South Kazakhstan State Pedagogical Institute

Theme: Digestive system

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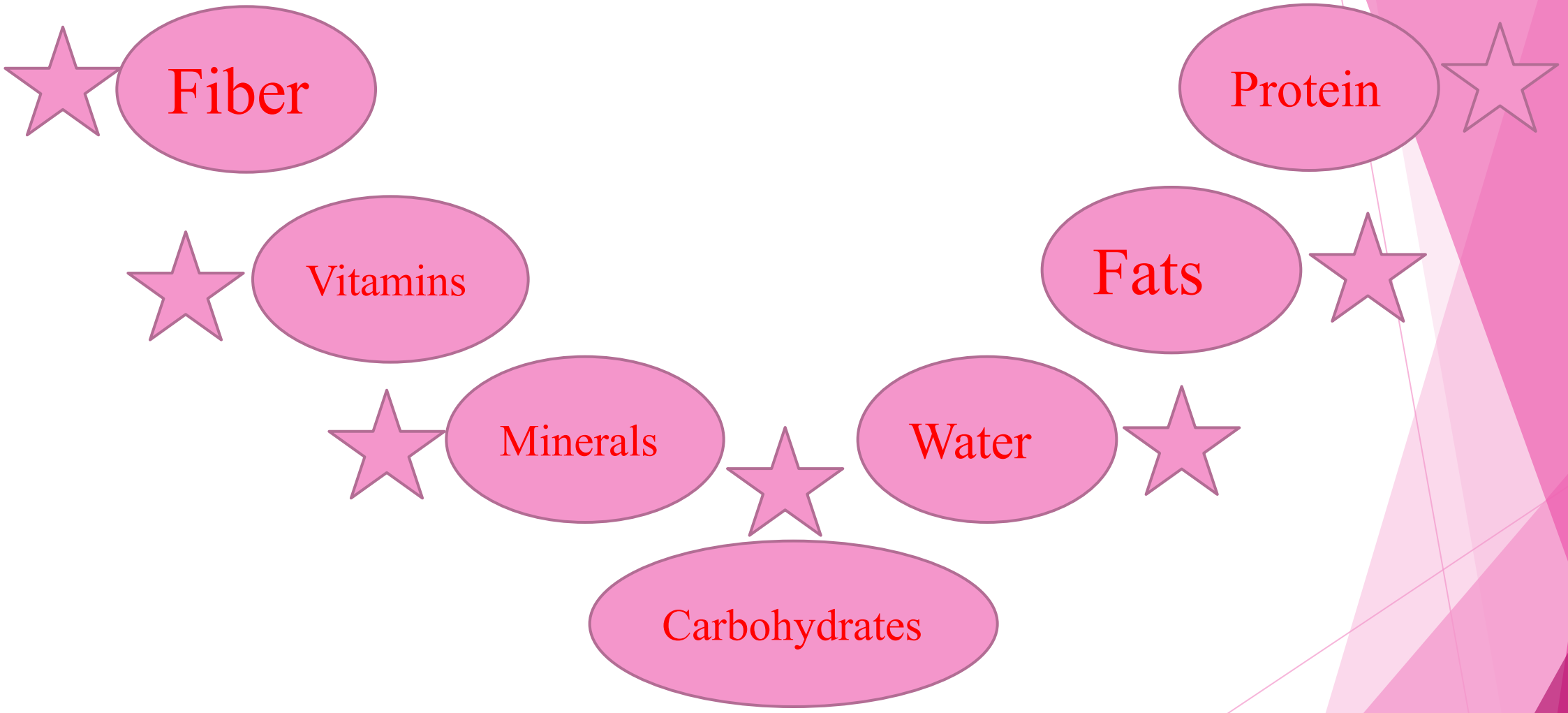
What is it & what does it do?

1

Every morsel of food we eat has to be broken down into nutrients that can be absorbed by the body, which is why it takes hours to fully digest food.

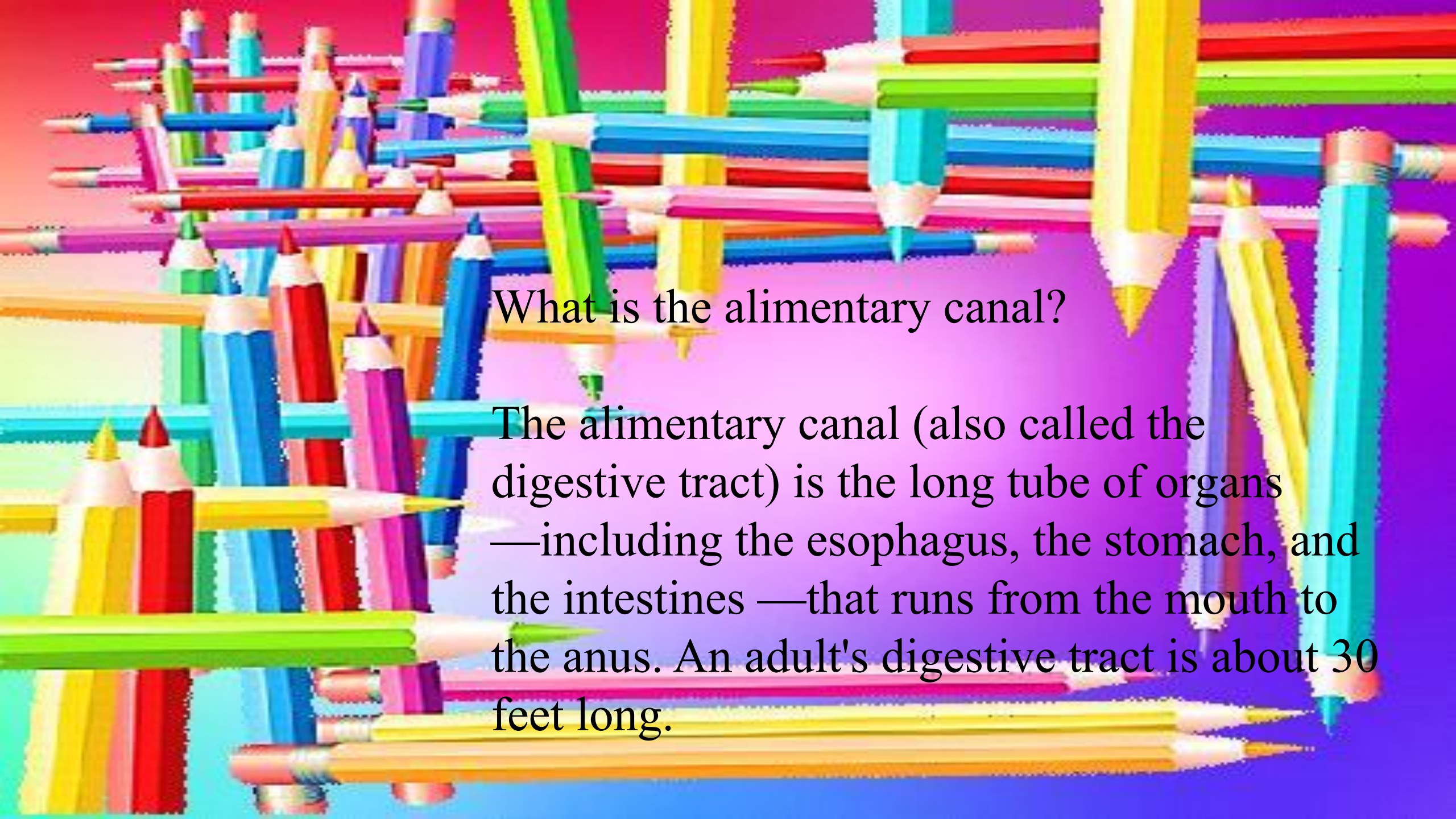
FYI -A nutrientis a chemical that an organism needs to live and grow or a substance used in an organism's metabolism which must be taken in from its environment. Nutrients are the substances that enrich the body. They build and repair tissues, give heat and energy, and regulate body processes.

7 Essential Nutrients



2

In humans, protein must be broken down into amino acids, starches into simple sugars, and fats into fatty acids and glycerol. The water in our food and drink is also absorbed into the bloodstream to provide the body with the fluid it needs.



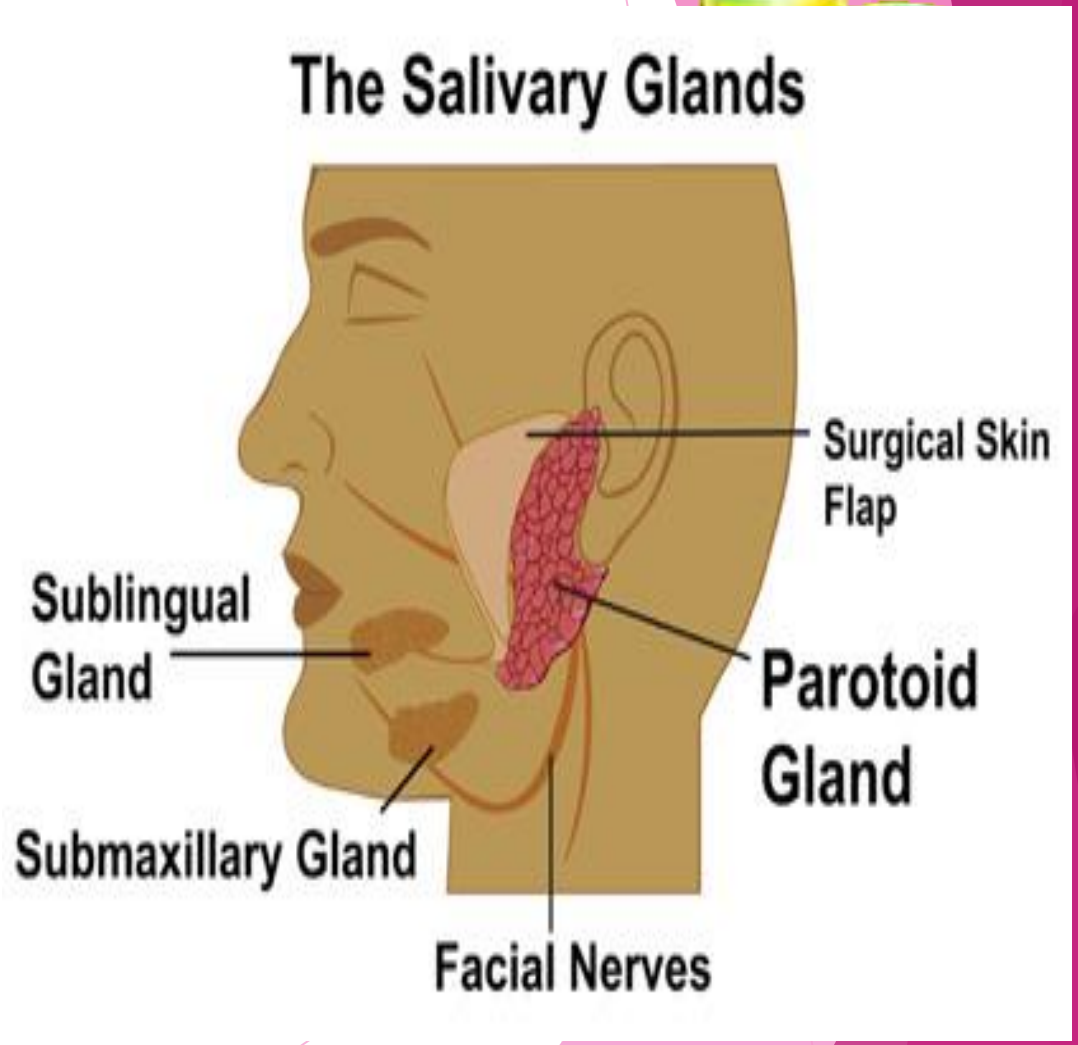
What is the alimentary canal?

The alimentary canal (also called the digestive tract) is the long tube of organs —including the esophagus, the stomach, and the intestines —that runs from the mouth to the anus. An adult's digestive tract is about 30 feet long.

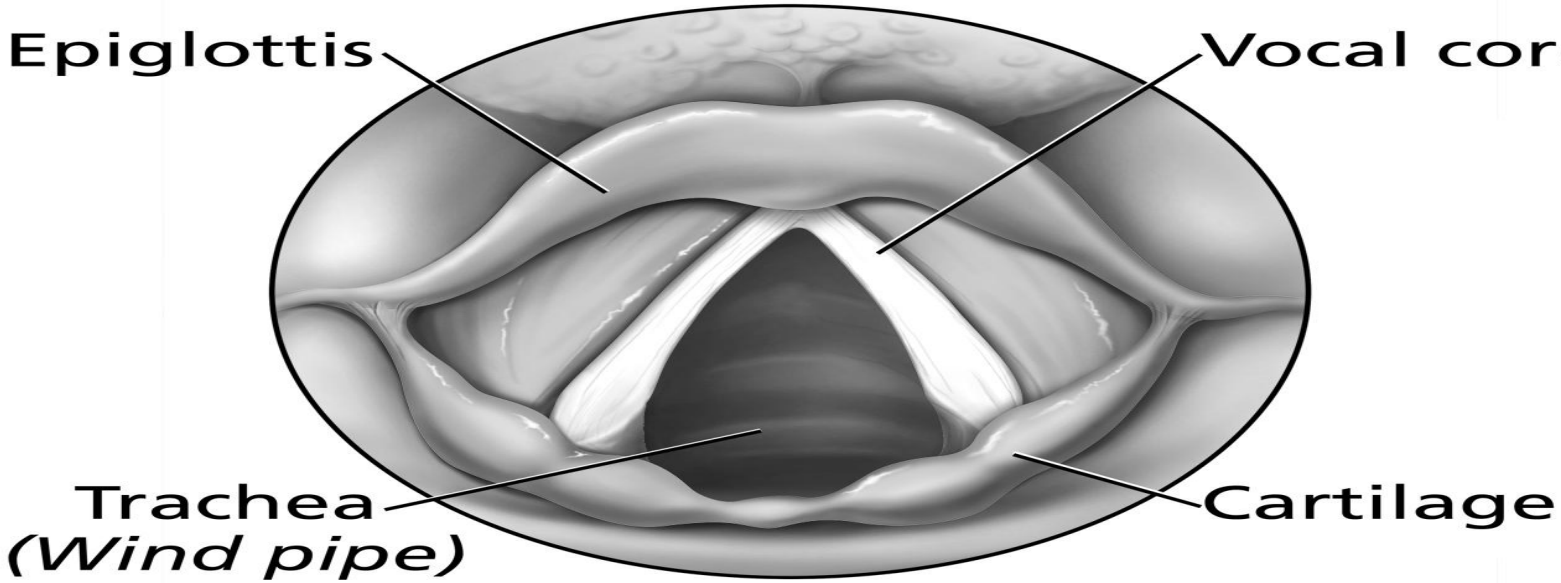
Parts of the digestive system

1. Teeth-The strongest stuff in the body! Their purpose is to rip, grind, mash and generally pulverize all that food we put into our mouths. Why? So that it fits down our throats.

2. Salivary Glands-3 main salivary glands deliver their juices, saliva, into the mouth. This fluid containing enzymes helps to soften up the food, the first chemical action along the digestive trail.



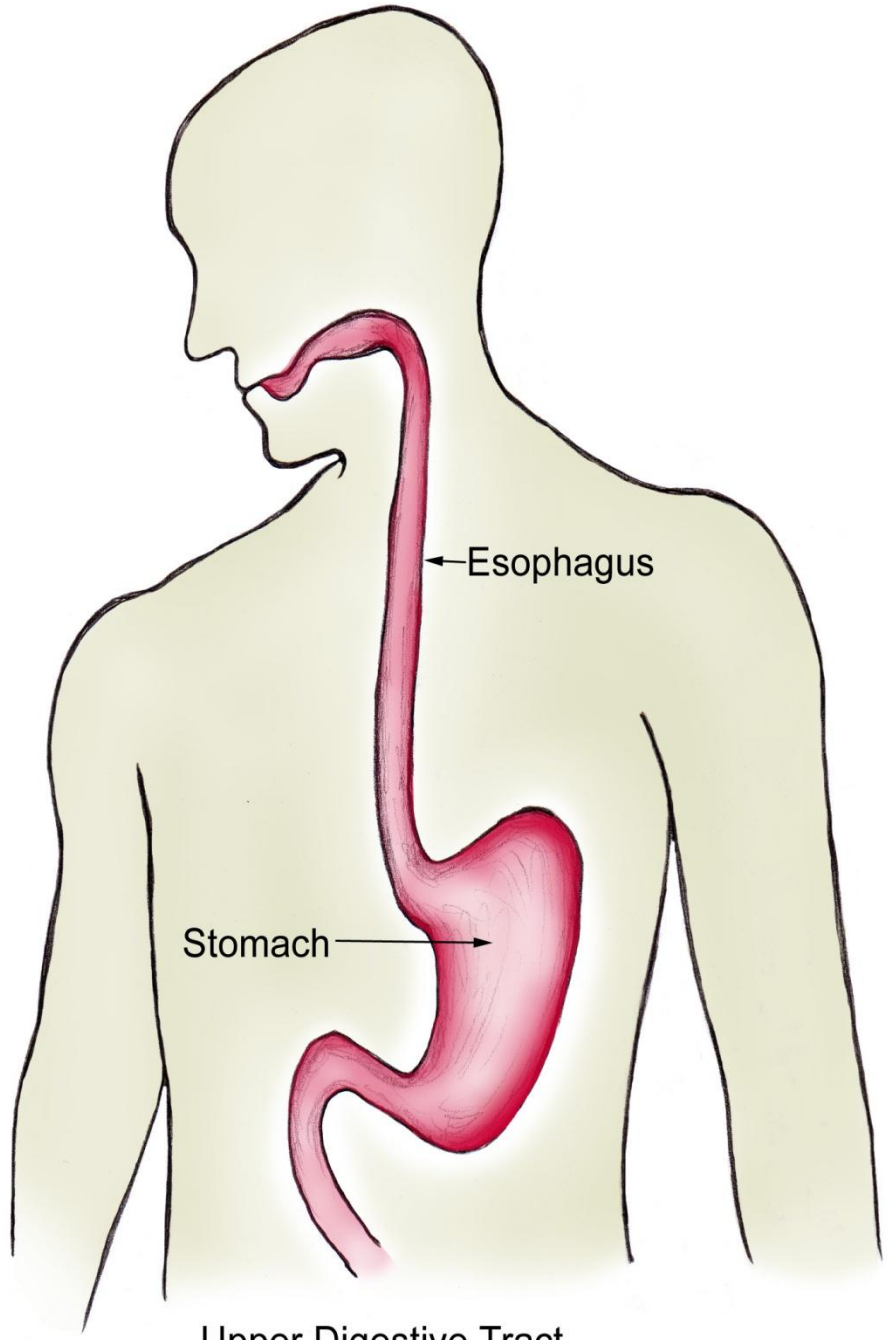
3. Epiglottis-This trap doorbelongs to both the respiratory system and the digestive systems. Swallowing triggers its closing over the trachea to prevent food and fluids from draining into our lungs.



National Cancer Institute

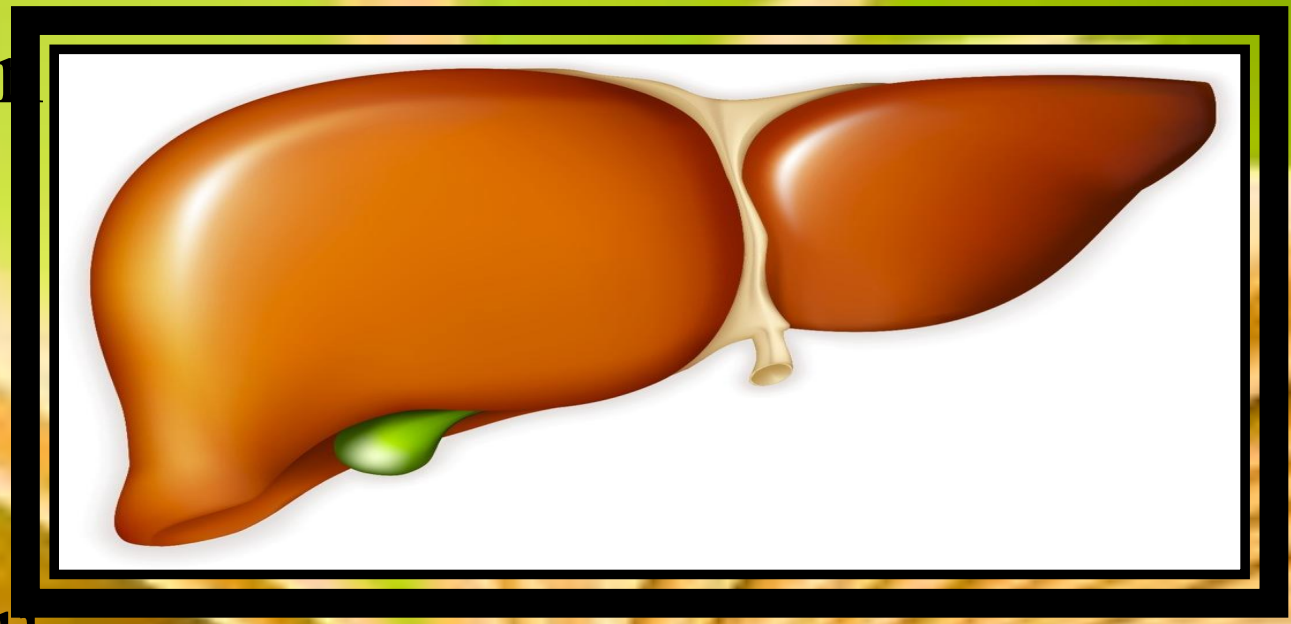
Parts of the digestive system cont’d

4. Esophagus-A muscular canal runni
from the pharynx to the
stomach. The tongue pushes a 'bolus'
food into the esophagus to
start it on its way to the stomach.



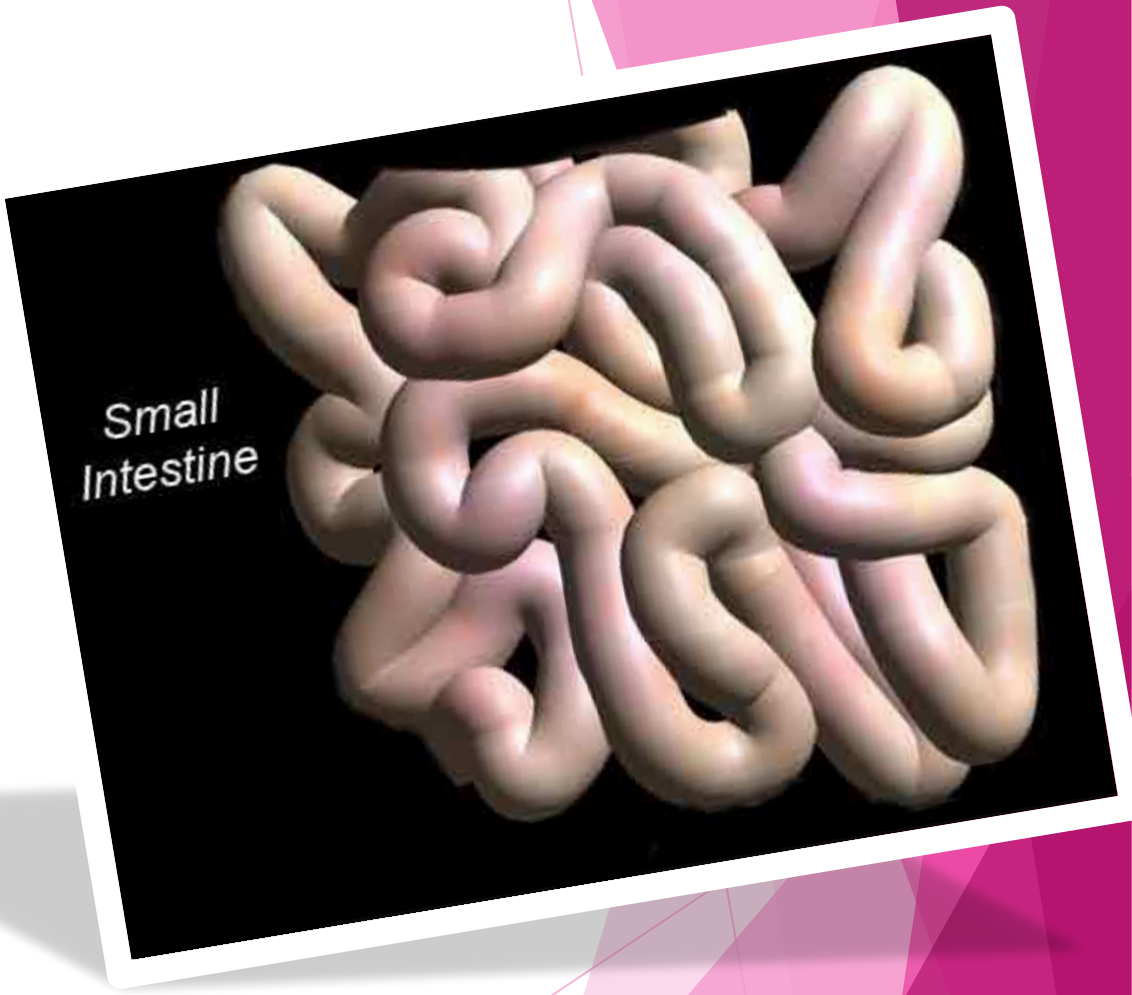
Upper Digestive Tract

5. Liver-One of the 'accessory‘organs of digestion. Food doesn't actually pass through this organ. Instead, this organ secretes bile that is passed along to the gall bladder for concentration and storage.

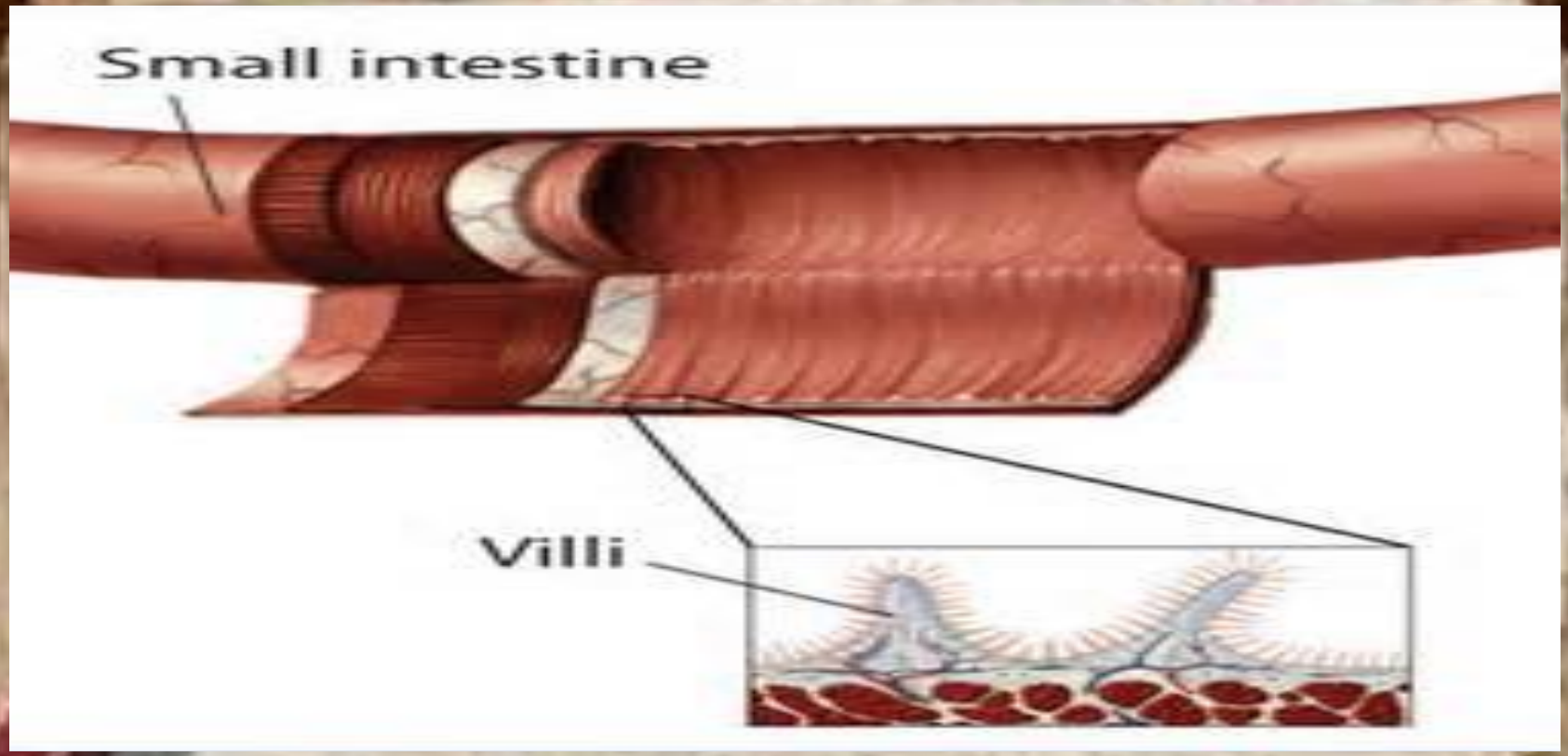


6. Gall Bladder-Another accessory organ. Food doesn't touch this one, either. It is a pear-shaped sac about 4 inches long and is the reservoir, or storage tank, for bile. Concentrated bile is released into the duodenum as needed to break down fats into an absorbable form.

7. Small Intestine-The small bowel has 3 main sections: the duodenum, jejunum and ileum. The duodenum is responsible for continuing to break down of food into liquid form and the jejunum and ileum mainly responsible for absorption of nutrients into the bloodstream. The mostly digested contents continue to be transformed into feces as it is moved along by peristalsis-a rhythmic contraction and relaxation of the muscles of the intestines.

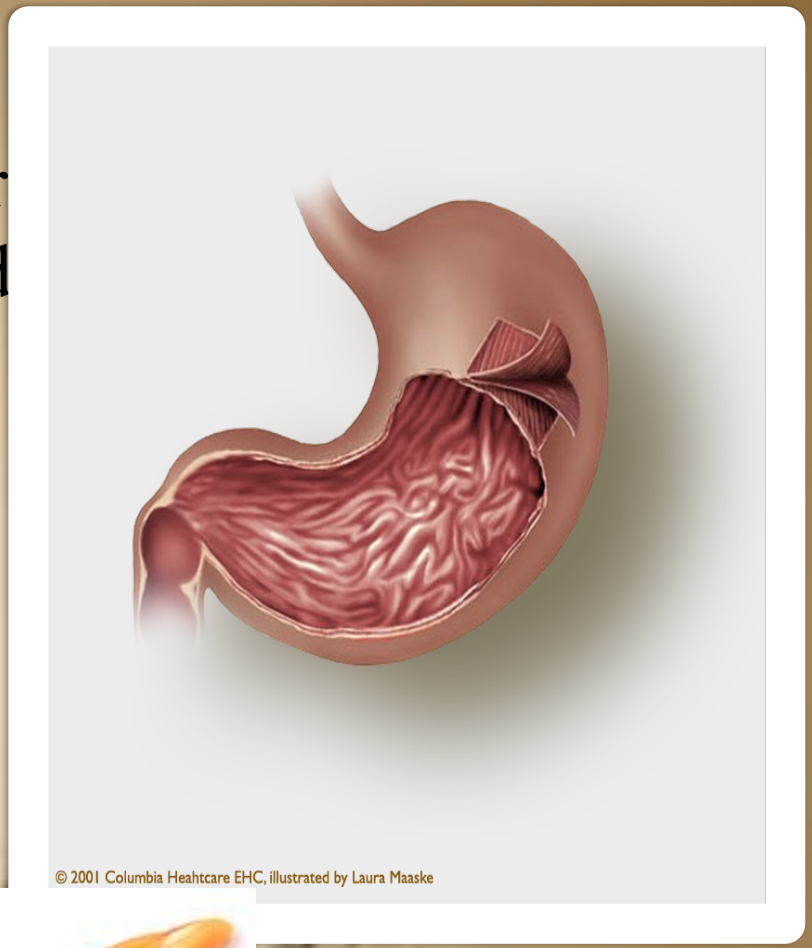


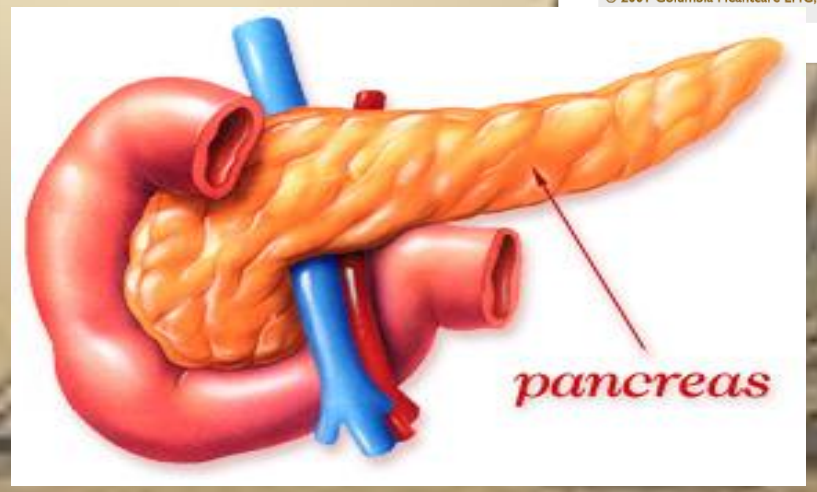
7. Small Intestine

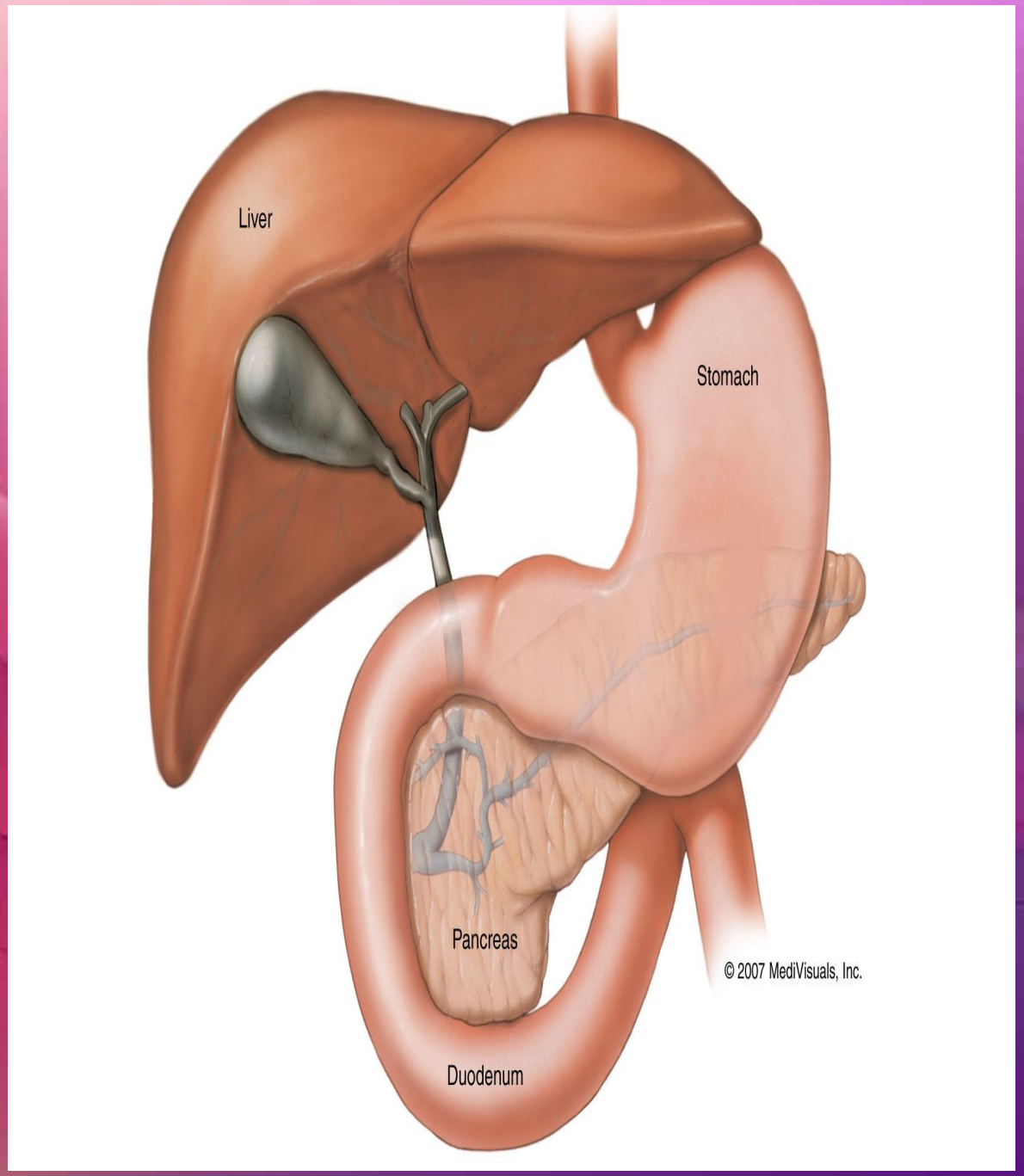


8. Stomach-Most food that we eat becomes unrecognizable here in the stomach. Gastric acids ar triggered by the presence of food that 'melt' the food into a thick soup.

9. Pancreas-The body's sugar control board. If your blood sugar gets too high, insulinis released to counteract it. If your sugars are low, glucagonsis released into the blood stream. Both insulin and glucagons are produced by the pancreas.



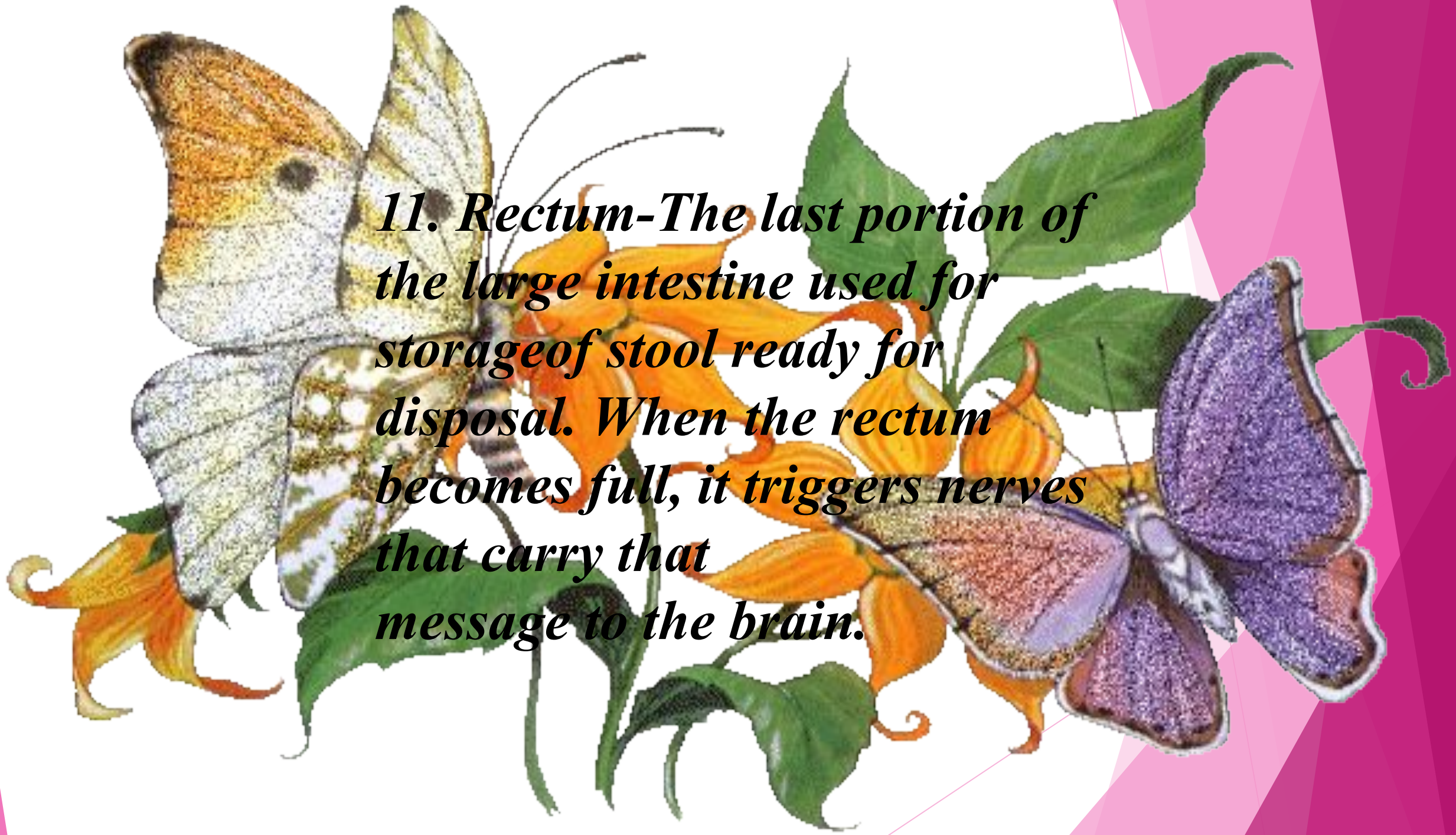




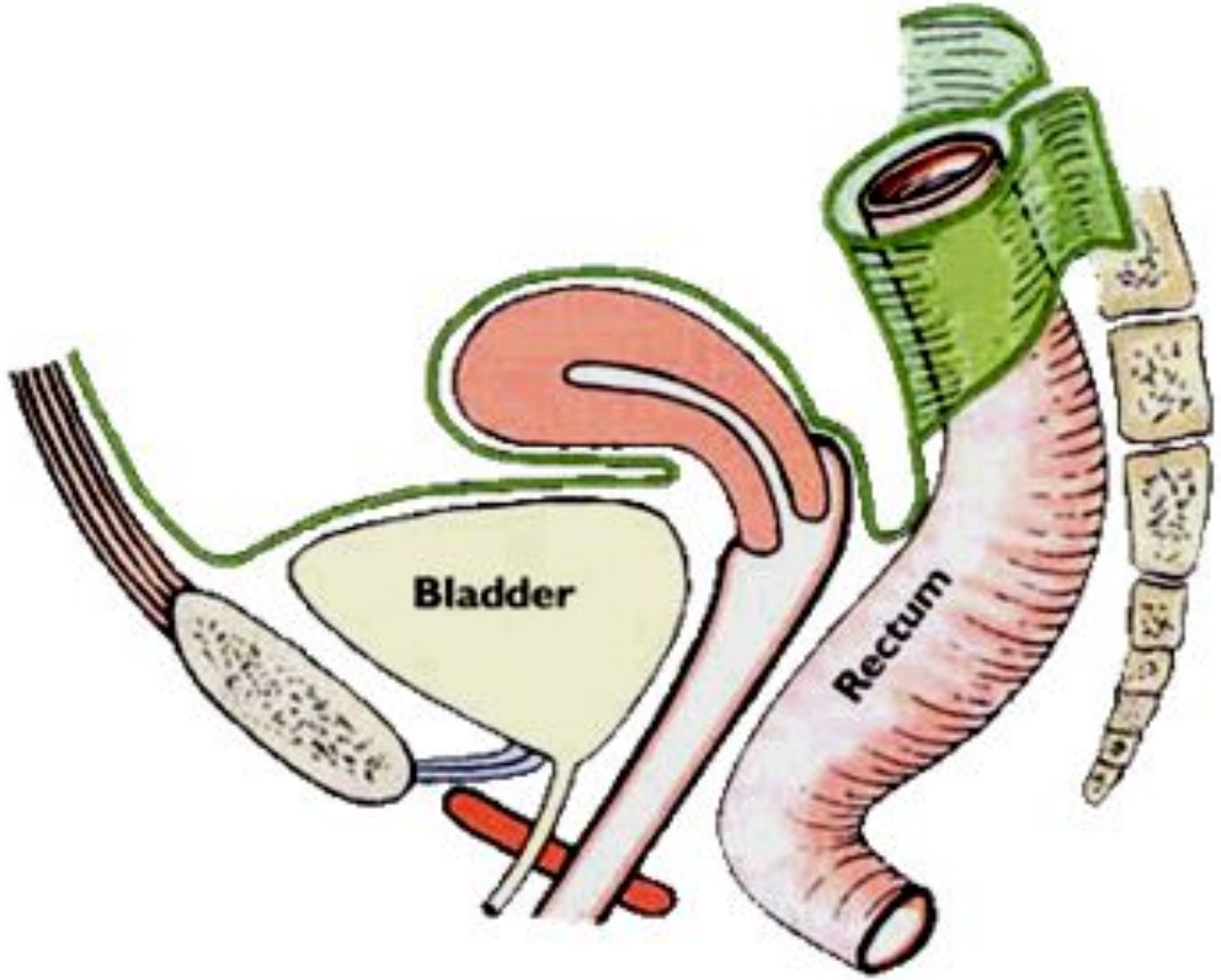
8.Stomach

9. Pancreas

10. Large Intestin-The main purposes of the large intestine is to pass remaining essential nutrients into the bloodstream and the storage and elimination of waste left-overs. As the nutritional fluids are absorbed and transferred out to the bloodstream, the contents get more solid and compact.



11. Rectum-The last portion of the large intestine used for storageof stool ready for disposal. When the rectum becomes full, it triggers nerves that carry that message to the brain.


Bladder
Rectum

TERMINOLOGY:

Esophagus-the long tube between the mouth and the stomach. It uses rhythmic muscle movements to force food from the throat into the stomach
Gall bladder-a small sac-like organ located by the duodenum. It stores and releases bile into the small intestine
Gastrointestinal tract- the system of the body that processes food and gets rid of waste
Ileum-the last part of the small intestine before the large intestine begins
Intestines-the part of the alimentary canal located between the stomach and the anus
Jejunum- the long coiled mid-section of the small intestine it is between the duodenum and the ileum
Liver- a large organ located above and on front of the stomach. It filters toxins from the blood and makes bile and some blood proteins
Mouth-the first part of the digestive system where food enters tye body. Chewing and salivary enzymes in the mouth are the beginning of the digestive process
Pancreas- an enzyme-producing gland located below the stomach and above the intestines.
Peristalsis- rhythmic muscle movements that force food in the esophagus from the throat into the stomach. Peristalsis is involuntary –you cannot it.
Rectum-the lower part of the large intestine where feces are stored before they are excreted


The End