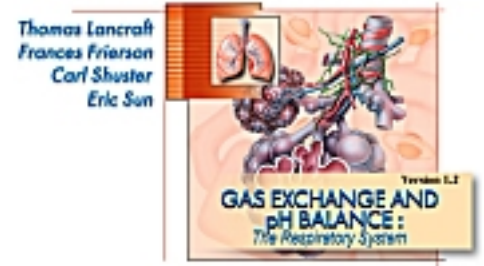


Role of the Respiratory System in pH Regulation

Directions:

- a. Click the "Contents" button,
- b. Open the *Respiratory System* File,
- c. Click *Animations*,
- d. Click *Role of the Respiratory System in pH Regulation*



Introduction

1. What is the source of free hydrogen ions? _____

2. What is *normal blood pH*? _____

3. Define *acidosis* and explain how it develops. _____

4. Define *alkalosis* and explain how it develops. _____

5. How is pH homeostasis critical to enzyme function? _____



6. What three mechanisms regulate blood pH?



Role of the Respiratory System

7. Explain how cellular metabolism affects blood pH. _____

8. Describe how ventilation rate contributes to pH homeostasis in each of the following conditions.

Low P_{CO_2} and high blood pH _____

High P_{CO_2} and low blood pH _____

