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Bio U4GP According to The National Institute of Diabetes and Digestive and Kidney Diseases (2008, pg The digestive system is made up of the digestive tract—a series of hollow organs joined in a long, twisting tube from the mouth to the anus—and other organs that help the body break down and absorb food. Organs that make up the digestive tract are the mouth, esophagus, stomach, small intestine, large intestine—also called the colon—rectum, and anus.” Each of the aforementioned organs is hollow and lined with mucosa, which produces fluids to help digest food as it moves through them. Also contained in the digestive tract is a layer of muscle that helps in the process of breaking down food (The National Institute of Diabetes and Digestive and Kidney Diseases, 2008).

In addition to the aforementioned hollow digestive organs, there are also solid organs that produce or store digestive juices to aid in the digestive process. These solid organs are the liver, pancreas, and gallbladder. The liver and pancreas produce digestive fluids that travel to the intestine via ducts. The liver’s digestive juices are stored in the gallbladder until the intestine needs them. Also, there are parts in the nervous and circulatory system that play serious parts in the overall digestive process (The National Institute of Diabetes and Digestive and Kidney Diseases, 2008).

Also according to the National Institute of Diabetes and Digestive and Kidney Diseases, “ When you eat foods—such as bread, meat, and vegetables—they are not in a form that the body can use as nourishment. Food and drink must be changed into smaller molecules of nutrients before they can be absorbed into the blood and carried to cells throughout the body. Digestion is the process by which food and drink are broken down into their smallest parts so the body can use them to build and nourish cells and to provide energy.”

## References

Your digestive system and how it works. (2008). National Institute of Diabetes and Digestive and Kidney Diseases. Retrieved August 13, 2008, from <http://digestive.niddk.nih.gov/ddiseases/pubs/yrdd/>

### How the Organ System Contributes to Physiological Homeostasis of the Human Organism

According to Merck (2008, pg. 1), “ Although an organ has a specific function, organs also function as part of a group, called an organ system. The organ system is the organizational unit by which medicine is studied, diseases are generally categorized, and treatments are planned.” The organ systems within the human body include the cardiovascular, respiratory, nervous, skin, musculoskeletal, blood, digestive, endocrine, urinary, male reproductive, and female reproductive systems.

Organ systems do not function by themselves. Instead, they work with each other to accomplish tasks that are needed for the human organism to survive. This means that communication between organs and organ systems is imperative. “ Communication allows the body to adjust the function of each organ according to the needs of the whole body. Through communication, the body keeps itself in balance—a concept called homeostasis. Through homeostasis, organs neither underwork nor overwork, and each organ facilitates the functions of every other organ” (Merck, 2008, pg. 1).

Homeostasis can be maintained through communication that occurs in the nervous system or through the process of chemical stimulation. According to Merck (2008, pg. 1), “ One part of the nervous system, the autonomic nervous system, largely controls the complex communication network that <https://assignbuster.com/bio-u4gp/>

regulates bodily functions. This part of the nervous system functions without a persons thinking about it and without much noticeable indication that it is working. Chemicals used to communicate are called transmitters.

Transmitters that are produced by one organ and travel to other organs through the bloodstream are called hormones. Transmitters that conduct messages between parts of the nervous system are called neurotransmitters.”

#### References

Organ systems. (2008). Merck. Retrieved August 14, 2008, from <http://www.merck.com/mmhe/sec01/ch001/ch001d.html>