

Essay Questions

Beyond the Limits (p. 242-244)

1. Define stressor.
2. Can the body recover normal balance more easily from a mild stressor or a severe stressor. Explain.
3. Use Figure E6.1 to answer the following question.
 - A. List two ways the body adjusts to a loss of 20% blood volume in order to maintain homeostasis and recover.
 - B. Why does a loss of 40% blood volume result in death?
4. Explain the negative impacts on the body that a less severe stressor like diabetes can produce because it lasts for a long time (see Figure e6.2).
5. List three other examples of stressors.
6. What happens to any organism if it cannot maintain homeostasis?

Coping with Disruptions: The Role of Medicine in Homeostasis (p. 244-246)

1. Explain one way that surgeons can help maintain balance in the cardiovascular system.
2. How does a ventilator help restore internal balance?
3. How does a dialysis machine restore internal balance?
4. List 4 ways that health care professionals can gather information about a person's illness or injury.
5. Explain how technicians use the different types of blood cells to tell if you have a blood disorder.
6. List three disorders that can be treated with drug technologies.
7. Use Figure E6.6 to answer the following question: How can you tell that the bacteria on the petri dish is resistant to the antibiotic bacitracin?
8. List one ethical question that has come about because of advances in medical research.

