

# Thinking About Psychology: The Science of Mind and Behavior 2e

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# Biopsychological Domain



# Stress and Health

## Chapter



# Module 12: Effects of Stress

## Stress

# Module 12

## Effects of Stress

# Stress

- The *process* by which we perceive and respond to certain *events*, called **stressors**, that we appraise as *threatening* or *challenging*
- Is a process of perceiving and responding
- The physical or psychological response is called a stress reaction.

# Health Psychology

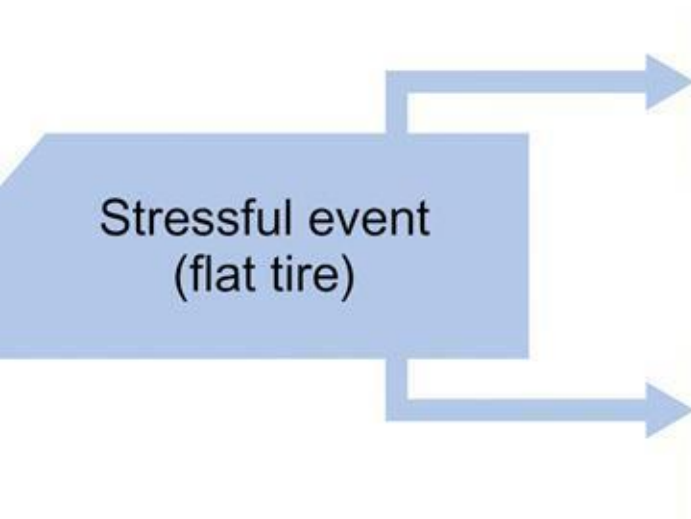
- A subfield of psychology that focuses on how stress affects our well being and health

## Module 12: Effects of Stress

# Stress: Responding to Stress



# Responding to Stress



Stressful event  
(flat tire)

The diagram consists of a light blue arrow pointing from the left towards the text. From the right side of the arrow, two separate light blue arrows branch out horizontally to the right, one above and one below the main arrow's path, representing two different responses to the event.

# Responding to Stress

## Appraisal

Stressful event  
(flat tire)

```
graph LR; A[Stressful event (flat tire)] --> B[Threat ("I'll never be able to fix this!")]; A --> C[Challenge ("I can handle this.")];
```

The diagram illustrates the appraisal process for a stressful event. It starts with a blue box on the left labeled "Stressful event (flat tire)". Two arrows branch out from this box to two green boxes on the right. The top green box is labeled "Threat ('I'll never be able to fix this!')" and the bottom green box is labeled "Challenge ('I can handle this.')." The word "Appraisal" is centered above these two boxes.

Threat  
("I'll never be  
able to fix this!")

Challenge  
("I can handle this.")

# Responding to Stress



# “Fight or Flight” Response

- Physiologist Walter Cannon found that a number of situations – from emotion-arousing incidents like a pop quiz to physically stressful conditions like extreme cold – trigger the release of stress hormones into the nervous system.
- Your nervous system, as part of its stress response, increases your heart rate, dulls your sensation to pain, and sends more blood to your larger muscles, preparing you either *to take action against the challenge* (fight) or *to flee from it* (flight)

# Hans Selye

(No, Hans *Selye*, not Han Solo!)



- Building on Cannon's work, Psychologist Hans Selye discovered a predictable, recurring response to all stressors that all people experience
- This response to stressors is so general in nature that Selye called it the *general adaptation syndrome* (GAS)

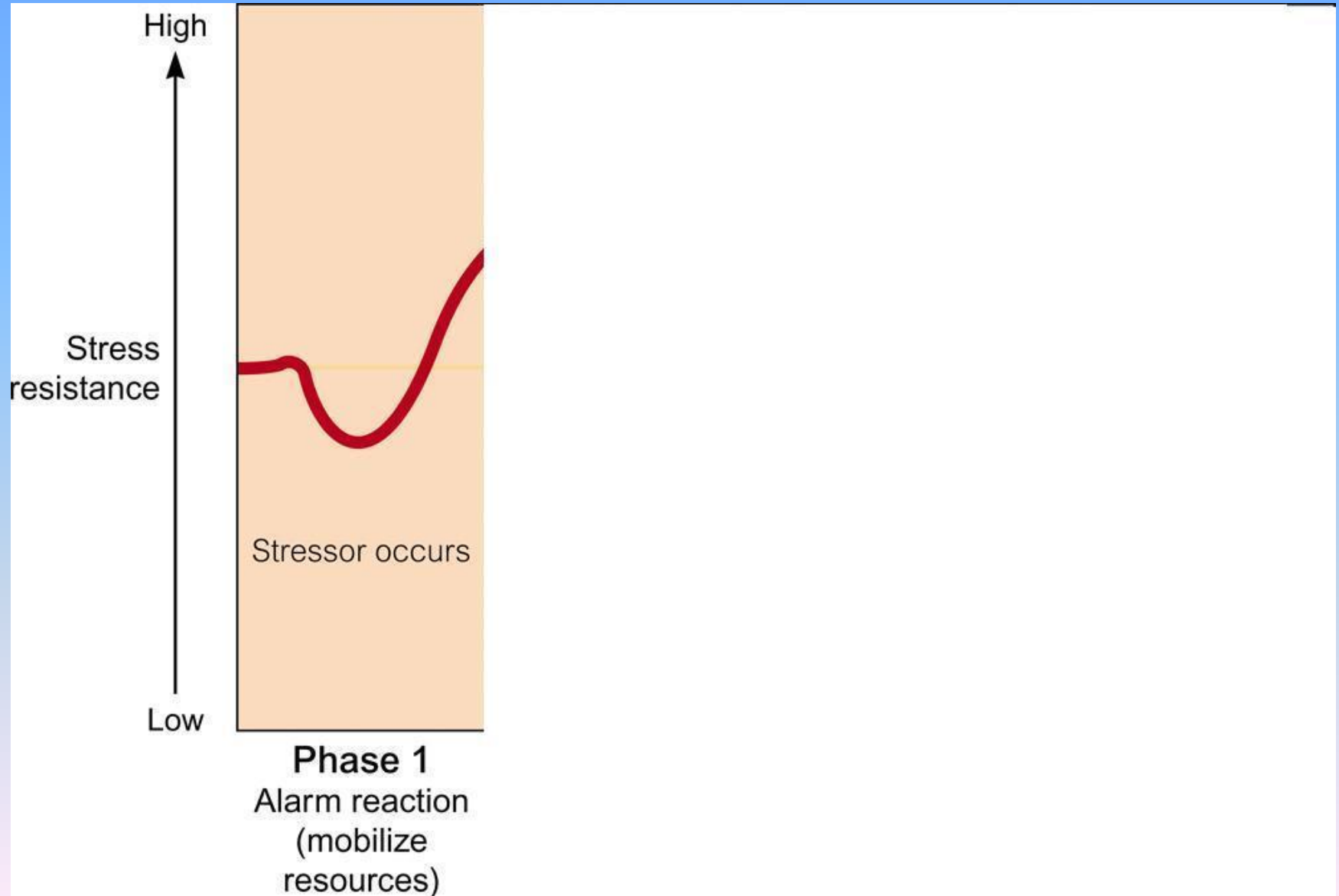
# General Adaptation Syndrome

- Selye's concept of the body's adaptive response to stress happens in three stages
  - Alarm
  - Resistance
  - Exhaustion

# General Adaptation Syndrome

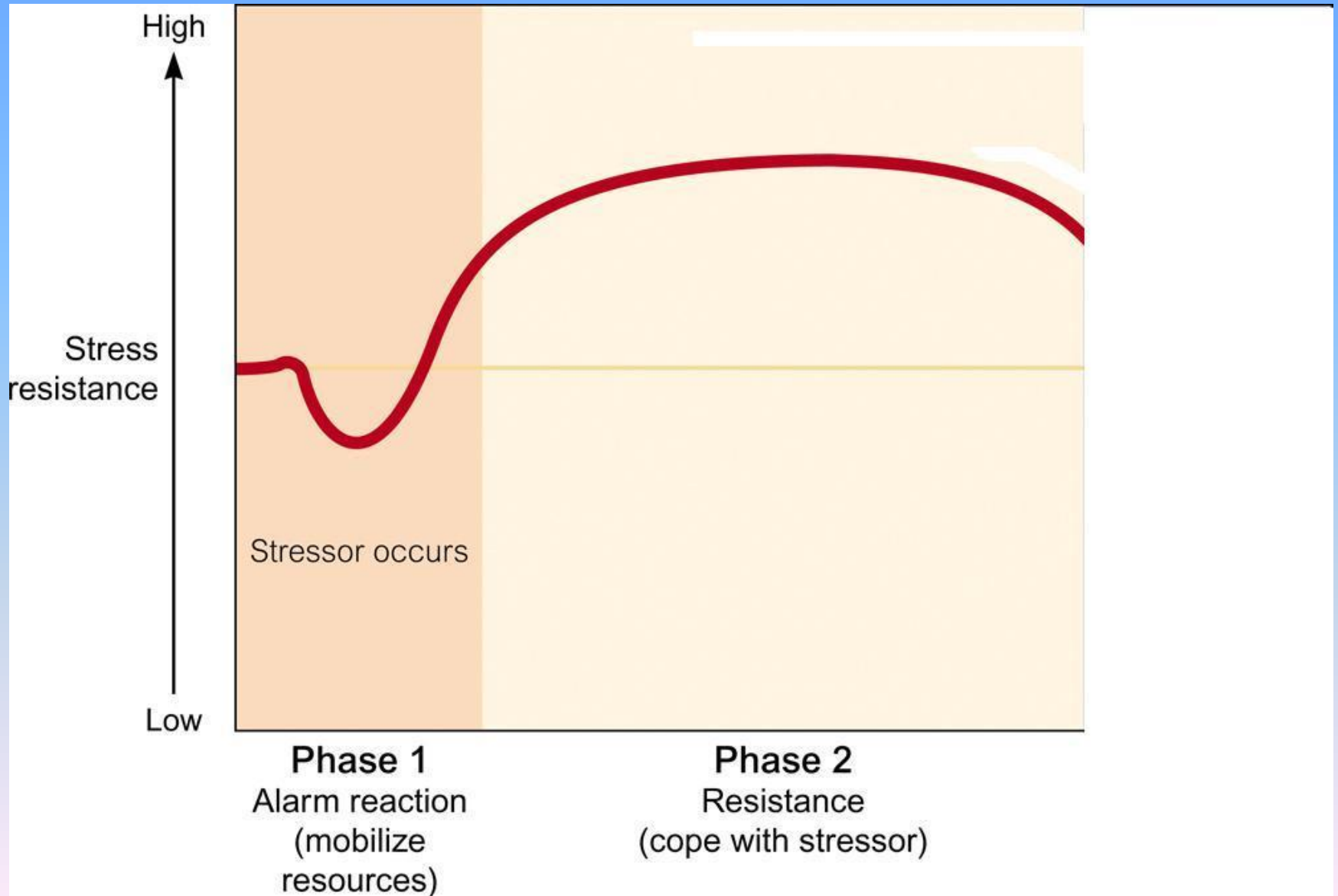
- **Alarm Reaction** – nervous system activated in response to stressor (fight-or-flight kicks in)
- **Resistance** – body responds with physiological reactions to cope with the stressor
- **Exhaustion** – body's resistance to stress is depleted (physical deterioration)

# General Adaptation Syndrome

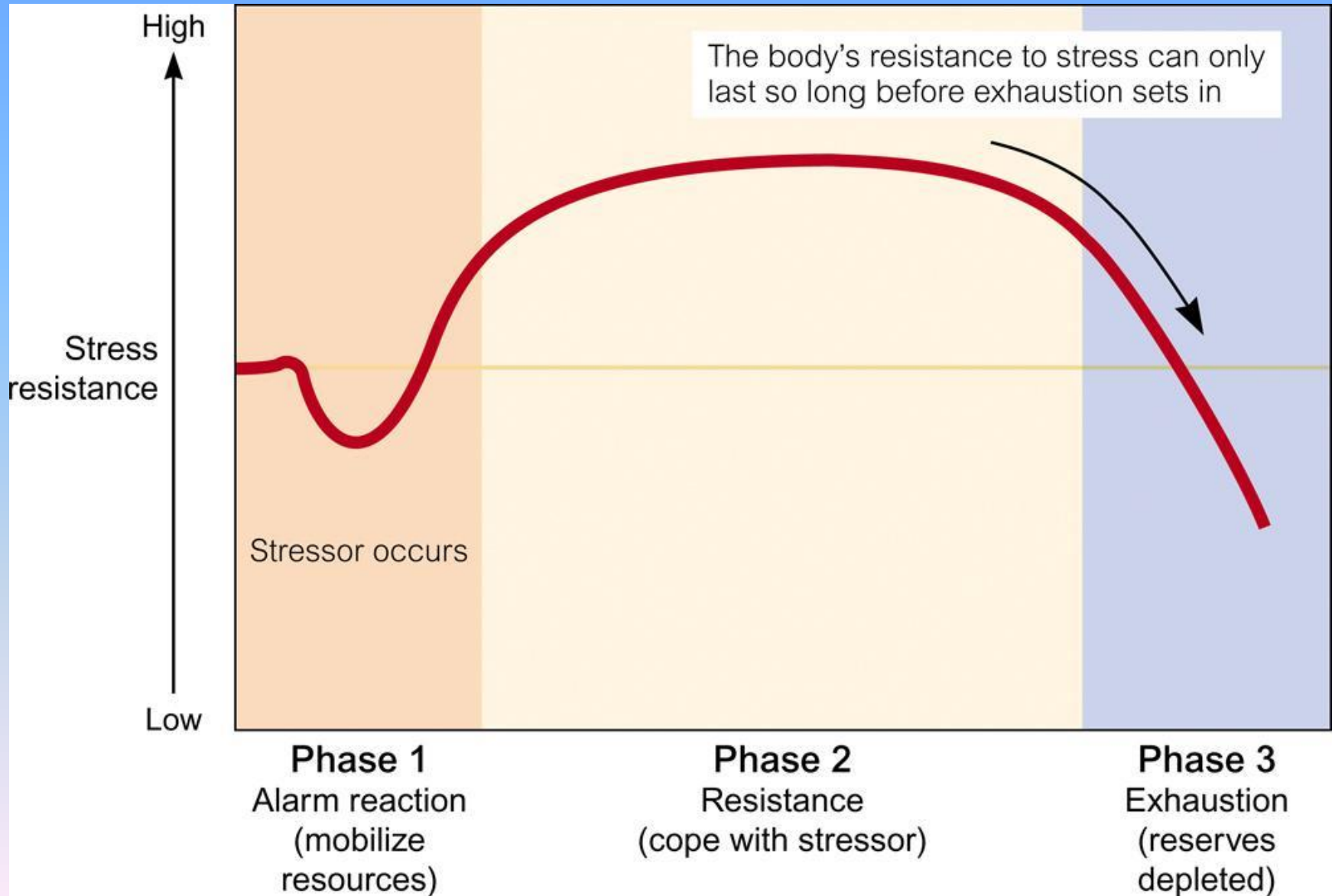




# General Adaptation Syndrome



# General Adaptation Syndrome



## Module 12: Effects of Stress

# Stress:

## 3 Types of Stressors

Daily Stress, Significant  
Changes, and Catastrophes

# Daily Stress



- Stress can be caused by:
  - Typical demands of the day
  - Living situations
  - Economic difficulties

# Burnout

- Physical, emotional, and mental exhaustion brought on by persistent job-related stress
- Common in police officers, teachers, and parents
- Burnout can result in:
  - Depression
  - Decreased performance
  - Cynicism

# Significant Life Changes

- Stress can be the result of personal life changes (bad *and* good)
  - Death of a loved one
  - Divorce
  - Leaving home for college
  - Having a baby
- Can result in health problems

# Catastrophes



- Large scale, relatively unpredictable, life threatening events like earthquakes, hurricanes, terrorist attacks, war, etc.
- Prolonged exposure can lead to physical and psychological problems (like heart attacks or depression)

## Module 12: Effects of Stress

# Effects of Perceived Control



# Perceived Control

- The sense of control or influence one has over stressful events in one's life
- Most studies suggest the lower the perceived control the larger the potential for health-related problems
- Lower perceived control leads to a lowered immunity to disease.

# Optimism

- A generally positive outlook on the future
- Optimists have stronger immune systems and recover faster from health problems.
- Opposite of pessimism

# Stress Hormones

- Hormones released in response to stress
- The body must work to rid the body of the stress hormones.
- Pessimism and perceived lack of control both produce more stress hormones.

## Module 12: Effects of Stress

# Stress and Disease: Cancer and Stress

# Stress-Cancer Connection

- Evidence for a connection is not conclusive.
- Two conclusions:
  - Stress does not create cancer cells.
  - Stress affects the body's malignancy-fighting ability.

## Module 12: Effects of Stress

# Stress and Disease: Stress and Heart Problems

# Type A

- Term for competitive, hard-driving, impatient, verbally aggressive, and anger-prone.
- More prone to heart attacks and other stress related illnesses.

# Type B

- Individuals who are easygoing, relaxed people



The End