



Your Health

Organ Origami©

by Jack Grierson

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What's the largest organ you can think of in the body? The stomach? The liver? Perhaps the brain? What if I told you that the largest organ was actually the skin?

The definition of an organ is a collection of cells that work together to carry out a single function in the body. These cells are specialized to carry out the necessary actions needed for the organ to function. An example is stomach cells releasing acid during the digestive process.

During this article we'll briefly talk about some of the main organs and what they do. We'll then discuss some of the less known organs and their importance.

So let's start with the main organs you've more than likely heard of. Here's a brief summary of the heart, brain, liver, stomach and skin.

The Heart: This is probably the most well known organ. The heart is used to pump blood around the body and get oxygen to all organs. In order to work correctly, oxygen is vital; hence the circulatory system has arteries and veins. Arteries carry blood with high levels of oxygen to the organs and veins carry blood with low levels of oxygen away from them.

The Brain: The brain is arguably the most important organ of the body. It is responsible for thinking, feeling, processing information and your responses. It has some element of plasticity which means it can adapt throughout life.

The Liver: The importance of the liver cannot be underestimated. Even though skin is considered the largest organ, the largest internal organ is the liver. It can weigh between 1.2 and 1.5 kilograms! The liver's main job is to secrete certain substances to be used elsewhere in the body. It is vital to detoxify chemicals and metabolize drugs. It also makes bile which is essential for digestion. In case that wasn't enough, the liver also makes clotting factors that stop you bleeding after you've cut yourself.

The Stomach: I'm sure we all know what the stomach does. But as with every organ in the body, it's more complex than you think. The stomach digests food both chemically and mechanically. Acid is released from the glands in the stomach lining which not only break down the food, but also protects against any harmful bacteria.

The Skin: Yes, believe it or not this is an organ. It consists of several different types of tissues including sweat glands, hair follicles and many different skin type layers. It not only provides protection and gives us the sense of touch but is also very important in temperature regulation.

Now that we've recapped some of the main organs in the body, what about those that aren't as well known like the pituitary, spleen, thyroid, gallbladder and pancreas?

The Pituitary: This is a very small organ (about pea sized) located just underneath the brain. It's debated whether or not the pituitary is classified as an organ as it is technically a gland. Its main function is the release of hormones that control growth, metabolism, puberty, reproduction, stress and breastfeeding. For such a small gland it has a big influence!

The Spleen: You may have heard of this bursting. The spleen is highly vascular which means that a lot of blood runs through it, hence bursting it can lead to some serious blood loss. The spleen's function is to act like a blood filter. It cleans the blood of dead or malfunctioning cells. It can also remove viruses, parasites, bacteria or any other foreign particles in the blood. A very important organ indeed.

The Thyroid: The thyroid is needed to produce hormones. These hormones can have some very long names but they can cause increased heart and breathing rates. They also play a large part in metabolism and can lead to weight changes if they get out of balance. Thirdly, they have a role involving bone formation.

The Gallbladder: This one is simple. The gallbladder's primary task is to store bile produced from the liver as we explained earlier.

The Pancreas: The pancreas produces many enzymes that help with digestion, but it's most famous for the production of insulin. Insulin is needed to absorb glucose which is the body's primary energy source. Diabetes Type 1 causes the body's immune system to attack the pancreatic cells that produce insulin, so that insulin is no longer made.

While we are busy running about our lives, we often forget what's going on in the background. This week's advice: Take some time to admire the complexity and well-oiled machine that is the human body.

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