Digestive System: Accessory Organs

1. What are the size and the location of the pancreas? - The pancreas, located in the back of the upper abdomen behind the stomach, is approximately a six-inch gland organ with the shape of the letter “J”. The head (right end of the pancreas), connects to the first part of the small intestine, the duodenum, while the tail of the pancreas extends to the left side of the body.
2. What are the different functions of the pancreas, and how is the pancreas directly related to digestion? - The pancreas produces the hormones insulin and glucagon which lower and raise blood sugar levels respectively as necessary. Along with producing these essential hormones, the pancreas also makes and secretes pancreatic juices (enzymes such as pancreatic amylase and pancreatic lipase) to digest fats, carbohydrates, and proteins.
3. How is the pancreas connected to the rest of the digestive system? - The pancreas is located behind the stomach and is attached to the gall bladder and small intestine. The pancreas is a secreting organ; therefore, it secretes digestive enzymes into the duodenum (the first segment of the small intestine)
4. What enzymes are produced by the pancreas and what are their functions? - The pancreas secretes trypsin/chymotrypsin, amylase, and lipase to break down protein, carbohydrates, and fats respectively.
5. How is insulin related to the digestive system? - After food is digested in the small intestine, glucose is released into the bloodstream. Insulin is then released into the blood to allow glucose into the cells. It turns any leftover glucose into fatty acids and stores them in fat cells. Insulin maintains a healthy blood sugar level in the body.
6. What is the size of the liver and where is it located? - An adult liver weighs about 3 pounds and roughly about the size of a football. It is located in the upper-right part of the abdominal cavity; beneath the diaphragm and above the stomach.
7. How does the liver function in relation to digestion? - The liver functions in relation to digestion by processing the nutrients absorbed from the small intestine and secreting bile, a fluid aiding in digestion, into it. The liver also detoxifies potentially harmful chemicals.
8. What are other functions of the liver in the body? - The liver also regulates the storage of glycogen and composes red blood cells. Before passing it to the rest of the body, the liver filters the blood coming from the digestive tract. It metabolizes drugs and is responsible for bile production.
9. What is the relationship between the liver and the gallbladder? - The gallbladder is just beneath the liver and they both work together to digest, absorb, and digest food. The gallbladder holds bile which is made in the liver.
10. What is the function of bile and where does it enter the digestive tract? The function of bile is to digest fatty foods, and waste products can be eliminated by entering bile. Bile travels through the bile duct and enters the duodenum.