***The Digestive System***

***The Body Needs Energy and Materials***

* Nutrients are important substances that enable the body to move, grow, and maintain homeostasis. 4 types of nutrients:
  1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ IS a nutrient: more than half your body is made of it!
  2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is used in the body for growth and repair, and cells of muscles, bones, and skin are made of protein.
  3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ provide cells with energy.
  4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ stores energy.

***The Digestive System Moves and Breaks Down Food***

* Before your body can use nutrients, they must be broken down into smaller substances.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the process of breaking down food into usable materials by moving and breaking it down.
* Material is moved from the esophagus to the stomach by wavelike contractions of smooth muscles called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* The body breaks down food in two ways: physically and chemically.
* Mechanical Digestion
  1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ changes = mechanical changes, which break food down into smaller pieces.
  2. Your teeth chew your food so you’re able to swallow it.
  3. Your stomach breaks down food mechanically by mashing it during peristalsis.
* Chemical Digestion
  1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ changes actually change food into different substances.

***The Path of Digestion***

* Mouth and Esophagus
  1. Both mechanical and chemical digestion occur in the mouth.
  2. Teeth break down food into smaller pieces (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_).
  3. Salivary glands release saliva, softening food (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_).
  4. Tongue pushes food to back of mouth and down throat while swallowing.
  5. Food travels down the esophagus to the stomach.
  6. Peristalsis moves solid food from throat to stomach in 8 seconds, liquid foods in 2.

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* Stomach
  1. Strong \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the stomach mix and mash food particles.
  2. Chemicals in the form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are used to break down food.
     + These are so strong they could eat through the stomach itself.
     + The stomach’s lining is replaced \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to prevent this.
* Small Intestine
  1. Partially digested food moves from the stomach to the small intestine.
  2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are released by the assisting organs and they break down nutrients.
  3. Most of the nutrients broken down during digestion are absorbed here.
  4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are found throughout the small intestine that contain folds that absorb \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from proteins, fats, and carbohydrates and send them to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ system.
* Large Intestine
  1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and some other nutrients are absorbed from the digested material.
  2. Most of the solid material remaining is \_\_\_\_\_\_\_\_\_\_\_\_\_, which is compacted and stored.
  3. Eventually this waste is eliminated through the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

***Assisting Organs***

* Although not in the “digestive tract”, the liver, gallbladder and pancreas all play an important role in digestion by producing or concentrating important \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Liver
  1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ internal organ of the body
  2. Located in the abdomen just above your stomach
  3. You can survive losing a large portion of your liver, but it is still important
  4. Filters blood, cleansing it of harmful substances, and stores unneeded nutrients for later
  5. Breaks down golden yellow substance (\_\_\_\_\_\_\_\_\_\_\_\_), which breaks down \_\_\_\_\_\_\_\_\_
  6. Breaks down medicines and produces important proteins
* Gallbladder
  1. Tiny sac connected to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ produced in the liver is stored here until sent to small intestine
* Pancreas
  1. Located between the stomach and small intestine
  2. Produces chemicals needed as materials move between these two organs
  3. Lowers the \_\_\_\_\_\_\_\_\_\_\_ in the small intestine and breaks down proteins, fat and starch
  4. Without these chemicals you would die of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, even with plenty of food
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