

All the cells in the human body

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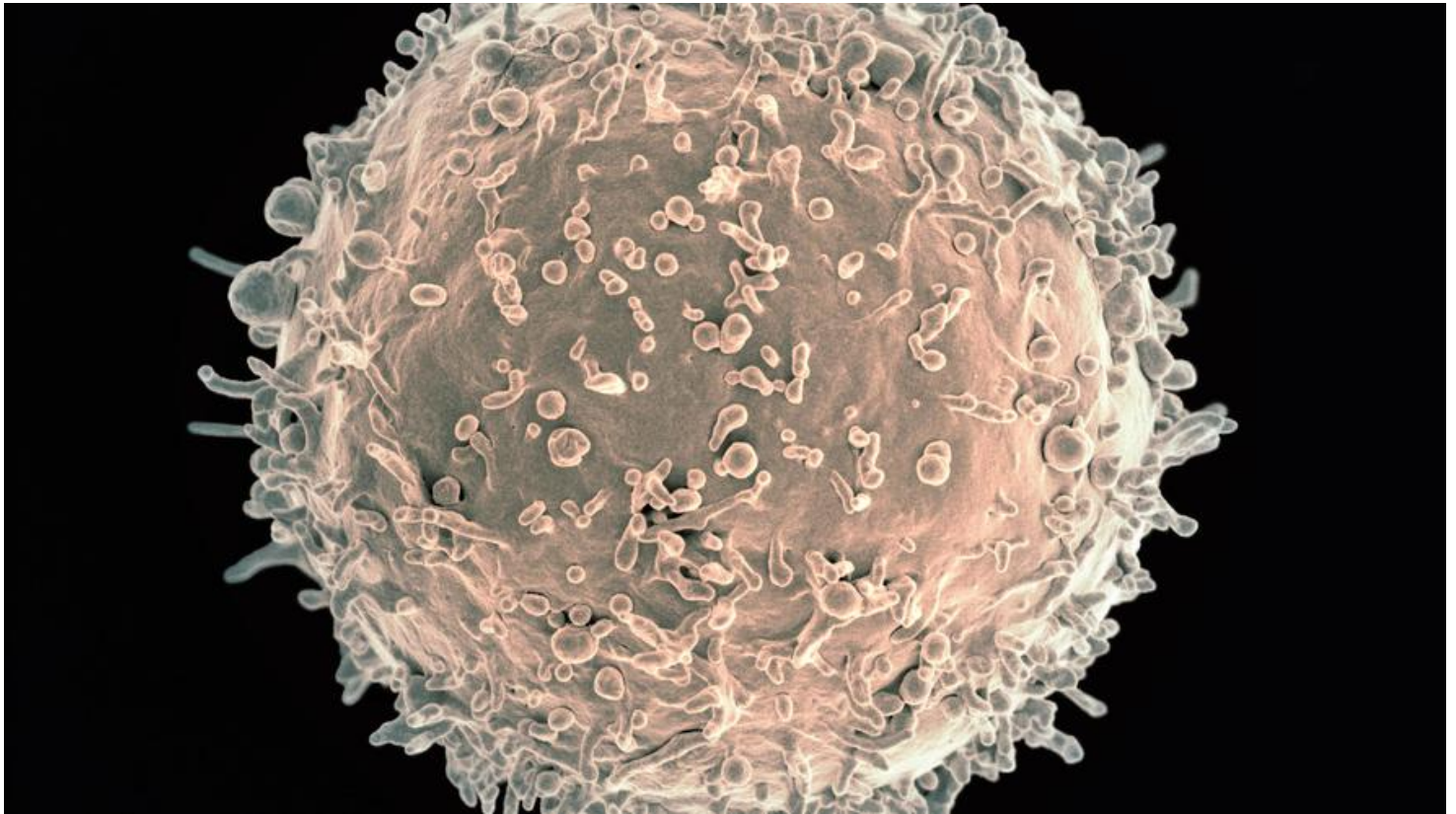


Image of a lymphocyte, a type of cell that makes antibodies. Antibodies act against harmful bacteria and viruses. Photo by: NIAID/Flickr.

Cells are the building blocks of life. We are all made up of cells. Each one has a certain job.

Cells depend on each other to keep the body working. Here are some different kinds of cells in the human body.

Stem Cells

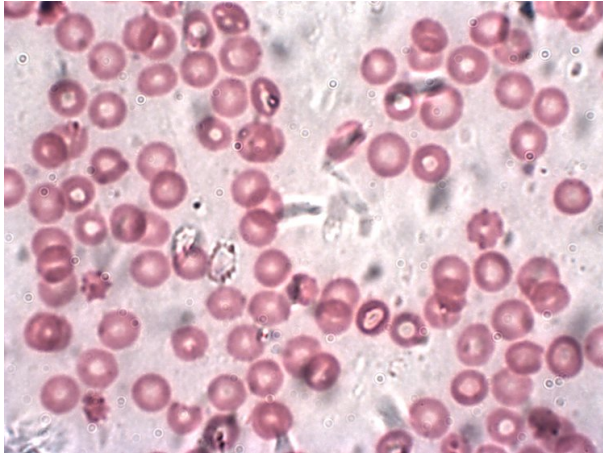
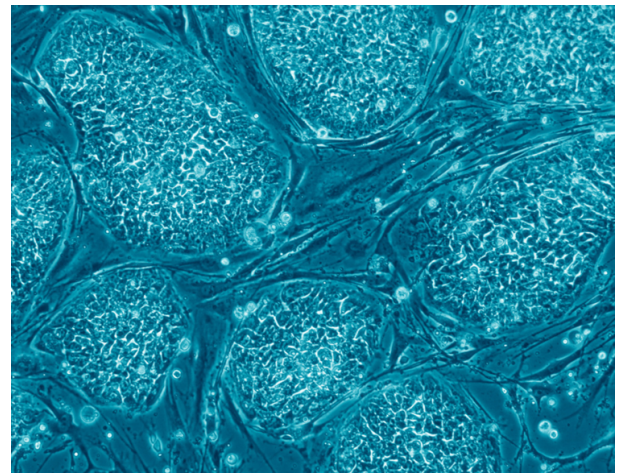
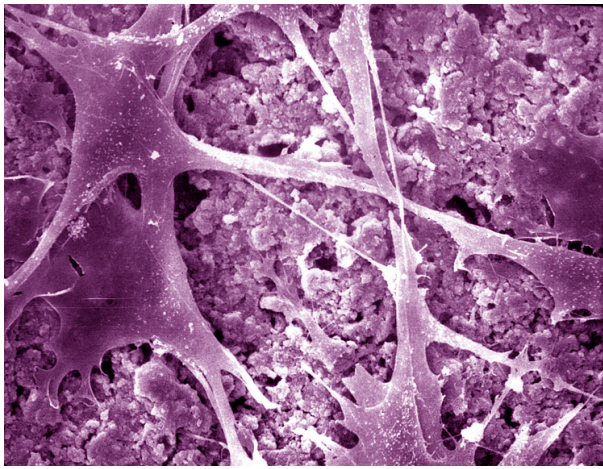
Stem cells can turn into many other kinds of cells. When one kind of cell stops working, stem cells can help. They can turn into that cell and take its place. Scientists are studying new ways to use stem cells. These cells can help people heal faster.

Bone Cells

Bone cells are what make up our bones. Without them, our bodies would not stand up or move. Different types of bone cells work together. They can make new bones and keep them healthy.

Blood Cells

The blood has red blood cells, white blood cells and platelets. Red blood cells carry oxygen to other cells in the body. Cells



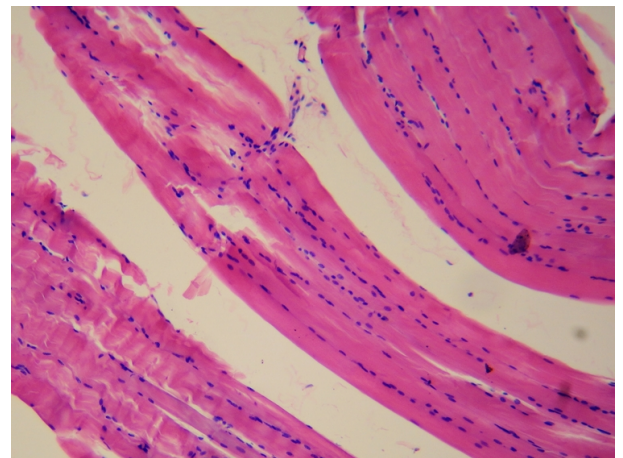
need oxygen to live. White blood cells destroy certain germs. They protect our bodies from disease. Blood vessels are tubes that carry blood. When you cut your finger and it bleeds, a blood vessel has been broken. Platelets help to clot the blood, or make it thicker. This closes up the cut. Platelets keep us from losing too much blood.

Muscle Cells

Muscle cells form muscles. Parts of muscles are attached to bones. They allow us to move around as we please. These muscles are called skeletal muscles.

Some muscles in our body move without us telling them to. These are called involuntary muscles. Some examples are the cardiac muscle cells inside the heart. These cells help the heart relax and fill with blood.

Another involuntary muscle is smooth muscle. This is found in various organs.

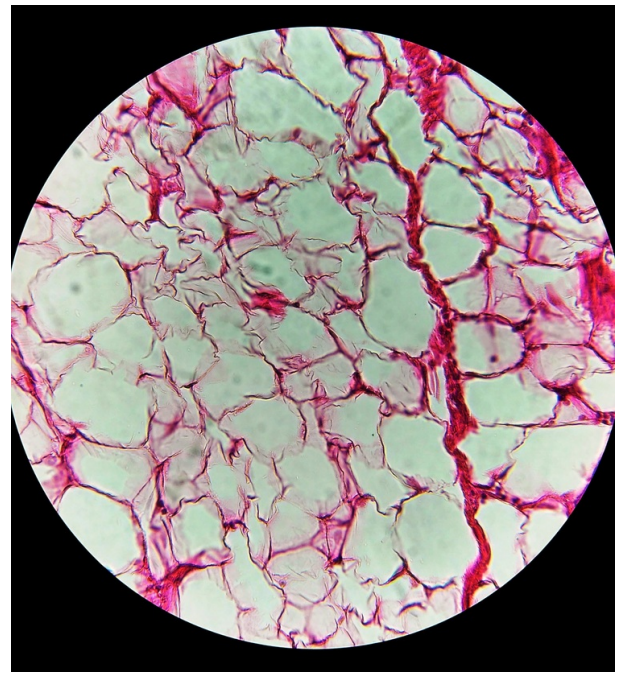
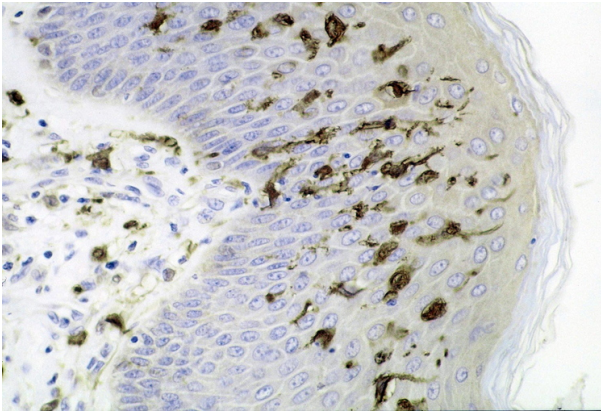


Fat Cells

Fat cells, or adipocytes, have fat inside them. This fat can be stored for when we need energy. When fat is being stored, fat cells grow round like a balloon. When fat is being used, these cells shrink.

Skin Cells

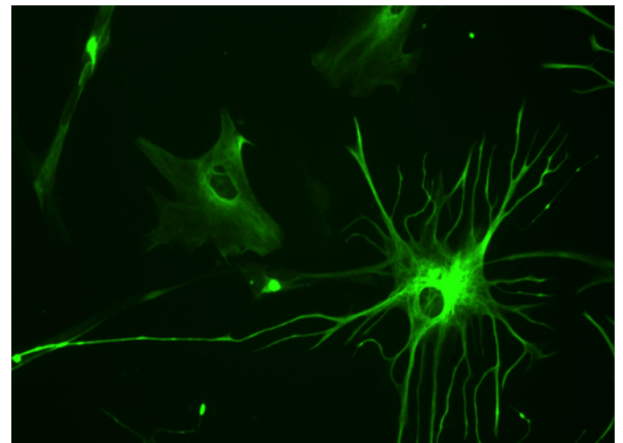
The skin is made up of many



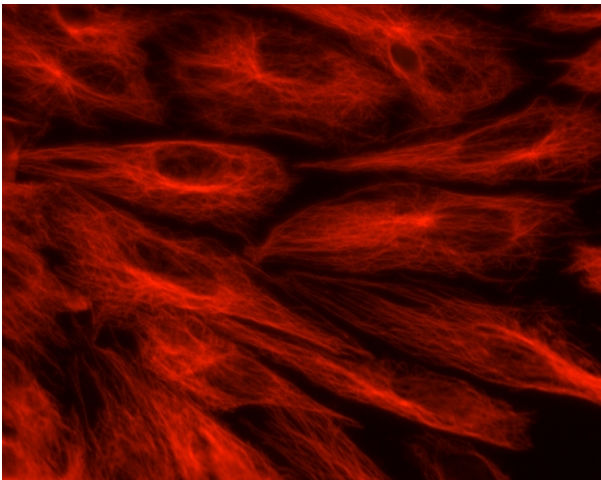
layers. The outer layer of the skin is made up of flat cells. They are closely packed together. This layer is called epidermis, and sits on another layer called dermis. The skin protects the parts inside the body. It also stores fat and blocks us from germs.

Nerve Cells

Nerve cells send messages to the rest of our bodies. These messages move between the brain, spinal cord and various organs. Nerve cells are also called neurons. A neuron is made of two parts, a body and nerve endings. These endings are called axons and dendrites. They are like fingers that reach out to other neurons.



Endothelial Cells



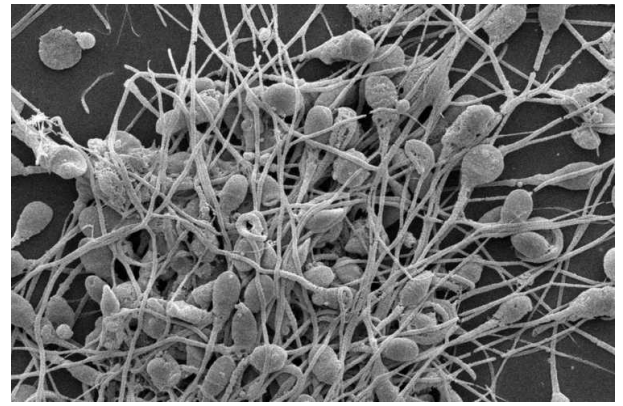
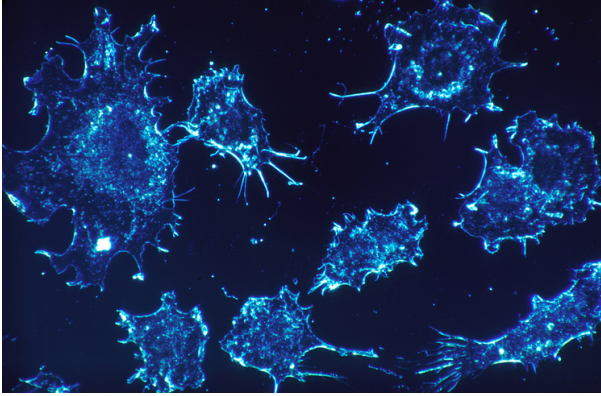
Endothelial cells are along the inside of our veins and organs. They make new veins and help with the flow of blood.

Sex Cells

When sex cells, or gametes, come together, they create a new life. Male sex cells are called sperm. They can move around and have a long tail. Female sex cells are called ova. They do not move and are larger than sperm cells.

Cancer Cells

Cancer cells are cells that are



sick. Normally, cells can go through apoptosis. This is a series of steps in which the cells die. Apoptosis stops cells from making copies of themselves forever.

Cancer cells do not go through apoptosis. They multiply quickly. Then they spread to other parts of the body.

Quiz

1 Read the paragraph from the section "Blood Cells."

The blood has red blood cells, white blood cells and platelets. Red blood cells carry oxygen to other cells in the body. Cells need oxygen to live. White blood cells destroy certain germs. They protect our bodies from disease.

Which question is answered in this paragraph?

- (A) What is the role of blood vessels?
- (B) What type of cells are attached to bones?
- (C) What type of blood cell helps to clot your blood?
- (D) What are the different types of blood cells?

2 Which sentence from the section "Stem Cells" BEST explains the role of stem cells?

- (A) When one kind of cell stops working, stem cells can help.
- (B) They can turn into that cell and take its place.
- (C) Scientists are studying new ways to use stem cells.
- (D) These cells can help people heal faster.

3 Read the selection from the section "Nerve Cells."

Nerve cells send messages to the rest of our bodies. These messages move between the brain, spinal cord and various organs. Nerve cells are also called neurons.

Fill in the blank.

A "neuron" is a _____.

- (A) cell that moves information from the brain to other parts of the body
- (B) stem cell that has both an axon and a dendrite
- (C) cell that controls the fingers of a body
- (D) cell that makes up the spinal cord

4 Read the paragraph from the section "Muscle Cells."

Some muscles in our body move without us telling them to. These are called involuntary muscles. Some examples are the cardiac muscle cells inside the heart. These cells help the heart relax and fill with blood.

What is the BEST definition of "involuntary" based on the context clues?

- (A) something that happens on its own
- (B) trying hard to do something
- (C) something moving back and forth
- (D) easily moved