

- **Fight or Flight**
- **Sympathetic nervous system**
  - Heart rate increases
  - Digestions slows or shuts down
  - Energy sent to the muscles
- **General Adaptation Syndrome (GAS)**
General Adaptation Syndrome (GAS)

1. **Alarm** – body first reacts to the stressor
2. **Resistance** – As stress continues the body settles into sympathetic division
3. **Exhaustion** – body’s resources are gone, exhaustion occurs.
Immune System & Stress

- **Immune system** – cells, organs and chemicals that responds to attacks from diseases, infections and injuries.

- **Psychoneuroimmunology** – The study of the effects of psychological factors such as stress, emotion, thoughts, and behaviors on the immune system.

Heart; Diabetes; Cancer

Natural Killer (KT) Cell – immune system cell responsible for suppressing viruses and destroying tumor cells.

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**Figure 11.3 Stress and Coronary Heart Disease**
Health Psychology

- Health Psychology – how physical activities, psychological traits & social relationships affect overall health and rate of illnesses.
Cognition, Personality and Stress

• Cognitive Factors in Stress

• Lazarus's Cognitive Appraisal Approach
  
  – **Primary Appraisal** – 1st step in assessing stress;
    Estimate the severity of stressor &
    Classifying is as either threat or a challenge
  
  – **Secondary Appraisal** – 2nd step is assessing a threat;
    Estimate resources for coping with threat
Potential stressor occurs

Primary appraisal
(How threatening is this event to my well-being?)

- Perceived as harmless or a challenge
  - No stress
- Perceived as potentially harmful
  - Biological reaction
  - Secondary appraisal
    (Do I have the resources to deal with the stressor?)
    - Emotional reaction

Weighing coping strategies

- Adequate resources perceived
  - Use of existing coping resources
- Inadequate resources perceived
  - Stress
    - Discovering new ways of responding or new resources
    - Remaining stressed
Personality Factors

- **Type A** – Ambitious, time conscious, extremely hard working, and tends to have high levels of hostility and anger as well as being easily annoyed

- **Type B** – Relaxed and laid-back, less driven and competitive than Type A and slow to anger

- **Type C** – Pleasant but repressed person, tend to internalize anger and anxiety and who finds expressing emotions difficult

- **The Hardy Personality** – Thrives on stress but lacks anger and hostility
Heart Disease and Personality

![Bar chart showing percentage of subjects with coronary heart disease and healthy men for Type A and Type B personalities.](image)
If Life gives you lemons,

• **Type A** people get enraged and throw the lemons back, having a minor heart attack while doing so.

• **Type B** people gather all the lemons and make lemonade.

• **Type C** people don’t say anything but fume inside where no one can see.

• **Type H** people gather the lemons, make lemonade, sell it, turn it into a franchise business, and make millions!
Optimists & Pessimists

- Optimists – people who expect positive outcomes
- Pessimists – people who expect negative outcomes

4 ways optimism many effect longevity

1. Optimists are less likely to develop learned helplessness.
2. Optimists are more likely to take care of their health.
3. Optimists are less likely to become depressed.
4. Optimists have more effectively functioning immune system.
Keeping Optimism

1. **Alternative thinking** – take bad things less personal
2. **Downward social comparison** – compare and feel better
3. **Relaxation** – improve mood

**How to become an optimist**

1. When a bad mood strikes; stop and think what you thought
2. When ID negative thought; distance as third person to resolve
3. Argue with those thoughts

**Example:**

1. “I’ll never finish this paper. It is too hard. I can’t do it”
2. These thoughts not helping
3. I can finish the paper. I need to find more time & structure time
Social Factors in Stress

Social factors that influence stress reaction:

1. Poverty
2. Job stress
3. Burnout – negative changes in thoughts, emotions and behavior as a result of prolonged stress or frustration

How Culture Affects Stress

- **Acculturative stress** – stress resulting from the need to change and adapt a person’s ways to the majority culture.

Positive benefits of Social Support

- **Social support system** – network of family, friend, neighbors, person coworkers and other who can offer support, comfort or aid to a person in need.
Coping with Stress

• **Coping strategies** – actions that people can take to alleviate stress
  
  – **Problem focused coping** – to eliminate the source of stressor
  
  – **Emotion focused coping** – change (emotional) impact of stressor
  
  – **Meditation** – mental series of exercised to refocus attention and achieve a trancelike state of consciousness
  
  – **Concentrative meditation** – focus mind on some repetitive or unchanging stimulus so that the mind can be cleared of disturbing thoughts and the body can experience relaxation.
  
  – **Receptive meditation** – to become aware of everything in immediate conscious experience or expansion of consciousness.

• **Effects of meditation** – if practice 20 minutes
  
  - lower blood pressure
  - less anxiety
  - increased ability to go to and stay asleep
Culture and Religion

- **Culture** – affect the appraisal of event & determine how to cope.

- **Religion/spirituality** – belief in a higher power can help relieve stress.
Exercising for Mental Health

• Release endorphins, dopamine, serotonin