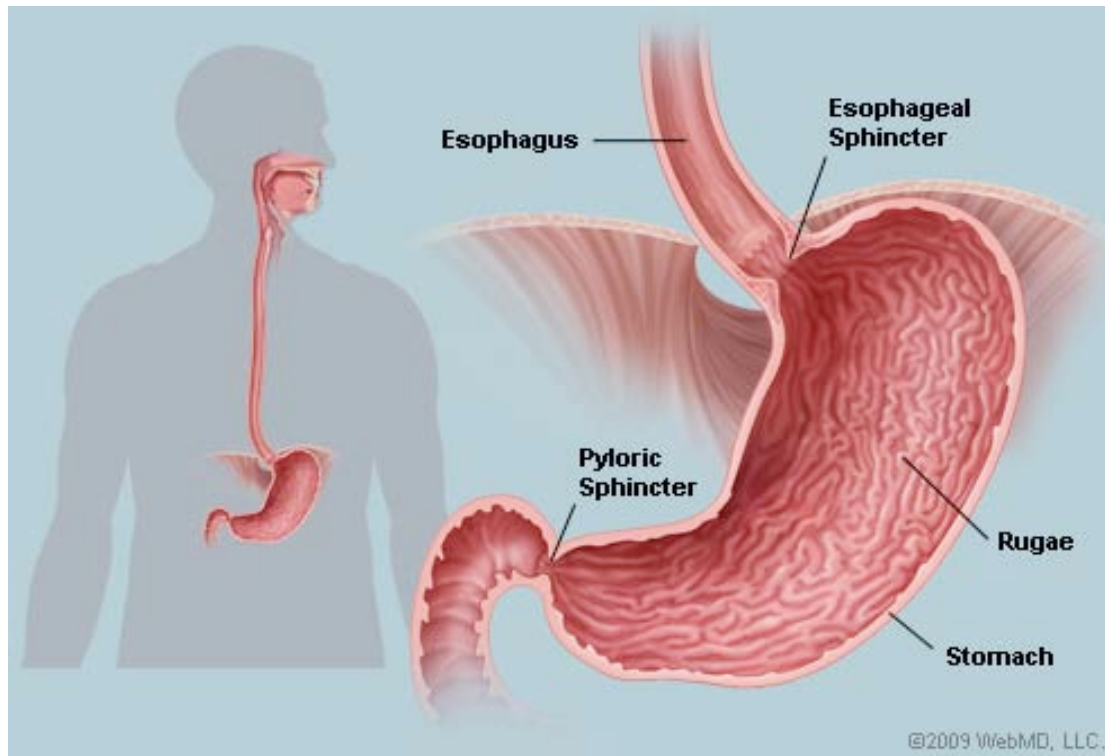




Stomach



wikipedia.org/wiki/Stomach

The **stomach** is a muscular, hollow, dilated part of the alimentary canal which functions as an important organ of the digestive tract in some animals, including vertebrates, echinoderms, insects (mid-gut), and molluscs. It is involved in the second phase of digestion, following mastication (chewing).

The stomach is located between the esophagus and the small intestine. It secretes protein-digesting enzymes and strong acids to aid in food digestion, (sent to it via oesophageal peristalsis) through smooth muscular contortions (called segmentation) before sending partially digested food (chyme) to the small intestines.

Bolus (masticated food) enters the stomach through the oesophagus via the oesophageal sphincter. The stomach releases proteases (protein-digesting enzymes such as pepsin) and hydrochloric acid, which kills or inhibits bacteria and provides the acidic pH of two for the proteases to work. Food is churned by the stomach through muscular contractions of the wall – reducing the volume of the fundus, before looping around the fundus[3] and the body of stomach as the boluses are converted into chyme (partially digested food). Chyme slowly passes through the pyloric sphincter and into the duodenum, where the extraction of nutrients begins. Depending on the quantity and contents of the meal, the stomach will digest the food into chyme anywhere between forty minutes and a few hours.

The stomach lies between the oesophagus and the duodenum (the first part of the



small intestine). It is on the left upper part of the abdominal cavity. The top of the stomach lies against the diaphragm. Lying behind the stomach is the pancreas. The greater omentum hangs down from the *greater curvature*

In adult humans, the stomach has a relaxed, near empty volume of about 45 ml. Because it is a distensible organ, it normally expands to hold about one litre of food, but can hold as much as two to three litres. The stomach of a newborn human baby will only be able to retain about 30 ml.

Stomach as nutrition sensor

The stomach can "taste" sodium glutamate using glutamate receptors and this information is passed to the lateral hypothalamus and limbic system in the brain as a palatability signal through the vagus nerve. The stomach can also sense independently to tongue and oral taste receptors glucose, carbohydrates proteins, and fats. This allows the brain to link nutritional value of foods to their tastes.

Absorption

Although the absorption is mainly a function of the small intestine, some absorption of certain small molecules nevertheless does occur in the stomach through its lining. This includes:

- Water, if the body is too dehydrated
- Simple sugars like glucose (e.g. through a glucose drink)
- Medication, like aspirin
- Amino acids (e.g. whey protein shake).

Diseases of the stomach

Historically, it was widely believed that the highly acidic environment of the stomach would keep the stomach immune from infection. However, a large number of studies have indicated that most cases of peptic ulcers, gastritis, and stomach cancer are caused by *Helicobacter pylori* infection. The stomach has to regenerate a new layer of mucus every two weeks, or else damage to the epithelium may result.

http://www.greekmedicine.net/hygiene/Emotions_and_Organs.html

Stomach: The stomach is a seething cauldron of emotions, and is intimately connected to the Gastric Center, or chakra, also called the Abdominal Center, which governs energy flow and distribution throughout the belly and gut. Choleric emotions like anger, hate, rage and frustration stored here lead to gastritis, ulcers and other Choleric stomach conditions. Many of us hold a lot of Choleric emotions



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like anger and resentment in our gut. Melancholic emotional stress and tension, as well as pensiveness, worry and anxiety, will stagnate the flow of the Natural Force in the stomach, causing distension, bloating, colic, gas and stomachache. And so, we must always try to be of good cheer when we eat. If accumulated Choleric and Melancholic emotional tensions in the stomach and Gastric Center get very severe, we may experience anorexia, appetite disorders, giddiness, nausea and dry heaves.