CHAPTER 10
Understanding and Managing Responses to Stress

Introduction
• Definition of stress
• Stress responses and psychiatric disorders
• The interface between stress and all health alterations

Early Stress-Response Theories
• Walter Cannon
• Fight-or-flight response
  • Body prepares for situation that individual perceives as threat to survival
  • New research indicates that men and women have different neural responses to stress

Early Stress-Response Theories (Cont.)
• Hans Selye
  • General adaptation syndrome (GAS)
    • Three stages
      • Alarm or acute stress stage
      • Resistance or adaptation stage
      • Exhaustion stage
  • Psychological reactions (Lazarus)
    • Distress
    • Eustress

Case Study
Maggie, a college student, is experiencing stress in her life. “I don’t know what to do,” she says. “I mean, this is supposed to be this awesome, exciting time in my life—finally going to college. I love college. I love being a student. But honestly, trying to juggle my schoolwork, job responsibilities, and single parenting is starting to make me feel pulled in a million directions at once!”

What attributes can this student develop to manage the stress?
Case Study/Audience Response Questions
Which stage of GAS is Maggie most likely experiencing?
A. Alarm  
B. Resistance  
C. Exhaustion  
D. None of the above.

Neurotransmitter Stress Responses
• Serotonin synthesis more active
• May impair serotonin receptor sites and brain’s ability to use serotonin

Immune System Stress Responses
• Psychoneuroimmunological model (PNI)
  • Interaction between nervous system and immune system during alarm phase of GAS
  • Hypothalamic-pituitary-adrenal
  • Sympathetic-adrenal medullary axes
  • Proinflammatory cytokines
• Stress negatively affects body’s ability to produce protective factors
• Links among stress, the immune system, and disease

Reactions to Stress
<table>
<thead>
<tr>
<th>ACUTE</th>
<th>CHRONIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uneasiness</td>
<td>Anxiety, Panic Attacks</td>
</tr>
<tr>
<td>Sadness</td>
<td>Depression</td>
</tr>
<tr>
<td>Change in appetite</td>
<td>Anorexia, overeating</td>
</tr>
<tr>
<td>Immune system dysfunction</td>
<td>Opportunistic infections</td>
</tr>
</tbody>
</table>

Reactions to Stress (cont.)
<table>
<thead>
<tr>
<th>ACUTE</th>
<th>CHRONIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased metabolism</td>
<td>Insulin-resistant diabetes</td>
</tr>
<tr>
<td>Increased energy mobilization</td>
<td>Fatigue, irritability</td>
</tr>
<tr>
<td>Cardiovascular tone increase</td>
<td>Angina, heart attack, stroke, sudden death</td>
</tr>
</tbody>
</table>

Mediators of the Stress Response
• Stressors
  • Physical
  • Psychological
  • Perception
  • Individual temperament
• Social support
  • Support groups
  • Culture
  • Spirituality and religious beliefs
Audience Response Questions
Which reaction to stress is healthy?
A. Distress
B. Eustress
C. Stressor
D. None of the above.

Measuring the Stress Responses
- Measuring stress
  - Recent Life Changes Questionnaire (Table 10.3)
  - Measures level of positive and negative stressful life events over a 1-year period
  - Perceived Stress Scale (Figure 10.6)
  - Average score for males was 12.1 and females 13.7
    - More specific norms are in the PDF file included in the course materials (age, race, etc.)

Nursing Management of Stress Responses
- Assessing four coping styles
  - Health-sustaining habits
  - Life satisfactions
  - Social supports
  - Effective and healthy responses to stress

Case Study
As Maggie continues to develop ways to manage stress in her life she works at developing these four coping styles as much as possible. Already, the yoga class and lunch with her daughter has become an effective and healthy response to stress that is also health-sustaining.

In the area of social support, she relies not just on her sister but on a group of single-parent students she finds on campus who meet to share things that work for them.

Managing Stress Through Relaxation Techniques
- Deep breathing exercises (Box 10.2)
- Progressive muscle relaxation (Box 10.4)
- Cognitive reframing (Table 10.4)
- Meditation
  - Mindfulness (Box 10.5)
    - http://marc.ucla.edu/body.cfm?id=22
  - Guided imagery (Box 10.6)

Managing Stress Through Relaxation Techniques (Cont.)
- Biofeedback
- Physical exercise
- Cognitive reframing (Table 10-4)
- Journaling
- Humor
- Assertiveness training
More Effective Stress Busters

- Sleep
- Reduction or cessation of caffeine intake
- Music
- Pets
- Massage

Audience Response Questions

In general adaptation syndrome (GAS), which stage occurs first?

A. Alarm
B. Resistance
C. Exhaustion