

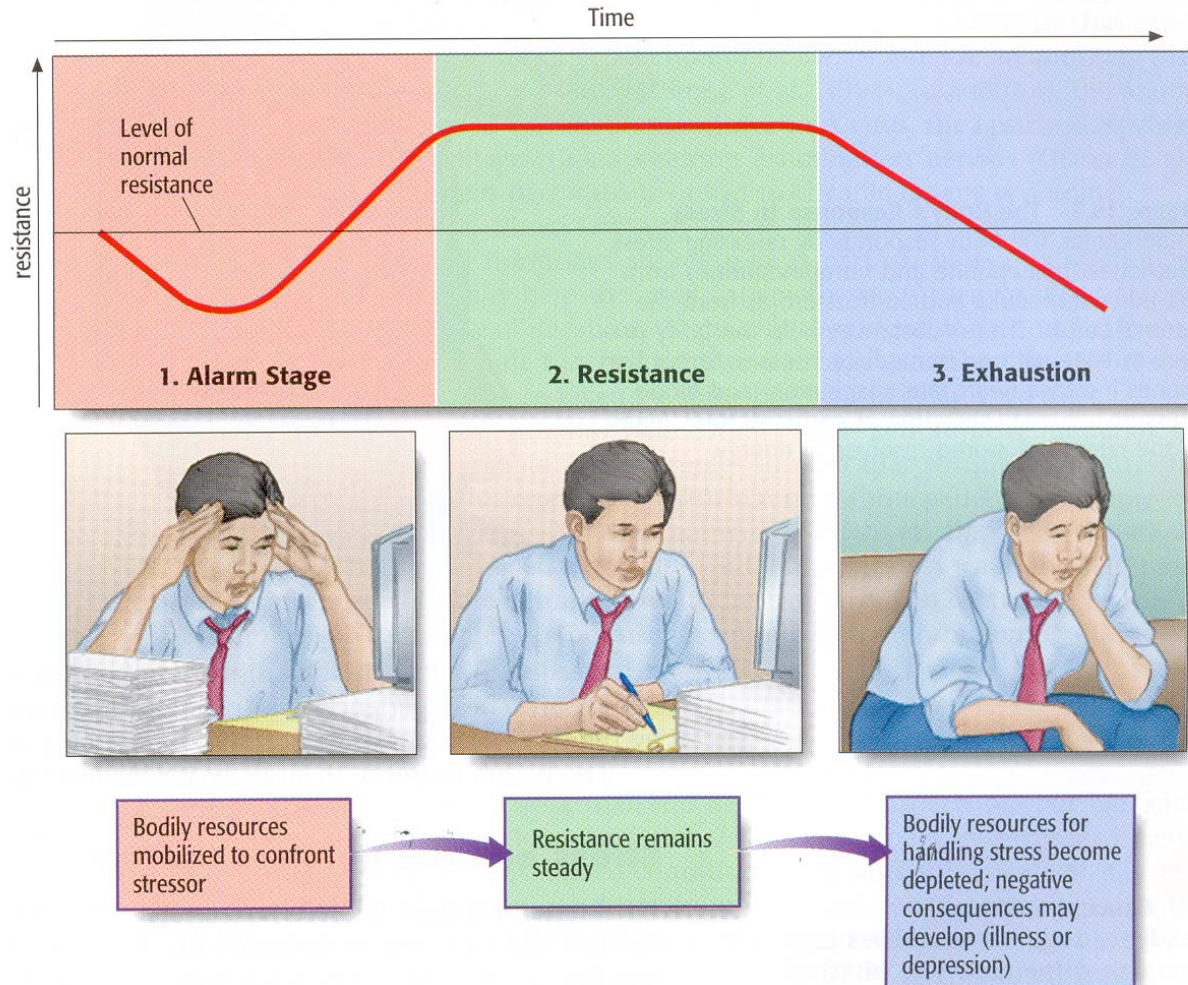
Physical Reactions to Stress

Stress isn't unique to humans. Other species, like this oil-covered survivor of Hurricane Katrina, also experience a physiological reaction in response to stressful situations.



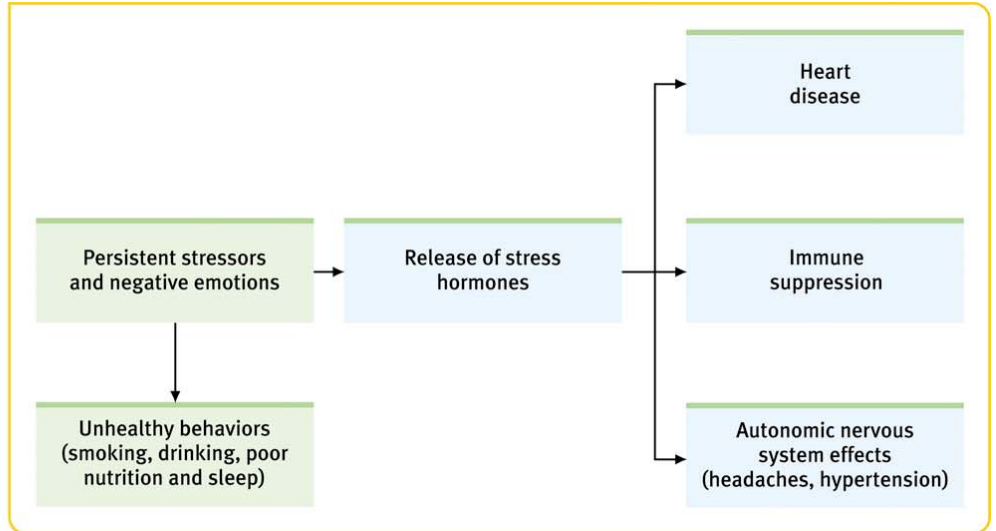
General Adaptation Syndrome

Figure 15.2 Level of Resistance During the Stages of the General Adaptation Syndrome
The body's resistance to stress first dips during the alarm stage, as the impact of the stressor takes a toll, but then increases as the body mobilizes its resources. Resistance remains steady through the resistance stage as the body attempts to cope with the stressor. But if the stressor persists, exhaustion eventually sets in as bodily reserves needed to resist stress become dangerously depleted.



Physical effects of stress

The effects of stress and health are subtle, which may make it difficult for us to perceive the effects.



Effects of Stress

| Indirect Effects of Stress | Direct effects of Stress |
|---|---|
| <ul style="list-style-type: none">• Stress may prompt behaviors that jeopardize physical well-being such as:<ul style="list-style-type: none">○ not eating properly○ not sleeping properlywhat are the physical effects of these two?• People under chronic stress are more likely to use alcohol, coffee, and cigarettes compared to those under less stress. • High levels of stress can interfere with cognitive abilities, such as<ul style="list-style-type: none">○ attention,○ concentration and○ memory.These can increase the likelihood of accidents, injuries, poor judgments and decisions. You are less likely to “connect the dots”, go with the option in front of you and less likely to think of options and/or evaluate options. | <ul style="list-style-type: none">• Stress can directly affect bodily functions such as contracting and tightening of muscles.• Weaken important body systems, lowering immunity and increase the susceptibility to physical symptoms and illness through the release of corticosteroids |

Stress Effects on the Immune Response

Stressors can cause stress hormones (e.g. cortisol) to be released which damage the immune system making you more susceptible to illness.

Those who were under stress were more likely to

- Have flare-ups of herpes simplex
- Worsen periodontal disease
- Reduce the effectiveness of vaccinations
- Have wounds heal more slowly
- Suffer colds

Stress and Cardiovascular Health

The heart and circulatory system are vulnerable to stress. Chronic stress changes the body that will increase the vulnerability to disease in the future .

As stress-activated arousal of the sympathetic nervous system, blood pressure goes up and stays up and slowly damages blood vessels. These damaged vessels accumulate plaque and increases the likelihood of coronary heart disease. .

Stress and Cardiovascular Health Type A Behavior Pattern

Type A consists of a cluster of three characteristics

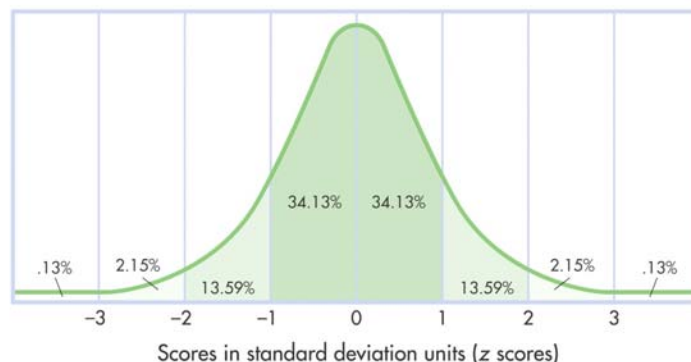
- An exaggerated sense of time urgency, often trying to do more in less time,
- intense ambition and competitiveness and
- a general sense of hostility, frequently displaying anger and irritation.

Type B

- More relaxed and laid back

Self-Evaluation: Which type do you tend to be?

| Type A | Type B |
|--|--|
| <ul style="list-style-type: none">• Very competitive• Always on the go• Hard driving• Demands perfection• Ambitious, wants quick promotions• Is a “workaholic”—even at play | <ul style="list-style-type: none">• Noncompetitive• Relaxed, in control• Easygoing• Understanding, forgiving• Confident and happy in job• Enjoys leisure and weekends |



Stress and Cardiovascular Health Type A Behavior Pattern



This basketball coach displays some Type A behaviors.

Type A personalities virtually guarantees that they will encounter many stressful situations such as time pressures of their own making and barriers that anger them.

What does the research in health psychology show with respect to differences in personality type (Type A versus Type B)?

- When 3,000 middle aged men were tracked for 8 years, those with a Type A personality were twice as likely to develop heart disease than Type B, even taking into account such risk factors as smoking, high blood pressure, and elevated levels of cholesterol.

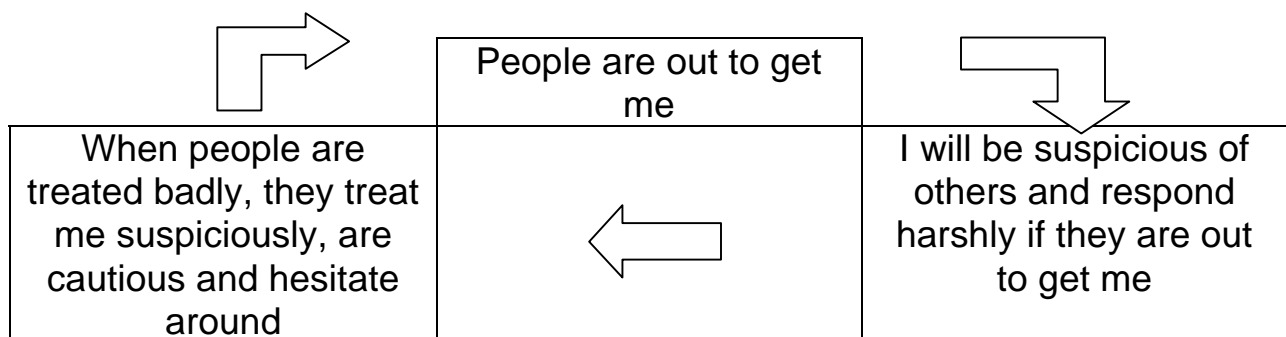
Type A people with high levels of competitiveness and ambition can foster aggressive behavior and hostility when things get in their way. However...

Researchers found that even within the Type A, there were differences. It was not the time urgency and being competitive that was a factor—it was the hostility.

Type A and Hostility

Hostility dimension: Hostility refers to the tendency to feel anger, annoyance, resentment and contempt and to hold negative beliefs about human nature in general.

- A cynical hostility marked by suspiciousness, resentment, frequent anger, distrust and antagonism seem important in the relation between personality and stress.
- Hostile people are also prone to believing that the disagreeable behavior of others is intentionally directed at them. Thus hostile people tend to be suspicious, mistrustful, cynical and pessimistic. (page 567, 568, Hockenbury)
 - Type A and Hostile personalities tend to alienate others and produce interpersonal stress and conflict which reduces the amount of social support the person has.
 - Because of their attitudes, they also create more stress in their life (a self-fulfilling prophecy, and perhaps a learned behavior). The experience more frequent and more severe, negative life events and daily hassles.



Hostility and Health

Hostile men were five times as likely to develop heart disease and seven times as likely to die by age 50 compared to non-hostile men.

Why does hostility predispose people to heart disease?

- Type A personalities tend to react more intensely to a stressor than other people do and take more time to recover.
 - They experience greater increases in blood pressure, heart rate and the production of stress related hormones.

Stress hormones elevated

| Sympathetic | |
|---------------------------------|----------------|
| Pupils dilated, dry, far vision | Eyes |
| Dry | Mouth |
| Goose bumps | Skin |
| Sweaty | Palms |
| Passages dilated | Lungs |
| Increased rate | Heart |
| Supply maximum to muscles | Blood |
| Increased activity | Adrenal glands |
| Inhibited | Digestion |

Less Hostile

| Sympathetic | |
|---------------------------------|----------------|
| Pupils dilated, dry; far vision | Eyes |
| Dry | Mouth |
| Goose bumps | Skin |
| Sweaty | Palms |
| Passages dilated | Lungs |
| Increased rate | Heart |
| Supply maximum to muscles | Blood |
| Increased activity | Adrenal glands |
| Inhibited | Digestion |

More Hostile

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