

What am I made of... and why do I get sick?



XP.

Organ Systems of the Body Digestive System



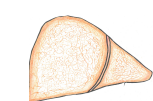
Mouth

Location
The mouth is in the front of your head which is in the top part of your body and is the start of the digestive system.

Function
The mouth is the first step in food traveling through the body. When you chew your food it breaks it down into smaller pieces with help from saliva. Saliva is a liquid and helps swallowing as it makes it easier for food to go down the oesophagus. This is the long tube from your mouth that goes down to the stomach.

Anaphylaxis
Anaphylaxis is an allergic reaction that makes the tissues become swollen which can cause difficulty breathing, vomiting, lightheadedness and low blood pressure. In the mouth, the tongue and throat swell up and it can stop you breathing, which is very dangerous. Anaphylaxis is caused by allergies to insect stings or bites, foods or medication. Anaphylaxis is non communicable, it can't be caught from other people. You can deal with anaphylaxis with an epipen. This injects adrenaline which brings the swelling down.

Noah Heyes and Jake Riddiough



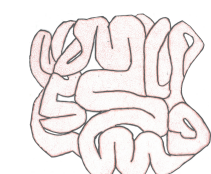
Liver

Location
The liver is found just above and to the right of the stomach, under the ribcage. The liver is a big organ and the heaviest too, at 1.5-3kg. It is found after the stomach in the digestive system and before the small intestine.

Function
Food never enters the liver but it is very important because it stores glucose and processes food. The liver makes bile and stores it in the gallbladder until it is ready to be squirted into the small intestine. The bile is used to break down fats into fatty acids, which can be taken into your body by the small intestine. The liver also stores all sorts of vitamins and nutrients.

Liver Disease
The liver has many different jobs and there are many kinds of liver disease. Signs of liver disease are that you want to eat less, lose weight and you can get jaundice, so if your skin goes yellowish you will need to visit the hospital. One example is cirrhosis of the liver. The biggest cause of the disease is alcohol. After years of drinking too much alcohol, your liver becomes scarred. Less blood flows to your liver because your liver tissue is damaged so the liver can't do its jobs properly. Don't worry though, liver disease can be avoided by living a healthy life, doing lots of exercise and eating well. This makes you less likely to get many types of liver disease. One amazing ability of the liver is that it can regenerate and regrow itself when damaged.

Storm Butterworth, Joshua Marshall and Joseph Nixon



Small Intestine

Location
The small intestine is a long tube that runs from your stomach to your large intestine, curled around in the middle of your belly. This is the longest organ in your body.

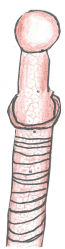
Function
The small intestine has lots of twists and turns so that it can fit in your tummy. The main job of your small intestine is to take the goodness from your food, called nutrients, by absorbing them into the rest of your body. Nearly all of the nutrients are absorbed here and the rest are absorbed in the large intestine. Your small intestine has special cells that have small bumps called villi. They increase the surface area of your small intestine. This allows more nutrients to be absorbed. The leftover food you don't need then goes onto your large intestine which takes out water and turns the bad stuff into poo.

Coeliac disease.
One condition that can affect your small intestine is coeliac disease. This is where your small intestine becomes sensitive to gluten. You cannot catch coeliac disease from other people. If you have coeliac disease, and you eat gluten, the villi of the small intestine will become smooth and nutrients cannot be absorbed properly. Gluten is found in foods such as bread and wheat. So if you have coeliac disease you need to avoid foods with gluten. Some symptoms of coeliac disease are vomiting and weight loss. You can live a normal and healthy life by avoiding foods with gluten in them.

Kiera Durkin & Zoe Flatters

This information was brought to you by Year 7 students at XP School and was made possible through an association with the Medical Imaging Department at Doncaster Royal Infirmary.

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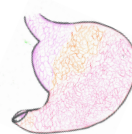
Oesophagus

The oesophagus is the tube behind your windpipe that leads from the mouth to your stomach. Swallowed food is sent to the stomach to be digested.

Function
In your oesophagus there are tiny circular muscles that squeeze the food down to the stomach. This is helped by the saliva made in your mouth which makes the food go to your stomach more easily. The muscles in your oesophagus mean that you can swallow your food even if you were upside down!

Oesophageal cancer
Oesophageal cancer is not common in children but in adults it causes difficulties swallowing and weight loss. Alcohol, tobacco, being overweight and having a poor diet are risk factors. The best way to avoid oesophageal cancer is to lead a healthy life, do not smoke or drink too much alcohol and eat lots of fruit and vegetables.

Matthew McEwen and Brandon Nilsen



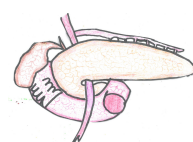
Stomach

Location
The stomach is in your tummy on the upper left side. It is between the oesophagus and the small intestine.

Function
The stomach is an organ that is mostly made of muscle and it's job is to store the food you eat and mix it with special acids which start to break down your food before it continues its journey through the digestive system. It can stretch to fit more food inside, and has a gooey lining to protect it from the acids. The stomach is split into different tissues which can release chemicals called enzymes to break down your food along with muscles which churn the food. Your stomach works as part of the digestive system.

Norovirus
One of the many different diseases that can affect the stomach is norovirus infection. Norovirus is a very communicable disease caused by a virus. This means it is passed from person to person easily in sweat or by eating contaminated food. Norovirus makes you have diarrhoea, stomach cramps and it can make you be sick. It stops digestion happening properly in the stomach. Your body often tries to get rid of the virus by vomiting and through diarrhoea. Luckily, norovirus usually goes away on its own after a couple of days. To feel better, you can drink plenty of water and get lots of rest. The virus can actually survive up to a week on a door handle and then when you touch that door handle, it might pass on to you. So to avoid catching norovirus you should wash your hands really well and often, especially if members of your family have caught it.

Owen Crooks and Ellis Mawby



Pancreas

Location
The pancreas lies in the tummy across the back of the stomach and is around 15-24 cm long. The tail of the pancreas stretches to the left side of the body. The pancreas is found between the liver and the small intestine in the digestive system.

Function
The pancreas has two different jobs that are very important. It makes enzymes and insulin. Enzymes get squirted out from your pancreas into your small intestine to help turn the food into a liquid mush. The pancreas also produces insulin, which helps control the levels of sugar in the blood.

Diabetes
Type 1 diabetes is when the pancreas doesn't make enough insulin. Most people's pancreas creates insulin to keep just the right amount of sugar in the blood. When someone has type 1 diabetes their pancreas cannot create enough insulin. Type 1 Diabetes is a non-communicable condition. This means you can't catch it from someone else. A person with diabetes carries an injection that is full of insulin. If there is not enough insulin in their blood, they can inject it into themselves to keep the blood healthy and keep themselves from becoming poorly. If they didn't do this it could be very serious for their health. Another form of diabetes called type 2 diabetes can develop as you get older. The best way to avoid getting type 2 diabetes is to eat healthily and avoid too much sugar in your diet.

Maisie Finney and Alisha Kaur



Large Intestine

Location
The large intestine is found in the lower tummy. It is a long tube that goes around the edge of the small intestine. It is the last part of the digestive system. The large intestine is about 1.5 meters long and is at the end of the digestive system.

Function
The main job of the large intestine is take out the remaining water from 'chyme'. Chyme is partly digested food that has traveled through the digestive system. Once it has reached the large intestine, the body has absorbed most of the nutrients, so what is left is the waste the body doesn't need. The water that is absorbed is then recycled back into the blood.

Diarrhoea
Diarrhoea is watery poo. Digested food goes through the large intestine too quickly meaning the water can't be absorbed. This can be caused by germs. Some of these germs have names like salmonella and E.coli and can be found in uncooked food like chicken, pork or eggs. The germs can get into your body because of bad hand washing and poor hygiene when preparing food, or not cooking food properly. It can also be spread from person to person, so it is important to wash your hands after going to the toilet. As bad as it might feel, don't worry because diarrhoea is very common and usually it is not serious. If you have diarrhoea it normally lasts about 2 or 3 days. Because you lose lots of fluid it is important to drink lots of water if you are poorly with diarrhoea. If the diarrhoea is really bad, there are medicines that you can buy from the chemist that help replace the water and good minerals that you lose.

Paige Carter and Clarice Duffield