

How a 55 year old man digests a meal



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How a 55 year old man digests a meal LaShelle Benson Unit 9 Catherine Rice

Today on our fantastic voyage we are going to be taken through the digestive system of a male, age 55 and we will be following what happens to a hamburger, fries and a refreshing glass of root beer, as its enters his body and begins the process of digestion. After that we will then follow the root beer into the blood stream and to the kidneys, through the urinary tract and then our journey will end when the urine is expelled. Let's begin!! The first step of our journey begins in the mouth. Here food is ground up using his teeth and his saliva helps to moisten the food to help make the food easier to swallow. Once the food is ground up and moistened up, the body then uses its swallowing reflex to help push the food down, using the pharynx, the muscle at the back of the throat, Its then pushed to the esophagus. At the very bottom of the esophagus is a round, ring like muscle called the lower esophageal sphincter, this attaches the esophagus to the stomach. This muscle is usually contracted but as food moves down the esophagus it relaxes and allows food to enter the stomach. Next we enter the stomach and as you can see the stomach begins to add more moisture to the food (gastric acid) from the stomach lining and it is mixed up almost like a slow moving blender. Once the food is mixed up the next step of our journey is where we enter the +small intestine. According to <http://digestive.niddk.nih.gov/ddiseases/pubs/yrdd/#food> the first of the foods to enter the small intestine are the carbohydrates, this is because simple sugars are broke down first to provide energy to the body. Next to enter the digestive system is the proteins, this way the body can gets the nutrients that is needed to build strong muscles as quickly as possible. Last but not least the fatty parts of the food enter into the small intestine; the reason for them being last in <https://assignbuster.com/how-a-55-year-old-man-digests-a-meal/>

this process is because they are the hardest for the body to break down. Once food is at this point, the food mixed with the acid is called chyme. The first part of the small intestine is called the duodenum, it then moves to the jejunum and then the ileum. The small intestine is the hardest working part of the digestive system. It continues to add juices to the food from the pancreas and the liver to help with digestion while at the same time it removes the vitamins, minerals and other nutrients from the food and introduces them to the blood stream to allow the body to get everything it needs to maintain health. If we were to continue our voyage to the large intestine we would then see the colon and then the chyme would then lose some of the liquids and turn to feces which would then be stored in the rectum until it is expelled from this individual having a bowel movement. Our journey is going to take us away from the large intestine though and will have us stop at the distal ileum instead, go through the mucosal membrane and enter the bloodstream via the Superior Mesenteric Vein. Once we have arrived at the Superior mesenteric vein, we will follow the path to the Portal vein which will then lead us to this individual's Liver. The liver is known for taking out the toxins that have been ingested, helping with absorption of proteins and also produces chemicals to help with further digestion. After we leave the liver we will reenter the blood system and go through the Hepatic vein and we will visit its neighbor, the Inferior vena cava. The Right atrium is our next stop as blood builds up in here it gets pumped into the, Right ventricle (via tricuspid valve), which is our next stop. Here blood is deoxygenated and then it is sent to the Pulmonary artery (via pulmonary valve). After the blood is deoxygenized and sent through the pulmonary artery it is sent to the Lungs. As I am sure you can guess the job of the lungs

is to add oxygen back to the blood and Pulmonary vein. We will now follow the oxygenated blood through the Left atrium to the Left ventricle (via mitral valve). After we leave the left ventricle we will follow the blood to the Aorta. The aorta is a very important organ as it separates and sends the blood to all of the different body parts, were going to follow the path of through Ascending aorta. Next we will pass through the Arch of aorta which connects to the Descending aorta, then the Thoracic aorta, abdominal aorta, Left renal artery (branch). The renal arteries supply the blood to our next big destination, the left kidney. The kidney is a very important organ. Although a person can have a kidney removed, this means the other kidney has to be working at full function otherwise a person will need a transplant, you cannot live without at least 1 properly functioning kidney. The kidney is important in removing toxins, balancing out the water and salt ratio and removing any acids left over from the beginning of the digestive system so they do not enter the urine stream. To continue our journey we will have to get to the bladder but using the path of the ureters. The ureters, as you can see are two very small tubes where the cleaned urine flows through. Now that we have traveled the ureters we are now entering the bladder. Urine can stay in the bladder for a few minutes or hours, just depending on how they belong to and how strong or big of a bladder that particular individual has.

Complications can arise if someone holds the urine in the bladder for too long as this allows for bacteria to form and can causing a bladder infection. If a bladder infection is not treated the bacteria will take the opposite route of us, head back up the ureters and back to the kidneys where it can cause even more complications and pain as a kidney infection. The last part of our journey will lead us to the urethra and as we follow the urethra it comes to

an opening where the urine, and ourselves will be expelled. As we have learned today each body part depends on the other in order to keep the body functioning and to maintain homeostasis, if one part of the body malfunctions and it can cause problems for the rest of the body. This sometimes makes a doctor's job difficult and a patient may come in with complaints of a problem and after many tests finds out that the problem actually lies elsewhere in the body. I hope you have all enjoyed this journey through the digestive system today, and we hope to see you again on our next big adventure! References: <http://www.enchantedlearning.com/subjects/anatomy/digestive/> <http://digestive.niddk.nih.gov/ddiseases/pubs/yrdd/#food> <http://answers.yahoo.com/question/index?qid=20110308194022AA3zUBt> <http://kidneyfunction.org/what-is-the-purpose-of-kidney-function/>