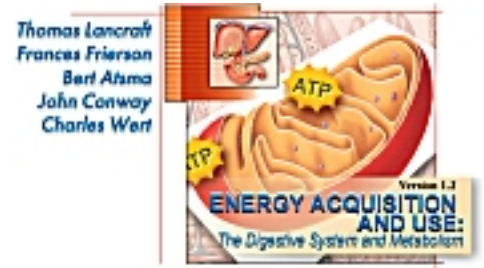


# Protein Digestion & Absorption

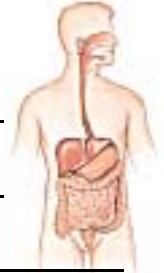
## Directions:

- a. Click the "Contents" button,
- b. Open the *Digestive System* File,
- c. Click *Animations*,
- d. Click *Protein Digestion & Absorption*



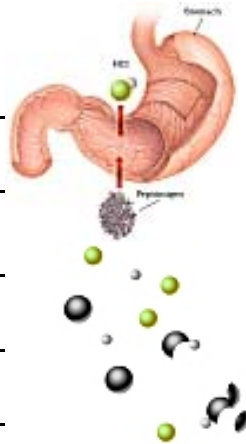
## Introduction

- 1. Where does protein digestion occur? \_\_\_\_\_
- 2. What is the role of *pepsin*? \_\_\_\_\_
- 3. What is the role of *pancreatic* and *brush border* enzymes? \_\_\_\_\_



## Protein Digestion

- 4. How does *HCl* affect *pepsinogen*? \_\_\_\_\_
- 5. How do pepsin molecules affect pepsinogen molecules (catalysis)? \_\_\_\_\_
- 6. How does pepsin affect protein molecules? \_\_\_\_\_



- 7. a. Where does *chyme* interact with *pancreatic juice*? \_\_\_\_\_
- b. Name the enzymes mixed in pancreatic juice.

\_\_\_\_\_

\_\_\_\_\_



- 8. a. What is the function of *trypsin*, *chymotrypsin*, and *elastase*. \_\_\_\_\_

\_\_\_\_\_

- b. What is the function of *carboxypeptidase*? \_\_\_\_\_

\_\_\_\_\_

9. Protein digestion is completed in the brush border. What is the function of these two brush border enzymes?

*Aminopeptidase* \_\_\_\_\_

*Dipeptidase* \_\_\_\_\_



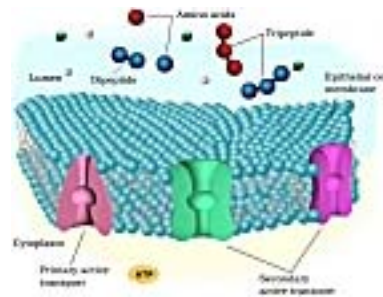
10. Specify the end products of protein digestion. \_\_\_\_\_

### Protein Absorption

11. Where are amino acids, dipeptides, and tripeptides absorbed? \_\_\_\_\_

12. Identify the three mechanisms responsible for absorption.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

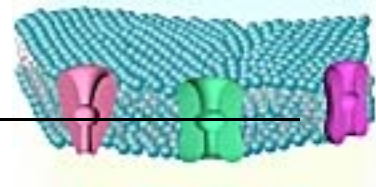


13. Briefly describe each of the following mechanism responsible for transporting digested proteins.

*Active Transport* \_\_\_\_\_

*Na<sup>+</sup> Dependent Secondary Active Transport* \_\_\_\_\_

*H<sup>+</sup> Dependent Secondary Active Transport* \_\_\_\_\_



14. What happens to the peptides once they are within the epithelial cells? \_\_\_\_\_

15. Describe the last stage of protein absorption. How do the amino acid molecules get from inside the epithelial cells to the blood capillaries of the villus?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_