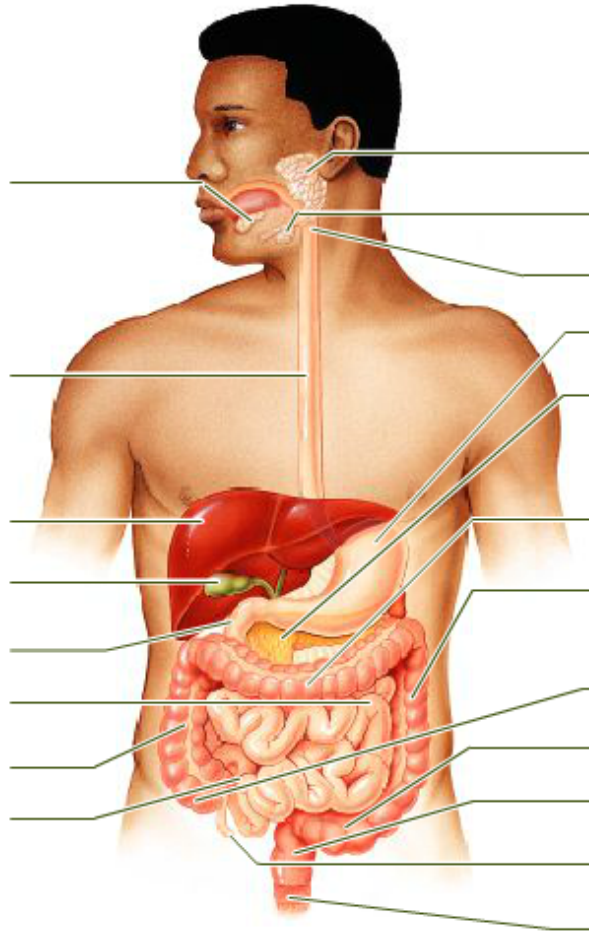


Digestive System Webquest

Part I- Identifying Digestive Structures

Use this website to help you label the following diagram.

http://media.pearsoncmg.com/bc/bc_marieb_haplace_7/labeling/fig_2301.html



Part II- Getting to Know Your Digestive System.

Watch the following animation and use it to help you answer the questions that follow.

http://highered.mcgraw-hill.com/sites/0072495855/student_view0/chapter26/animation_organs_of_digestion.html

1. The mechanical process of teeth breaking down food is called _____.
2. Chemical digestion begins in the _____ where your _____ glands secrete _____.
3. After swallowing, your body performs an involuntary movement called _____ which forces the food through the esophagus into the stomach.
4. The stomach has the ability to expand due to small folds called _____.

5. The stomach aids in digestion by secreting a strong acid called _____.
6. The bolus, mixed with stomach juices, is now called _____.
7. Once food exits the stomach through the _____ sphincter, it enters the first part of the small intestines called the _____.
8. The chyme then flows through the rest of the small intestine, consisting of the _____ and _____.
9. The liver and pancreas are considered to be secondary digestive structures. What roles do they play in digestion?
10. Anything that isn't digested in the small intestine is passed into the large intestine where _____ and _____ are absorbed and the remaining chyme becomes _____.
11. What is the role of the rectum?

Part III- Digestive Enzymes

Read the information from the following website to help you answer the questions.

<http://www.sciencelearn.org.nz/Contexts/Digestion-Chemistry/Looking-Closer/Digestive-enzymes>

1. Most enzymes are named using the suffix _____
2. How else are enzymes named?
3. Enzymes are part of what group of macromolecule? _____
4. The substance that the enzyme connects with is called the _____
5. Name 2 substances that could possibly bind to the active site and therefore poison you _____ & _____
6. What class of enzymes do digestive enzymes belong to and what is their function?
7. Name the 5 major enzyme producing structures of the digestive system.
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____

Part IV- Gastrointestinal Diseases

A. The new fad of going “gluten-free” has swept the country. More and more people are going on gluten-free diets and more and more companies are coming out with gluten-free products. Read the following article to educate yourself about why people choose to be gluten-free and who is really effected by gluten! Answer the questions that follow.

<http://health.usnews.com/health-news/articles/2012/06/01/making-sense-of-the-gluten-free-food-frenzy>

1. What is gluten? Did you know that most people who are gluten free do not even know what gluten is? Just watch this clip from Jimmy Kimmel! <http://www.refinery29.com/2014/05/67578/jimmy-kimmel-gluten>
2. Who SHOULDN'T eat gluten, and why?
3. Most people who should not eat gluten suffer from a disease called _____ disease. Only about ____% of the population actually suffers from this disease! However, about _____% of the population suffers from gluten sensitivity. So if you have gastrointestinal issues they suggest you try being gluten-free for about a week to see if it helps.
4. Why is gluten all of a sudden an issue? Why didn't our grandparents deal with this way back when they were wee lads?
5. Why are many doctors against a gluten-free diet?

B. IBS (irritable bowel syndrome) was once thought to be a psychological disorder. Read this article to find out about the truth! <http://www.medicalnewstoday.com/releases/273833.php> and answer the questions.

1. What is IBS? What causes it?
2. How can nutrition effect this disease?
3. What can you do to improve symptoms?

C. Research 1 other gastrointestinal disease of your choice. Explain what it is, symptoms, what causes it, and how you can improve the symptoms.

Part V- Nutrition

Before you begin this section, calculate your BMI (Body Mass Index) by using this online BMI calculator

<http://nutritiondata.self.com/tools/calories-burned>

1. What is your BMI? _____
2. How many calories must you intake to maintain your BMI? _____
3. If your BMI is higher than the average, what could you do to your diet to live a healthier lifestyle?
4. What could you do to decrease your BMI without changing your calorie consumption?

Part VI – Enzymes

Use the below website to fill in the chart.

https://scioly.org/wiki/index.php/Digestive_Secretion_List

Enzyme	Production Site	Substrate	Products
Salivary Amylase			
Lingual Lipase			
Pepsin			
Pancreatic Lipase			
Pancreatic Amylase			
Nuclease			
Trypsin			
Chymotrypsin			
Carboxypeptidase			
Sucrase			
Maltase			

Lactase			
Intestinal Lipase			
Peptidase			