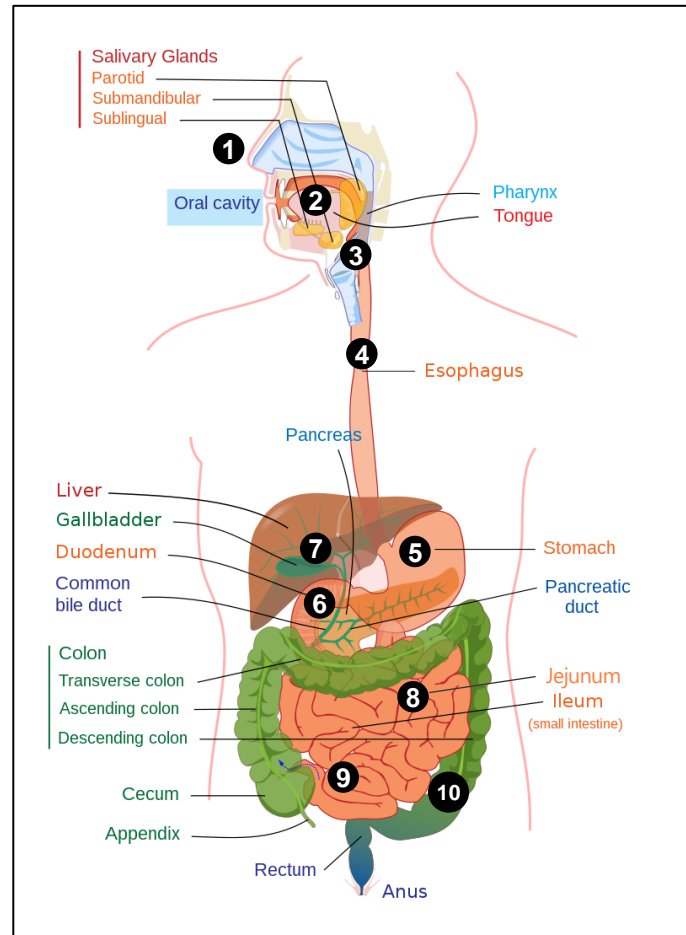


The Digestive System (Gastrointestinal Tract)

The **digestive system** is a collection of organs that extracts the **nutrients** and **energy** from the food we eat and removes the remaining **waste**.

How the digestive system works:

1. When we smell food, our **salivary glands** start to release **saliva** into our mouths.
2. Once we take a bite of the food, our **teeth** cut the food into smaller pieces. Our **tongue** mixes the saliva with the food, and the saliva provides moisture and helps break down the food chemically. The food now becomes a small round mass (**bolus**).
3. During the motion of **swallowing**, the muscles in our mouth and throat (**pharynx**) send the bolus into the upper part of the **esophagus**.
4. The esophagus muscles contract and relax in a motion called **peristalsis** to send the bolus towards the stomach. At the bottom end of the esophagus, the **esophageal sphincter** opens, and the bolus goes into the stomach.
5. The stomach muscles churn the bolus into smaller pieces. At the same time, the stomach acid and digestive enzymes mix with the food, forming a paste (**chyme**).
6. The stomach then sends the well-mixed chyme (a small amount at a time) through the exit valve (**pylorus**) into the **duodenum**, which is the first part of our **small intestine**.
7. In the duodenum, enzymes from the **pancreas** break down proteins and carbohydrates. **Bile** made by the **liver** and stored in the **gallbladder**, goes into the duodenum and digests fats.
8. The digested food travels to the **jejunum**, which is the second part of the small intestine. Here, the nutrients break down further into a state that can be absorbed.



9. The nutrients travel to the **ileum**, which is the final part of the small intestine, and get absorbed.
10. The remaining contents (which are mainly water, salt, and fiber) enter the large intestine (**colon**). Here, the water is absorbed, and the waste gathers into **stool** ("poop"). The muscles in the colon push the stool to the **rectum**, where it is released out of the **anus**.

References / Resources

- [Slide show: See how your digestive system works](#) – Mayo Clinic
- Diagram adapted from: Digestive System Diagram by Mariana Ruiz, edited by Joaquim Alves Gaspar, Jmarchn - Own work. Public Domain. <https://commons.wikimedia.org/w/index.php?curid=1501695>