# Chapter 14 Test

Review slides

# Test questions/facts to know.

**1 1 What is the worst advice for a dieter?**

- **2 What fat signaling hormone was linked to obesity in mice?**
- **3 Smokers differ from non-smokers in a gene that influences responses to dopamine.**
- **4. What are the rewarding consequences of smoking?**

- **5 What did Ader and Cohen discover about taste aversion in rats?**
- **6 What is stress appraisal?**
- **7 What chemicals increase the build up of plaque?**
- **8 What is the important of social support in coping with stress?**

**9. What is released into the bloodstream during the fight or flight response?**

- **10. How did Ader and Cohen condition rats to weaken their immune system?**
- **11 What is emotion-focused coping?**
- **12 How does social support help leukemia victims?**
- **13 What is the Type A personality?**

**14 What influences the number of fat cells in your body?**

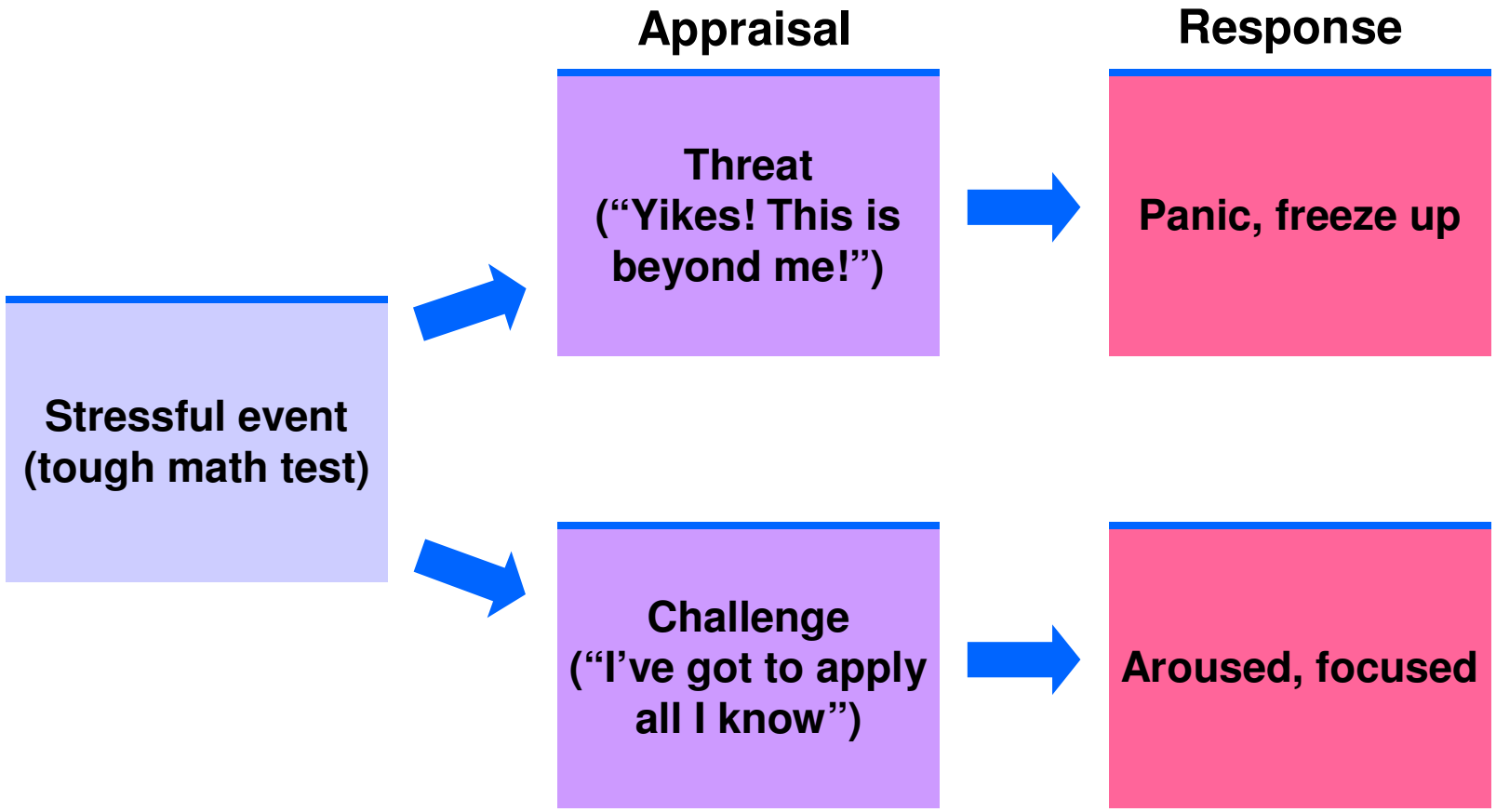
- **15 What is the best advice for losing weight?**
- **16 What does research say about fat cells?**
- **17 How effective are smoke cessation programs?**
- **18 In what ways does faith help people remain healthy?**

  **19 How does stress affect the body?**

- **20 How do stress hormones affect your arteries?**
- **21 What is the leading cause of death in the U.S.?**
- **22 What happens to people after a catastrophe?**
- **23 What are the best ways to deal with a stressful environment?**

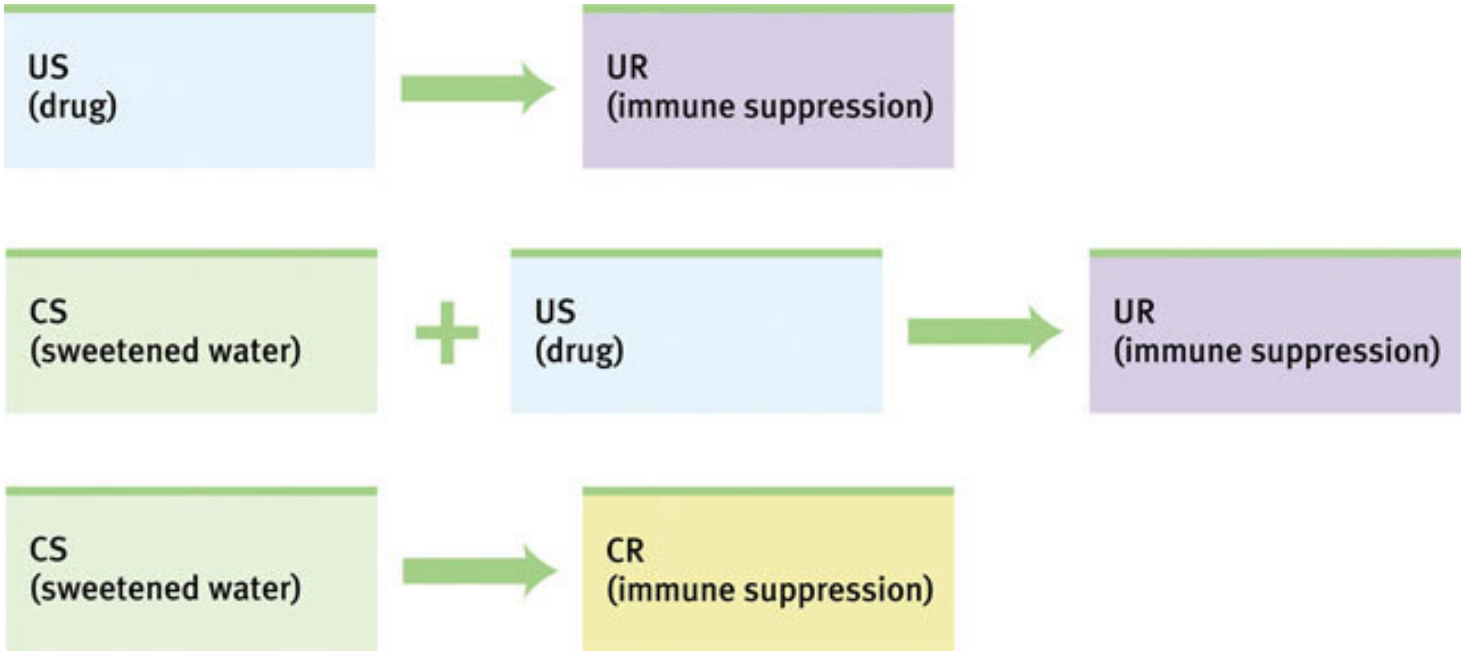
**24 What is the best advice on minimizing the affects of stress on your life?**

# Stress Appraisal



# Stress and Immune Conditioning, 560

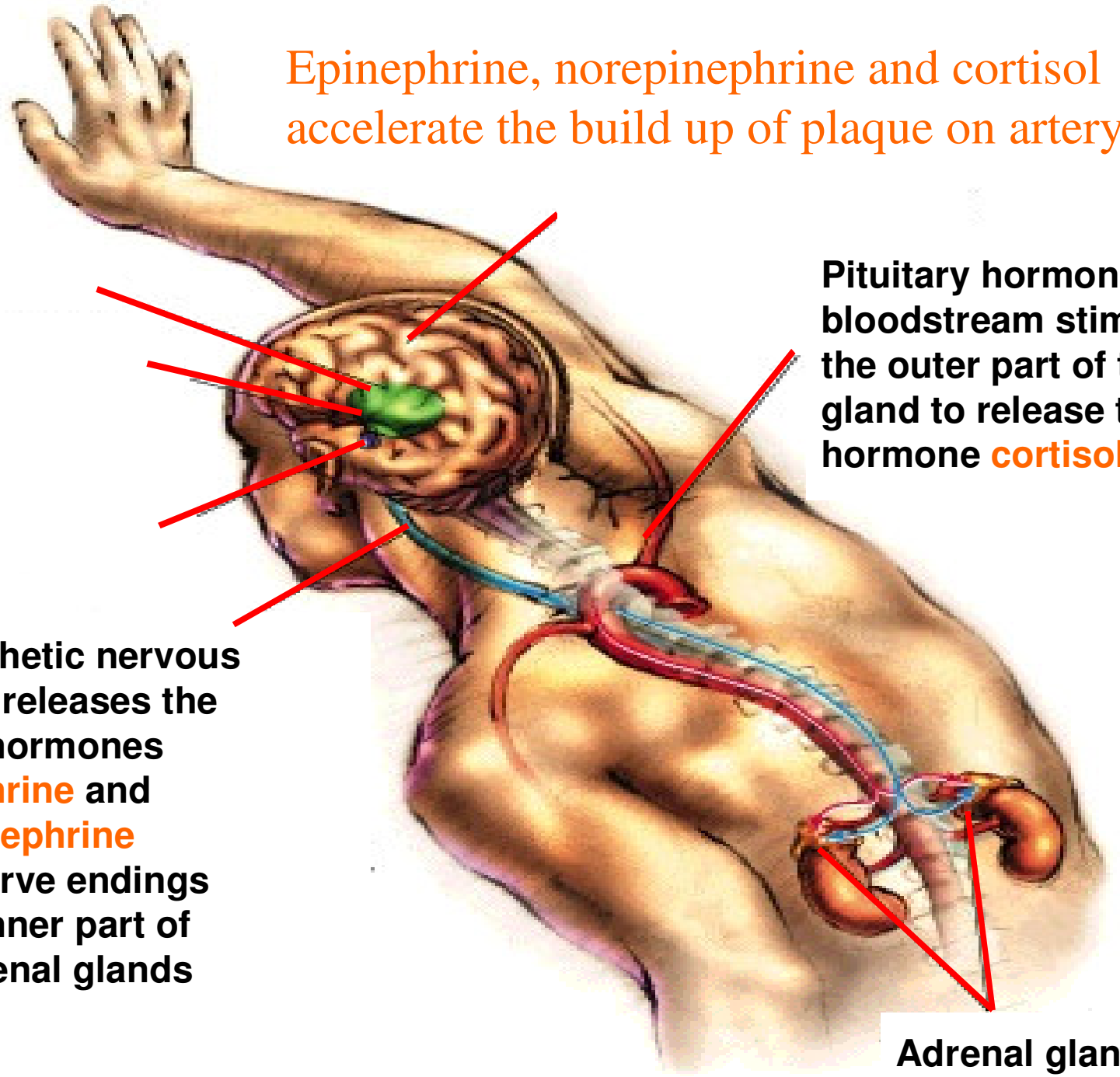
If the immune system can be suppressed through conditioning, researchers believe that immune-enhancing responses can be inculcated to combat viral diseases.



# Catastrophic Events, 553

Catastrophic events like  earthquakes, combat stress, and floods lead individuals to become depressed, sleepless, and anxious.

# Epinephrine, norepinephrine and cortisol accelerate the build up of plaque on artery walls



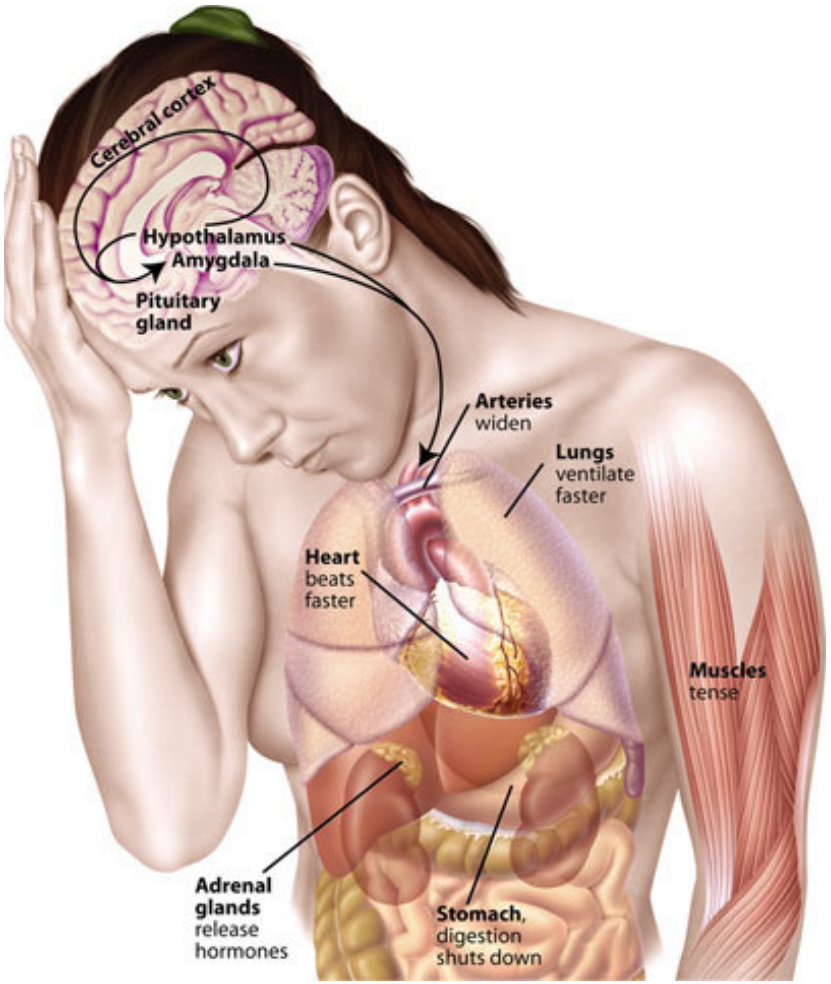
**Pituitary hormone in the bloodstream stimulates the outer part of the adrenal gland to release the stress hormone cortisol**

**Sympathetic nervous system releases the stress hormones epinephrine and norepinephrine from nerve endings in the inner part of the adrenal glands**

**Adrenal glands**

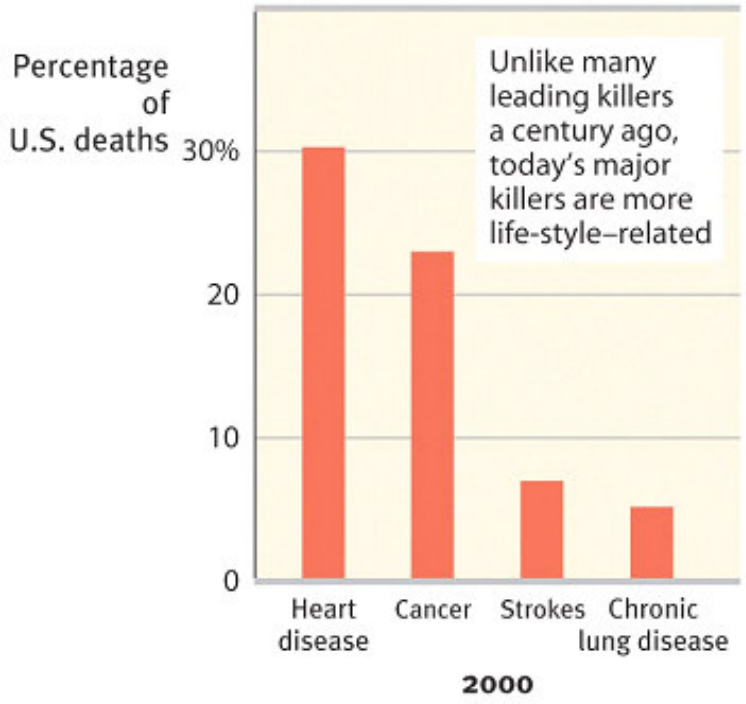
# The Stress Response System

Cannon proposed that the stress response (fast) was a fight-or-flight response marked by the outpouring of *epinephrine* and *norepinephrine* from the inner adrenal glands, increasing heart and respiration rates, mobilizing sugar and fat, and dulling pain.



# Stress and Causes of Death

Prolonged stress combined with unhealthy behaviors may increase our risk for one of today's four leading diseases. 550



# Type A v. Type B personalities

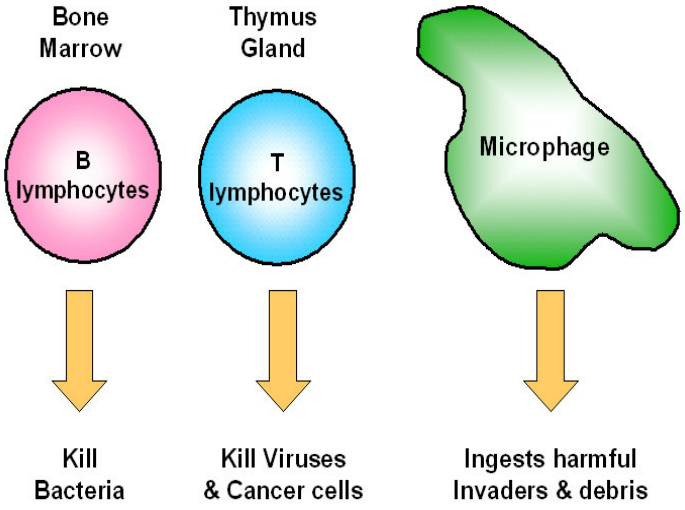
Type A is a term used for competitive, hard-driving, impatient, verbally aggressive, and anger-prone people.

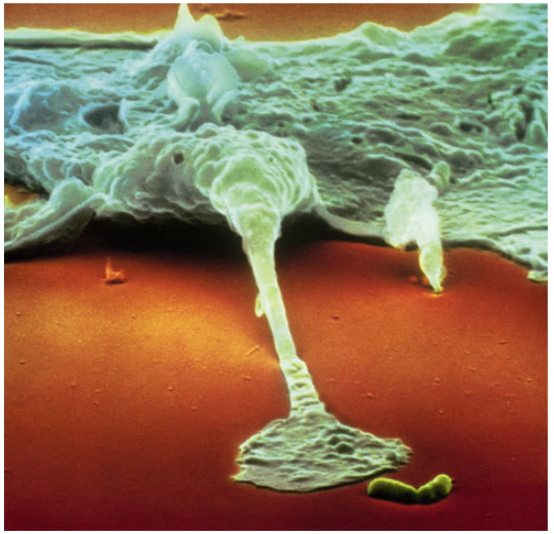
Type B refers to easygoing, relaxed people (Friedman and Rosenman, 1974).

See page 555 for more

# Stress and the Immune System, 557

B lymphocytes fight bacterial infections, T lymphocytes attack cancer cells and viruses, and microphages ingest foreign substances. During stress, energy is mobilized away from the immune system making it vulnerable.



Lennart Nilsson/ Boehringer Ingelhein International GmbH

# Conditioning Rats, 559

*a. Ader and Cohen*

b. Rats can be conditioned to suppress their immune system

*see fig. 14.9 p. 560 (next slide)*

c. *Saccharine water was conditioned stimulus that suppressed the immune system*

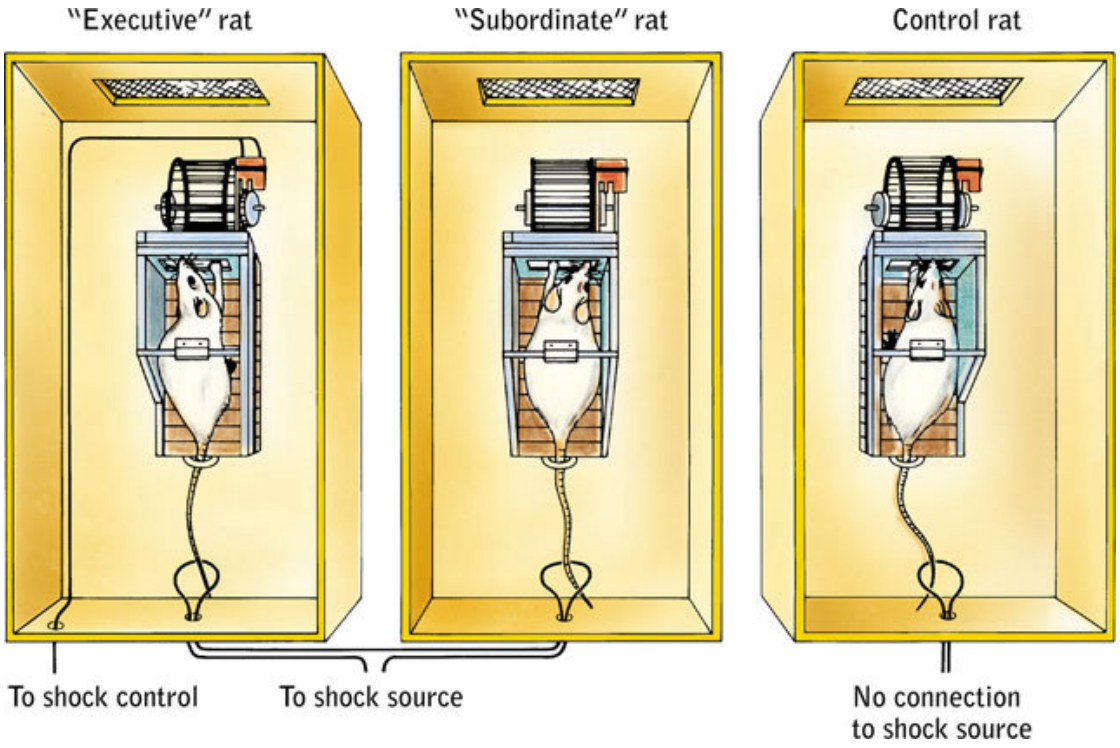
# Types of Coping with Stress, 562

1. Reducing stress by changing events that cause stress or by changing how we react to stress is called problem-focused coping.

2. Emotion-focused coping is when we cannot change a stressful situation, and we respond by attending to our own emotional needs.

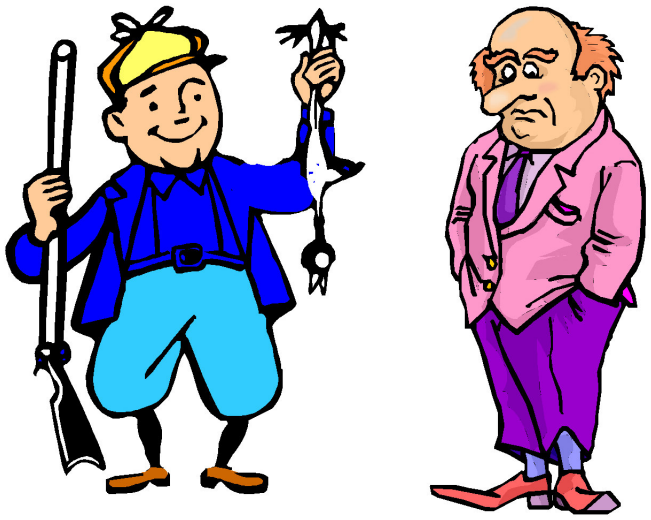
# Perceived Control, 563

Research with rats and humans indicates that the absence of control over stressors is a predictor of health problems.



# Explanatory Style, 563-4

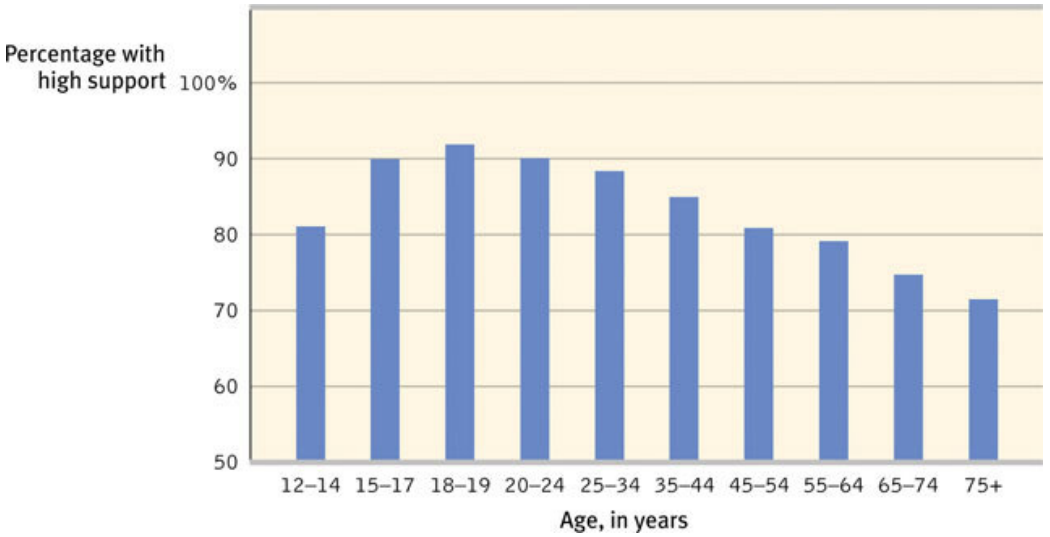
People with an optimistic (instead of pessimistic) explanatory style tend to have more control over stressors, cope better with stressful events, have better moods, and have a stronger immune system.



# Social Support, 564

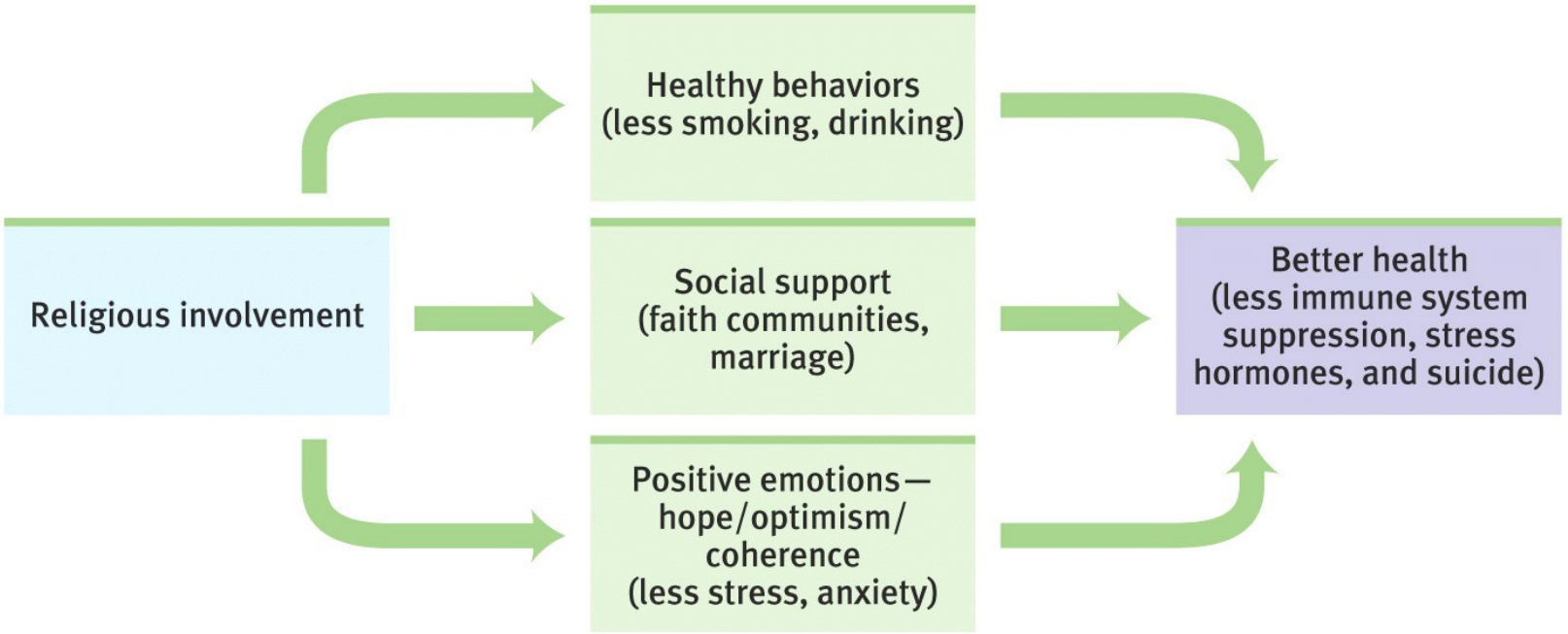
Supportive family members, marriage partners, and close friends help people cope with stress. Their immune functioning calms the cardiovascular system and lowers blood pressure.

Bob Daemmrich/ Stock, Boston



# Religious Factors, 574

Investigators suggest there are three factors that connect religious involvement and better health.



# Smoking, 575

- **a. Social cognitive theory best explains why teens start smoking**
- **b. They want to facilitate their social acceptance into the group**
- **c. Nicotine triggers decrease in anxiety, increase in alertness**
- **d. Smoking reduces sensitivity to pain, making it a rewarding consequence**

***Prevention strategy: teach 7th graders how to refuse persuasion appeals of their peers**

# Smokers v. nonsmokers

- They are found to differ in a gene that influences responses to the neurotransmitter dopamine.

# Smoking cessation

- Most people who quit smoking go back to smoking.

# Overeating Factors

- a. falling below your *set point* you feel an increase in hunger and a decrease in *metabolism*
- b. we **underestimate** our caloric intake and **overestimate** our physical activity

c. most on weight loss programs gain all weight lost back (males and females)

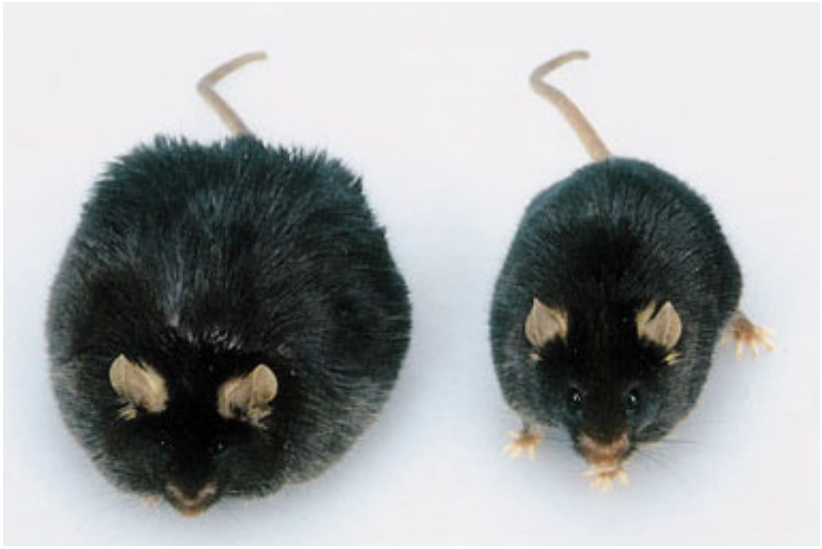
d. *worst advice for a dieter*: don't eat all day then have a big dinner

# Fat cell facts

- Once acquired they remain with you for life.
- Factors in acquisition:
- Genetic predisposition
- Childhood eating patterns
- Adulthood eating patterns

# The Genetic Factor, 584

Identical twin studies reveal that body weight has a genetic basis.



Courtesy of John Soltis, The Rockefeller University, New York, NY

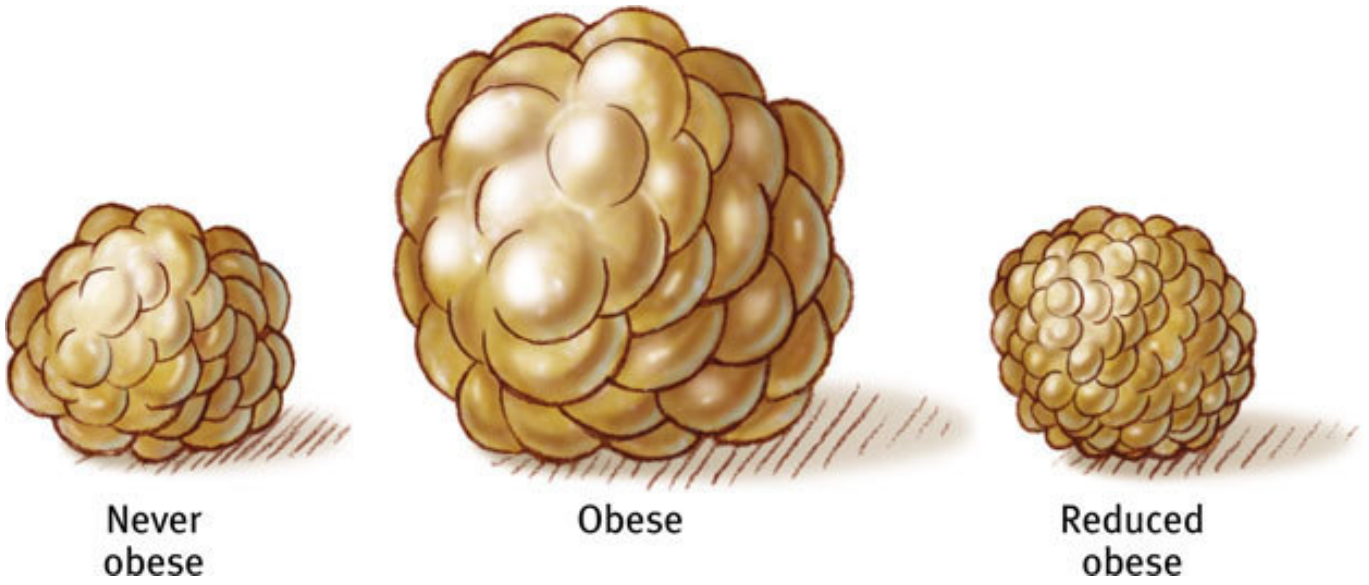
The obese mouse on the left has a defective gene for the hormone leptin. The mouse on the right sheds 40% of its weight when injected with leptin.

# Best weight loss strategy

Health psychologists argue for reducing your weight gradually over a period of several months.

# Physiology of Obesity, 584

Fat Cells: There are 30-40 million fat cells in the body. These cells can increase in size or increase in number (75 million) in an obese individual (Sjöstrum, 1980).



# And the essay…

*Describe the role of each of the following mechanisms in determining an individual's eating habits and body weight.*

**Biological mechanisms**

a. body or brain chemistry

b. brain structure

c. genetics

**Learning mechanisms**

a. cultural factors

You should use your textbook to answer this after your multiple choice has been graded.