

DIGESTIVE SYSTEM

Digestive System is uniquely designed to turn the food you eat into energy your body needs to survive.

PARTS OF DIGESTIVE SYSTEM

Mouth

The mouth is the beginning of the digestive tract. In fact, digestion starts here as soon as you take the first bite of a meal. Chewing breaks the food into pieces that are more easily digested, while saliva mixes with food to begin the process of breaking it down into a form your body can absorb and use.

Throat

Also called the pharynx, the throat is the next destination for food you've eaten. From here, food travels to the esophagus or swallowing tube.

Esophagus

The esophagus is a muscular tube extending from the pharynx to the stomach. By means of a series of contractions, called peristalsis, the esophagus delivers food to the stomach. Just before the connection to the stomach there is a "zone of high pressure," called the lower esophageal sphincter; this is a "valve" meant to keep food from passing backwards into the esophagus.

Stomach

The stomach is a sac-like organ with strong muscular walls. In addition to holding the food, it's also a mixer and grinder. The stomach secretes acid and powerful enzymes that continue the process of breaking down the food. When it leaves the stomach, food is the consistency of a liquid or paste. From there the food moves to the small intestine.

Small Intestine

Made up of three segments, the duodenum, jejunum, and ileum, the small intestine is a long tube loosely coiled in the abdomen (spread out, it would be more than 20 feet long). The small intestine continues the process of breaking down food by using enzymes released by the pancreas and bile from the liver. Bile is a compound that aids in the digestion of fat and eliminates waste products from the blood. Peristalsis (contractions) is also at work in this organ, moving food through and mixing it up with digestive secretions. The duodenum is largely responsible for continuing the process of breaking down food, with the jejunum and ileum being mainly responsible for the absorption of nutrients into the bloodstream.

Three organs play a pivotal role in helping the stomach and small intestine digest food:

- **Pancreas**- among other functions, the oblong pancreas secretes enzymes into the small intestine. These enzymes break down protein, fat, and carbohydrates from the food we eat.
- **Liver**- has many functions, but two of its main functions within the digestive system are to make and secrete bile, and to cleanse and purify the blood coming from the small intestine containing the nutrients just absorbed.
- **Gallbladder**- is a pear-shaped reservoir that sits just under the liver and stores bile. Bile is made in the liver then travels to the gallbladder through a channel called the cystic duct. During a meal, the gallbladder contracts, sending bile to the small intestine.

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Colon (Large Intestine)

The colon is a 5- to 6-foot-long muscular tube that connects the cecum (the first part of the large intestine to the rectum (the last part of the large intestine). It is made up of the ascending (right) colon, the transverse (across) colon, the descending (left) colon, and the sigmoid colon (so-called for its "S" shape; the Greek letter for S is called the sigma), which connects to the rectum.

Once the nutrients have been absorbed and the leftover liquid has passed through the small intestine, what is left of the food you ate is handed over to the large intestine, or colon.

Rectum

The rectum (Latin for "straight") is an 8-inch chamber that connects the colon to the anus. It is the rectum's job to receive stool from the colon, to let you know there is stool to be evacuated, and to hold the stool until evacuation happens. When anything (gas or stool) comes into the rectum, sensors send a message to the brain. The brain then decides if the rectal contents can be released or not. If they can, the sphincters (muscles) relax and the rectum contracts, expelling its contents. If the contents cannot be expelled, the sphincters contract and the rectum accommodates, so that the sensation temporarily goes away.

Anus

The anus is the last part of the digestive tract. It consists of the pelvic floor muscles and the two anal sphincters (internal and external muscles). The lining of the upper anus is specialized to detect rectal contents. It lets us know whether the contents are liquid, gas, or solid. The pelvic floor muscle creates an angle between the rectum and the anus that stops stool from coming out when it is not supposed to. The anal sphincters provide fine control of stool. The internal sphincter keeps us from going to the bathroom when we are asleep, or otherwise unaware of the presence of stool. When we get an urge to go to the bathroom, we rely on our external sphincter to keep the stool in until we can get to the toilet.

COMMON DIGESTIVE PROBLEMS

- Heartburn/GERD
- Reflux
- Peptic ulcer
- Gallstones
- Lactose Intolerance
- Diverticulitis
- Ulcerative colitis
- Celiac Disease
- Constipation

COMMON DISORDER

- GERD
- Gastritis and Gastric Ulcers
- Duodenal Ulcers
- Crohn's Disease
- Ulcerative Colitis
- Diverticulitis
- Hemorrhoids