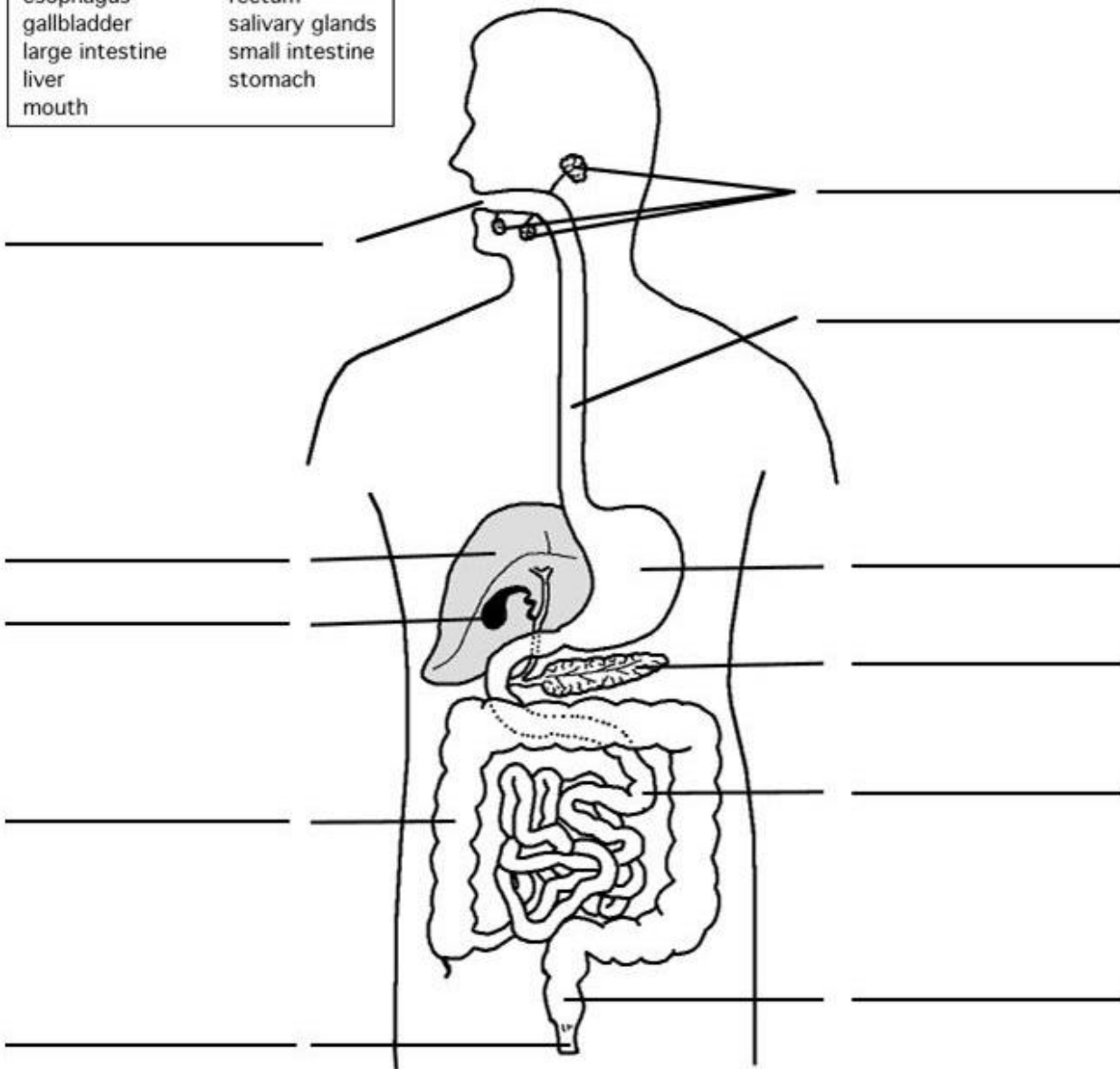


The Digestive System

Use the descriptions below to label the diagram

anus	pancreas
esophagus	rectum
gallbladder	salivary glands
large intestine	small intestine
liver	stomach
mouth	

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1. **Anus**—The opening at the end of the digestive system where feces leave the body.
2. **Esophagus**—The esophagus is simply a transportation tube from the mouth to the stomach. When we swallow, what we are really doing is closing a trap door in our throat called the epiglottis. This sends food down the esophagus and prevents food from going down the trachea (or windpipe) and into our lungs. Food moves down the esophagus by a process called peristalsis. Peristalsis uses layers of muscle in your esophagus and intestines. These muscles relax and contract in a wave motion to pass food forward.

3. **Large Intestine**—Whatever the body cannot put to use is sent to the large intestine. Many plants, for example, contain cellulose, which cannot be digested. The big job of the large intestine is to remove water. Water has been necessary up until this point in the digestive process. Now it is no longer needed; therefore, the water in large intestine is sent into the bloodstream. Food spends about 12 hours in the large intestine. Undigested food is called solid waste feces, and this is stored in the rectum until it leaves the body.
4. **Liver/Gall Bladder**—At this point, our food is hit with more chemicals. The liver makes a chemical called bile, and it is stored in the gall bladder. When the gall bladder mixes bile with our food, it does an important job: breaking down the fat (from milk, butter, cheeses) into tiny droplets. This fat will supply us with much energy later.
5. **Mouth/Teeth**—First steps in the digestive system take place in the mouth as the teeth cut, tear, and grind the food down into small enough pieces so that it can fit down the throat. Saliva is squirted into the food to moisten and soften the food. The mouth makes close to 500 milliliters (1/2 quart) of saliva each day. Saliva contains chemicals called enzymes, which break down the starches in the food. The enzyme in saliva that breaks down starch into sugar is called amylase.
6. **Pancreas**—The pancreas also adds a digestive chemical as the food leaves the stomach. This digestive juice works on breaking down the carbohydrates (from breads, potatoes, pasta, etc.) and the proteins (from meats, eggs, peanut butter, etc.)
7. **Rectum** – the lower part of the large intestine where feces is stored before it's removed from the body
8. **Saliva**- The salivary gland is located underneath the back of our tongue. It creates our saliva or spit. This helps soften the food in the mouth so that it is easier to swallow. Saliva is also the first of several chemicals that start to break down foods into simpler forms.
9. **Small Intestine**—The small intestine is the real hero of the digestive system. The small intestine is a tube that is about 18 feet long! This is where the real digestion takes place. As the food passes through, it is mixed with the new chemicals, and is finally digested enough to be put to use by the body. Along the walls of the intestine are thousands of tiny fingers called villi. Blood vessels (capillaries) in the villi can absorb the tiny food molecules and send them off to the rest of our body through the blood.
10. **Stomach**—The first stop after the esophagus is the stomach. Once the food gets to the stomach the stomach uses chemicals to try to make the food particles tinier. These chemicals are called gastric juices and they include hydrochloric acid and enzymes (chemicals that break down food). The food is moved around in the stomach and mixed with the chemicals for 3-4 hours. When the stomach is finished with it, the food is a creamlike liquid called chyme. This substance is still not small enough to get into our blood stream, and it has not yet provided the body with anything useful. Now a valve at the end of the stomach opens, sending the food past the liver.
11. **Tongue**—A muscle that works with the food and saliva to form a "ball" that can be swallowed. Of course, the tongue also contains taste buds that help us tell the difference between salty, sour, sweet, and bitter foods.