

# Fit & Well

## Session V

### Stress Management; Substance Use and Abuse (Chapters 10 &13)

#### Stress

**The Collective physiological and emotional responses to any stimulus that disturbs an individual's homeostasis**

1. **Stressor** – Any physical or psychological event or condition that produces stress. The situation that triggers physical and emotional reactions.
2. **Stress Response** – The physiological changes associated with stress. Your reaction(s) to stress.

#### ✓ **Physical Responses to Stressors**

- **Actions of the Nervous System**
  - **Autonomic nervous system** – The branch of the peripheral nervous system that, largely without conscious thought, controls basic body processes; consists of the sympathetic and parasympathetic divisions. Examples; digestion, heart beat, breathing, blood pressure, etc....
  - **Parasympathetic division** – A division of the autonomic nervous system that moderates the excitatory effect of the sympathetic division, slowing metabolism and restoring energy supplies. Works mostly when you are at rest or resting.
  - **Sympathetic division** – A division of the autonomic nervous system that reacts to danger or other challenges by almost instantly accelerating body processes. Your body's reaction to pain, anger, or fear.
- **Actions of the Endocrine System**
  - **Endocrine system** – A system of glands, tissues, and cells that secrete hormones into the bloodstream to influence metabolism and other body processes.
  - **Hormones** – A chemical messenger produced in the body and transported in the bloodstream to target cells or organs for specific regulation of their activities.
  - Along with the nervous system with which it closely interacts, the endocrine system helps prepare the body to respond to a stressor.
- **The Two Systems Together**
  - When triggered, key hormones are released to cause profound physiological changes to your body.
    - Hearing and vision become more acute.
    - The heart rate accelerates to pump more oxygen through the body.
    - The liver releases extra sugar into the bloodstream to provide an energy boost.
    - Perspiration increases to cool the skin.
    - Endorphins are released to relieve pain in case of injury.
  - **Fight-or Flight Reaction** – All of these body reactions working together to provide you the heightened reflexes and strength you need to handle the situation or deal with the stressors.
- **Homeostasis** – A state of stability and consistency in an individual's physiological functioning. Once the stressful situation ends, the parasympathetic division takes command and halts the reaction to stress.

## ✓ Emotional and Behavioral Responses to Stressors

- **Effective and Ineffective Responses**
  - Somatic nervous system - controlled behavior responses to stressors
  - Effective responses are talking, laughing, exercising, meditating, learning time-management skills, and finding a more compatible partner.
  - Ineffective behavior responses are overeating, using tobacco, alcohol, and drug use.
- **Factors Influencing How We Respond to Stressors**
  - Temperament, health, life experiences, values, and coping skills.
  - Personality, the sum of emotional and behavioral tendencies, plays a role in enabling people to cope more or less successfully with stress.
    - Type A – Ultra-competitive, controlling, impatient, aggressive and hostile.
    - Hardy – View stressors as challenges and opportunities for growth and learning, rather than burdens.
    - See p. 301 for more personality and stress)

## ✓ Stress and Wellness

- **General Adaptation Syndrome (GAS)**

A universal and predictable response pattern to all stressors.

  - Biologist Hans Selye theory on stress and disease
    - **Alarm** – The complex sequence of events brought on by the activation of the sympathetic nervous system and the endocrine system, the fight-or-flight reaction. The body is more susceptible to disease or injury because it is geared up to deal with a crisis.
    - **Resistance** – A new level of homeostasis in which it is more resistance to disease and injury than normal. A person can then deal with normal life and added stress.
    - **Exhaustion** – When a stressor persists, or if several stressors occur in succession, general exhaustion results. A life-threatening type of physiological exhaustion characterized by such symptoms as distorted perceptions and disorganized thinking.
- **Allostatic Load**

The long-term wear and tear of the stress response.

  - When your allostatic load exceeds your ability to cope, you are more likely to get sick.
  - Linked health risks with high allostatic load are heart disease, high blood pressure, obesity, and reduced brain and immune system functioning.

## ✓ Links Between Stress and Specific Conditions

- **Cardiovascular Disease**
  - High blood pressure – due to stress response.
- **Altered Functioning of the Immune System**
  - Stress related changes in the immune system can cause you to be more susceptible to colds, and other infections.

## ✓ **Common Sources of Stress**

- Major Life Changes
- Daily Hassles
- College Stressors
- Job-Related Stressors
- Interpersonal and Social Stressors
- Other Stressors
  - Environmental such as noises, unpleasant smells, industrial accidents, violence, and natural disasters.

## **Managing Stress**

### ✓ **Social Support**

- People with strong social support were less distressed.
- Married couples live longer.

### ✓ **Communication**

- People who have good communicational skills deal better with stress.
- People who suppress their feelings and needs entirely are under more stress.

### ✓ **Exercise**

- People who exercise regularly react with milder physical stress responses and have a overall sense of well-being.

### ✓ **Nutrition**

- Healthy balanced diet will supply the energy needed to cope with stress.
- Limit or avoid caffeine.
- Avoid high-potency vitamin compounds and amino acid supplements.

### ✓ **Sleep**

- Lack of sleep or insufficient sleep deteriorates our mental and physical processes, causing a variety of problems.
- Adequate sleep improves mood, fosters feelings of competence and self worth. Supports optimal mental and emotional functioning.

### ✓ **Time Management**

- **Over-commitment, procrastination, and boredom are significant stressors.**
  - Set priorities
  - Schedule tasks for peak efficiency
  - Set realistic goals and write them down
  - Budget enough time
  - Break up long-term goals into short-term goals.
  - Visualize the achievement of your goals.
  - Keep track of the tasks you put off.
  - Consider doing your least-favorite tasks first.
  - Consolidate tasks when possible.
  - Identify quick transitional tasks.
  - Delegate responsibility
  - Say no when necessary
  - Give yourself a break
  - Stop thinking of talking about what you're going to do, and just do it.

- **Cognitive Techniques – ideas, beliefs, and perceptions.**
  - Modify expectations.
  - Monitor your self-talk. (Minimize the criticize)
  - Problem solve
  - Live in the present
  - Go with the flow
  - Laugh
  
- **Relaxation Techniques**

Relaxation response – is a physiological state characterized by a feeling of warmth and quiet mental alertness. (Opposite of the fight-or flight response)

  - **Progressive Relation**
    - Tense the muscle, then relax the muscle, one by one.
  - **Visualization**
    - Visualizing success or peaceful setting.
    - Very successful people practice visualization everyday.
  - **Deep Breathing**
    - Deep, slow breathing is associated with relaxation.
  - **Listening to Music**
    - Music has influences on pulse, blood pressure, and electrical activities of the muscles.
  
- **Other Techniques**
  - **Biofeedback**
    - Learning how to become more aware of your physiological arousal.
    - It requires the help of a therapist, stress counselor, or technician.
  - **Hypnosis / Self-hypnosis**
    - Can be used to correct eating disorders, help people stop smoking, alleviate cancer pain, and hasten recovery from surgery.
  - **Massage**
    - Manipulation of the body's tissues.
    - Subdues stress response, diminish depression, and increase alertness.
  
- **Counterproductive Coping Strategies**
  - **Tobacco**
    - Nicotine can make you feel relaxed and increase concentration.
    - Highly addictive and causes several health problems.
  - **Alcohol**
    - Temporarily feeling of at ease
    - Intoxication causes you to forget current stressors.
    - Increase risk of short-term and long-term illnesses.
  - **Other Drugs**
    - Altering your body chemistry in order to cope with stress.
  - **Binge Eating**
    - Feeling of satiation and sedation after eating produces a relaxed state that reduces stress.
    - Risky behavior associated with weight gain and eating disorders.

## **Substance Use and Abuse**

**Psychoactive Drugs** – Drugs that are designed to alter a person’s experiences or consciousness. Short-term intoxication.

**Intoxication** – a state in which, sometimes unpredictable, physical and emotional changes occur.

**Addictive Behavior** - Any habit that has gotten out of control, resulting in a negative impact on a person’s health.

### ✓ **What is Addiction?**

When the habitual use of a drug produced chemical changes in the user’s body, such as physical tolerance.

### ✓ **Characteristics of typically associated with addictive behavior.**

- **Reinforcement** – pleasurable physical and/or emotional states or relieves negative ones.
- **Compulsion or craving** – feels a compelling need to engage in the behavior.
- **Loss of control** – loses control over the behavior and cannot block the impulse to engage.
- **Escalation** – more and more of the substance is needed or required to produce the desired effects.
- **Negative consequences** – problems with academic or job performance, difficulties with personal relationships, or health problems.

### ✓ **Examples of Addictive Behaviors**

- Compulsive or Pathological Gambling
- Compulsive Buying or Shopping
- Internet Addiction

## **Psychoactive Drugs**

Legal compounds such as caffeine, tobacco, and alcohol as well as illegal substances such as heroin, cocaine and LSD are all psychoactive drugs.

### ✓ **Drug Abuse / Substance abuse**

- Recurrent drug use, resulting in a failure to fulfill major responsibilities at work, school, or home.
- Recurrent drug use in situations in which it is physically hazardous, such as before driving a car.
- Recurrent drug-related legal problems.
- Continued drug use despite persistent social or interpersonal problems caused by or exacerbated by the effects of the drug.

**Physical dependence may or may not be present.**

### ✓ **Drug Dependence / Substance dependence**

1. Developing tolerance to the substance.
2. Experiencing withdrawal
3. Taking substance in larger amounts or over a longer period than was originally intended.
4. Expressing a persistent desire to cut down on or regulate substance use.
5. Spending a great deal of time obtaining the substance using the substance, or recovering from its effects.
6. Giving up or reducing important school, work, or recreational activities because of substance use.
7. Continuing to use the substance in spite of recognizing that it is contributing to a psychological or physical problem.

✓ **Who Uses (and Abuses) Drugs**

- All income and education levels
- All ethnic groups
- All ages

**Characteristics that place people at higher-than-average risk**

- Male
- Young
- Frequent exposure to drugs through family, friends, and peers.
- People who have risk-taking personality.

**Treatment for Drug Abuse**

- No single best method of treatment, and the relapse rate is high for all types of treatment.
- However to be successful a treatment program must deal with the reason behind the drug abuse, and help develop behavior, attitude, and social support system.

**Signals of drug dependence**

- Sudden withdrawal or emotional distance
- Rebellious or unusually irritable behavior.
- Loss of interest in usual activities or hobbies.
- A decline in school performance.
- A sudden change in group of friends.
- Changes in sleeping or eating habits.
- Frequent borrowing of money.