



# THE LIVER, KIDNEYS, AND PANCREAS

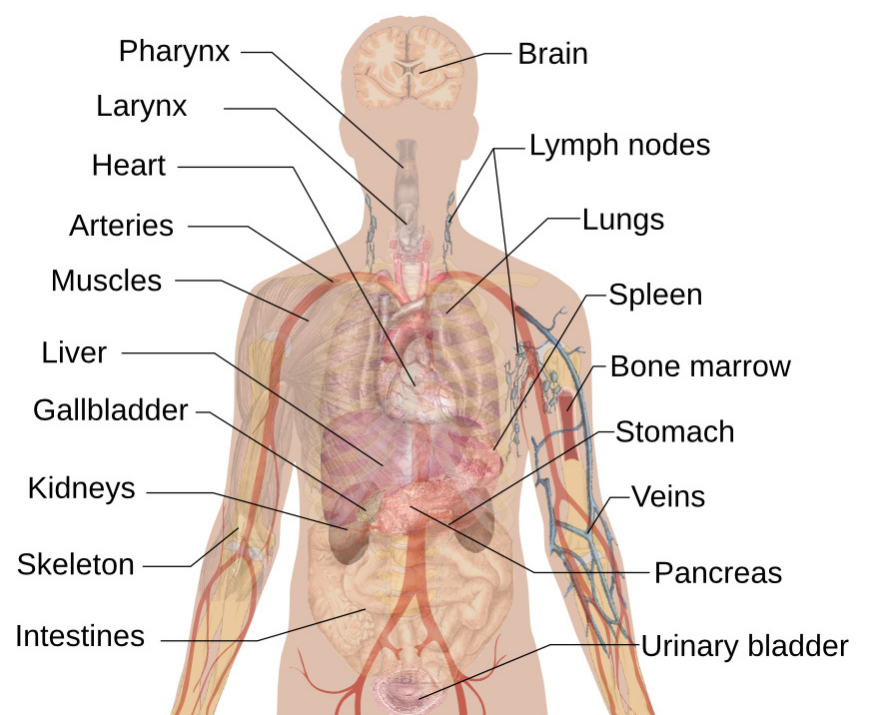
## What is the Liver?

The Liver is the largest solid organ in the body. It grows as we grow until, when we are adults, it has reached the approximate size of an American Football. It can be found on the right side of the body, just under the rib cage. Blood constantly flows through the liver to be cleaned and processed, and the liver holds approximately 13% of the body's entire volume of blood at any one time.

## What does the Liver do?

The Liver has over 500 functions, but some of the most important ones are:

- Processing digested food and absorbing useful nutrients into the blood.
- Removing harmful substances and waste products from the blood.
- Breaking down food and converting it to energy, especially heat.
- Storing energy as glycogen, ready to be used when it is needed quickly.
- Making bile, which is stored in the gallbladder until it is needed in the blood to help absorb fat from food.
- Fighting infections within the body, and cleaning bacteria from the blood.
- Storing iron, vitamins, and other essential chemicals until they are needed.
- Making enzymes and proteins to be used elsewhere in the body.



## What are the Kidneys?

We each have two Kidneys. They sit under the ribcage - one on either side of the spine - and filter the blood that they receive from the renal artery.

Their most important task is to filter waste. They also filter enough water from the blood to keep the fluid levels in our bodies balanced, and combine this excess water with the filtered waste to make urine. The urine travels through the ureter to the bladder, where it is stored until we go to the toilet.



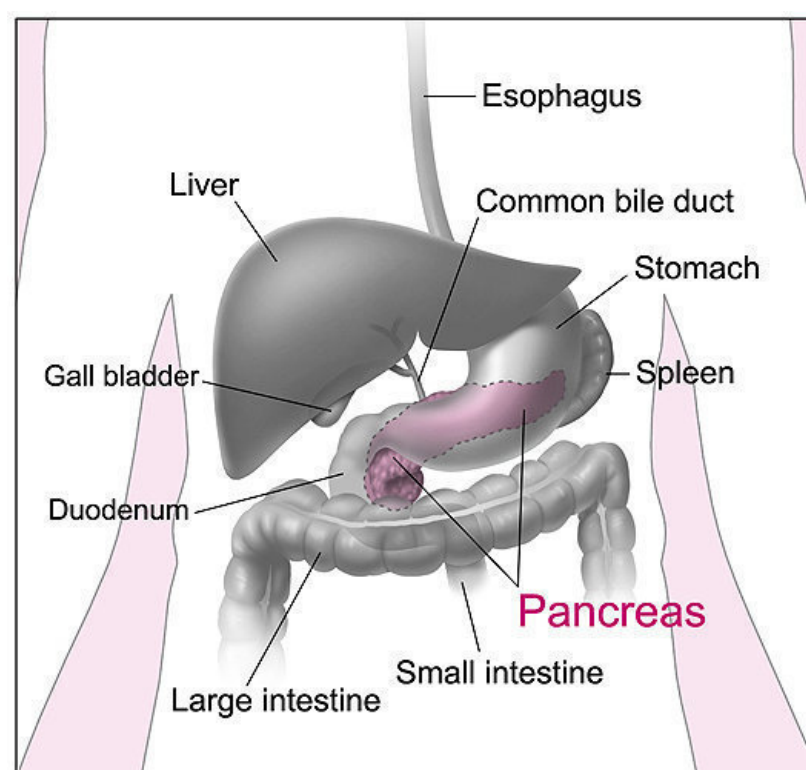
Our Kidneys are also involved in:

- Keeping levels of certain minerals in the blood such as potassium, sodium and phosphate stable.
- Producing hormones that make red blood cells.

## What is the Pancreas?

The Pancreas is a long, flat gland about 12 cm long that sits behind the stomach. It has two main jobs:

- Making enzymes which digest fats, carbohydrates and proteins, and sends them to the small intestine through the pancreatic duct. The nutrients can then be absorbed into the blood.
- Making hormones: most importantly insulin, which controls and regulates the amount of glucose (sugar) that the body can store and use. When the Pancreas cannot make enough insulin, the person may develop diabetes.



## References

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