



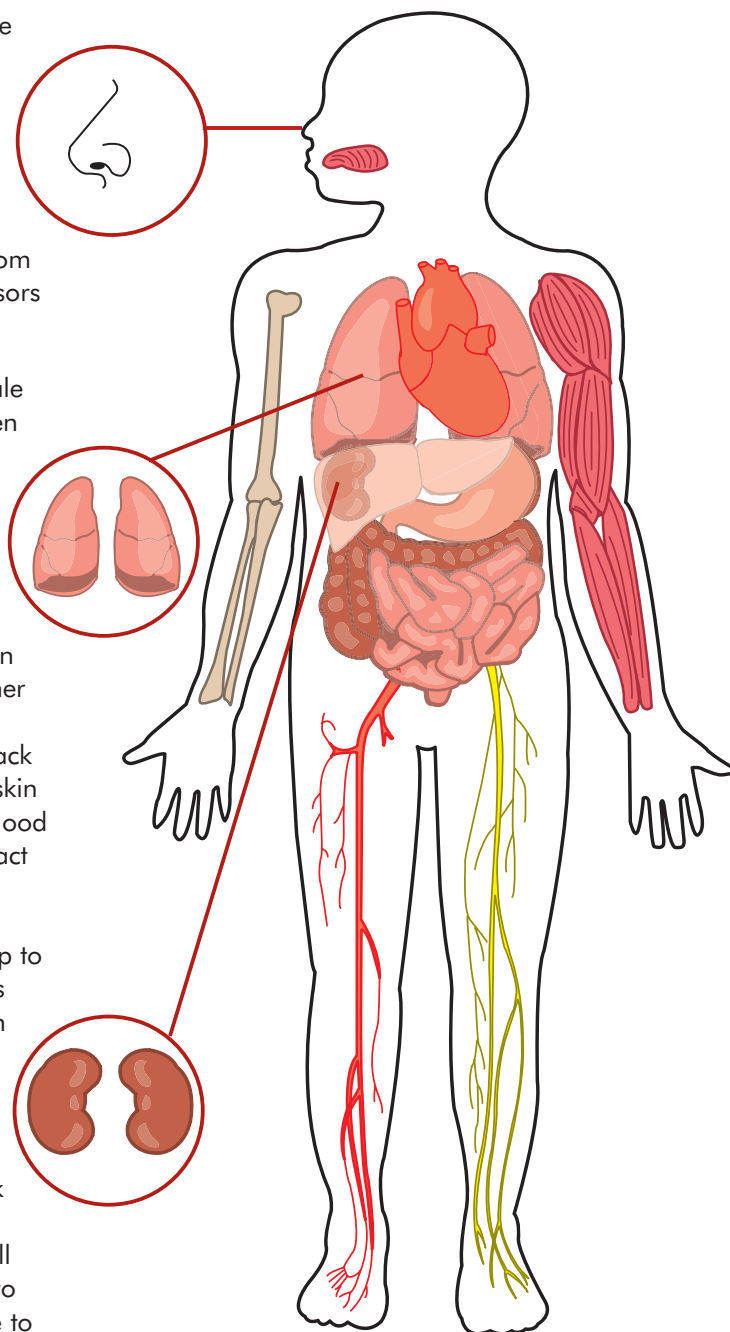
Nose—Your nose plays a key role in your sense of taste. You may remember that the last time you had a cold, nothing tasted quite right. That was because your nose was all stopped up. When you eat, vapors from your food float up through the back of your throat and into your nose. Then your nose reports what it smells to your brain. Your brain must have information from both the taste buds on your tongue and the sensors in your nose to tell how something really tastes.

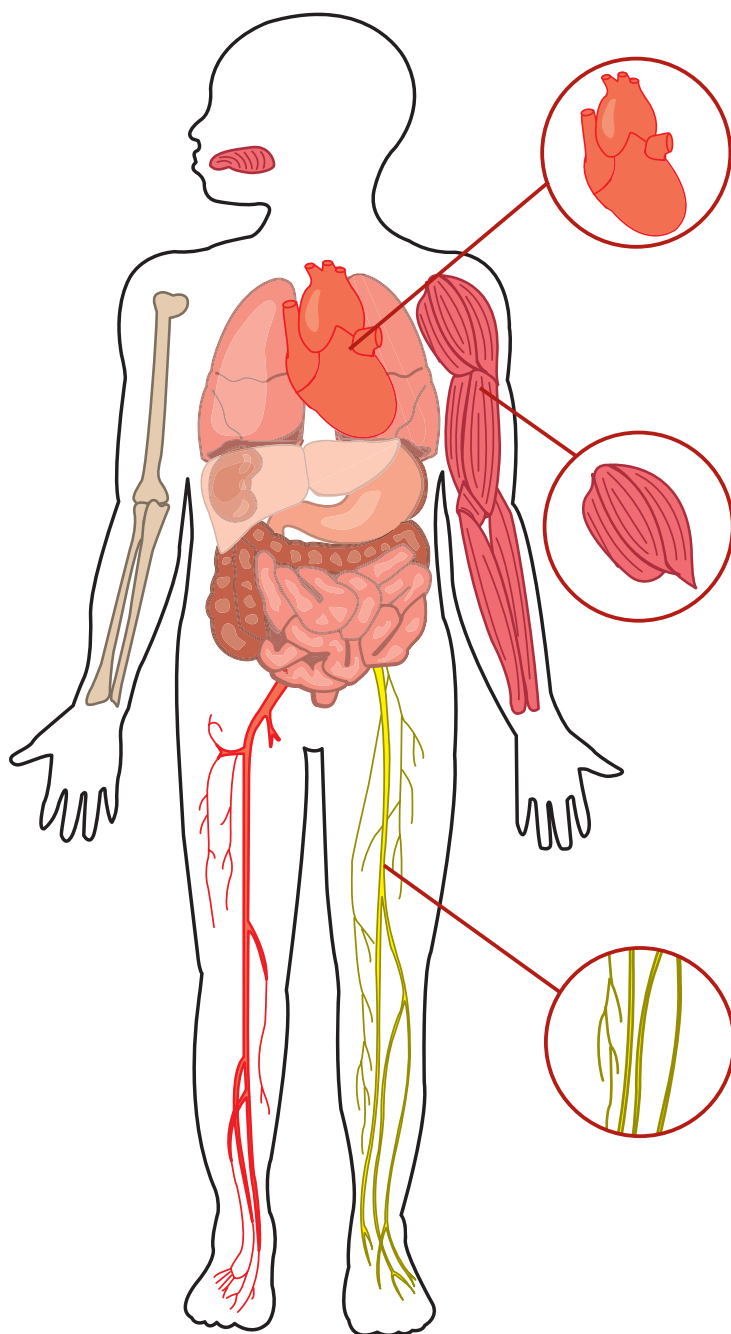
Lungs—Your lungs inhale (breathe in) and exhale (breathe out) about 12 to 20 times a minute when you are at rest. Each time you inhale fresh air into your lungs, the blood in your circulatory system picks up oxygen and drops off carbon dioxide. The carbon dioxide is pushed out of your lungs when you exhale.

Blood that is loaded with oxygen is bright red. The iron in your blood holds onto the oxygen until it can be delivered to your muscles or another part of your body that needs it. After delivering oxygen and picking up carbon dioxide to take back to your lungs, your blood turns blue. When you skin your knee or bleed for some other reason, the blood that comes out is red because it comes into contact with the oxygen in air outside of your body.

Kidneys—Most of us have two kidneys that help to clean waste products from our blood. The wastes that they pick up combine with any extra water in your body to make urine. On a typical day, your kidneys will clean over 160 liters (42 gallons) of blood, and produce about one liter (2 pints) of urine.

If your kidneys stop working, you can get sick very quickly because wastes get trapped in your bloodstream. The only sure way to make you well would be to get your kidneys working again, or to transplant a kidney from someone else. If it were to take a while for your kidneys to heal, or if a donor kidney was not available, you might be connected to an artificial kidney machine for a short time.





Heart—Your heart is the centerpiece of your circulatory system. It pumps about 100,000 times a day to keep your blood flowing through the tips of your fingers, your toes and your nose. It is connected to the parts of your body through nearly 97,000 km (60,000 miles) of blood vessels.

Foods that are high in fats, especially saturated fats, tend to clog your blood vessels. At your age, you probably don't notice the difference, but by the time that you're an adult it could lead to serious problems. So next time, pass on fat and eat more fruits and vegetables instead.

Muscles—Your muscles get you where you want to go. They are the meat on your bones and account for much of your outward appearance. They also heat you up. Most of the heat that your body makes comes from the contractions of muscles.

Nerves—Your body is wired with thousands of nerves that let your brain know all the things your body parts are doing. Nerves also let your brain send messages to different areas of your body, so that you can walk, talk, and wiggle your fingers. When nerves are damaged, messages from the brain get lost, and some parts of the body may stop working the way they should.

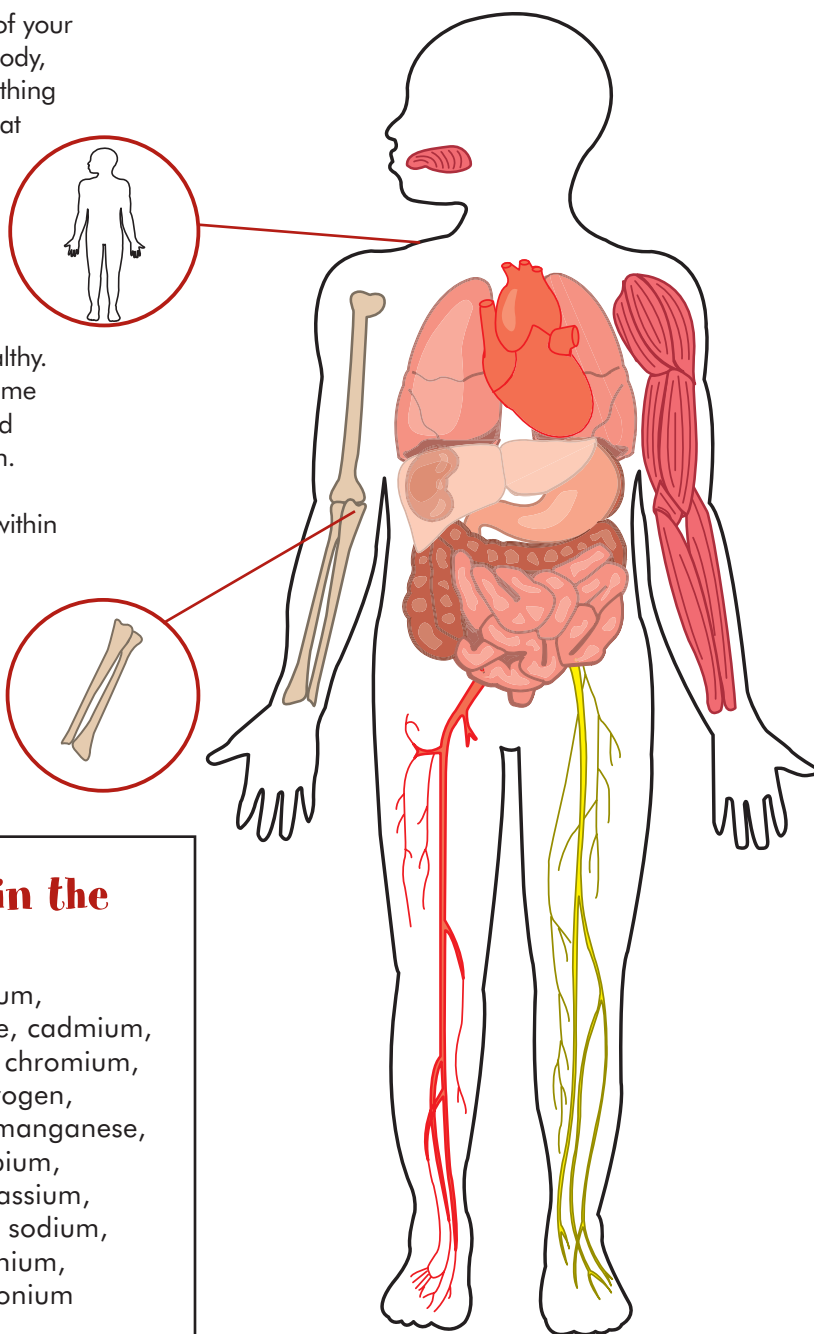
Signals travel through your nerves at about 250 miles per hour. That's faster than the speediest car in the Indianapolis 500. Many things can slow down or stop signals from your brain to the parts of your body, but one of the most common causes is illegal drug use. Drugs like crystal, crack, and ice can block messages traveling through your nerves and cause permanent damage to your brain.



Skin—Your skin is your largest and one of your most important organs. It covers your body, keeping your insides in and keeping everything else out. It is loaded with nerve endings that sense heat, cold, and pain allowing you to keep in touch with the world around you. It also has sweat glands that cool you when you're hot, and a layer of fat that insulates you when you're not.

Your skin takes a beating when you're in the sun, so use sunscreen to keep it healthy. You should remember to always put on some sunscreen, slip on a long-sleeved shirt, and wear a hat to prevent damage to your skin.

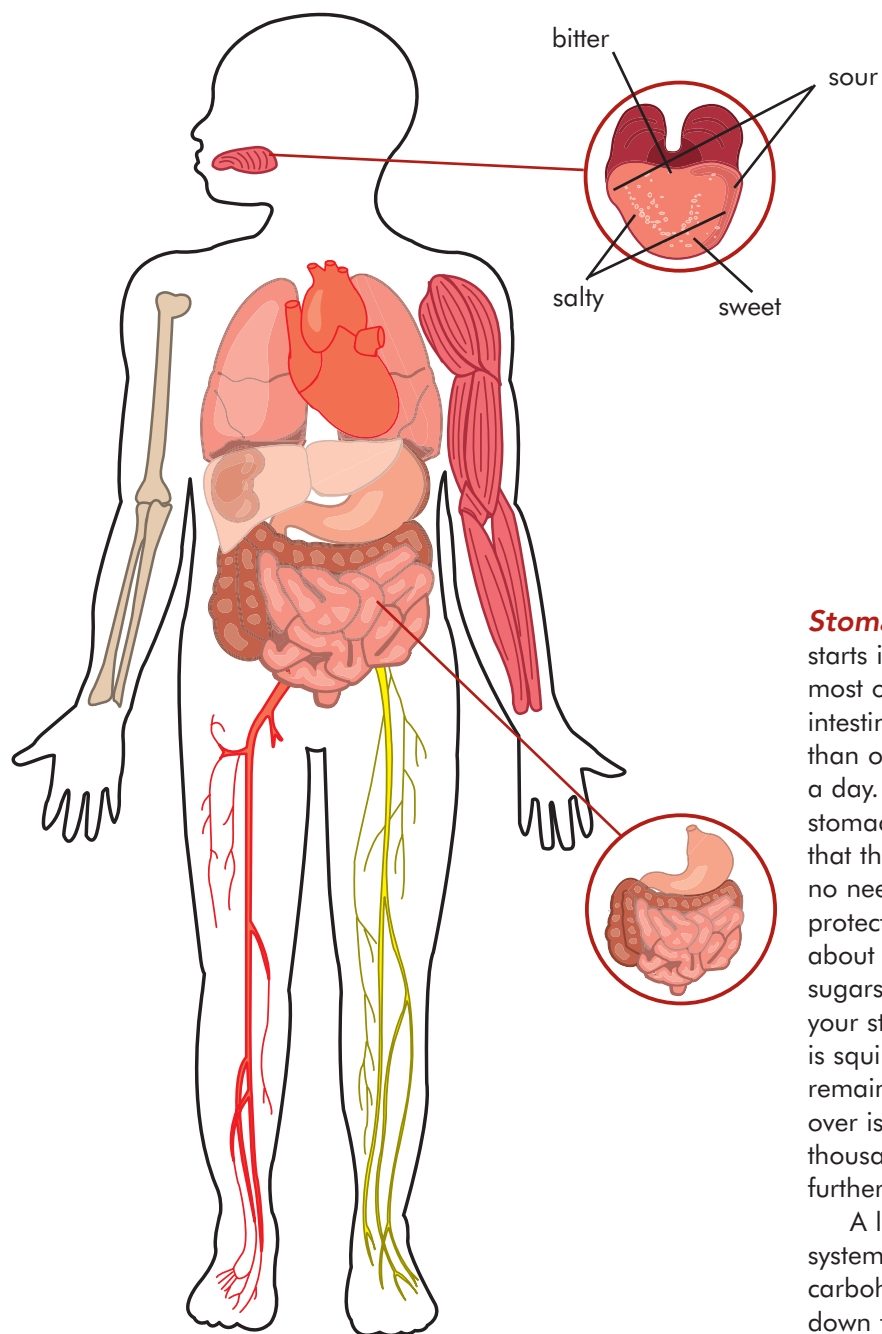
Bones—Your bones are the framework within your skin. They hold you up and provide protection for your inner parts. When you are born you have about 300 bones, but by the time you become an adult you will only have 206. Don't worry! They won't go away—they'll just fuse (join) together to make bigger bones.



Chemical Elements in the Human Body

aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, bromine, cadmium, calcium, carbon, cesium, chlorine, chromium, cobalt, copper, fluorine, gold, hydrogen, iodine, iron, lithium, magnesium, manganese, mercury, molybdenum, nickel, niobium, nitrogen, oxygen, phosphorus, potassium, radium, rubidium, selenium, silver, sodium, strontium, sulfur, tellurium, tin, titanium, uranium, vanadium, zinc, and zirconium





Tongue—Your tongue is lined with taste buds that are connected to nerves that attach to your brain. When you eat an orange, the juice covers your tongue and your taste buds go to work. Taste buds can tell the difference between four different types of tastes: bitter, sour, salty, and sweet. The taste buds that sense bitter things are located on the back part of your tongue, while the ones that taste sour things are on its sides. The taste buds for salty and sweet things are at the front of your tongue. All in all, you have about 9,000 bumpy little taste buds on your tongue.

Stomach and Intestines—Although digestion starts in your mouth with enzymes in your saliva, most of the work gets done in your stomach and intestines. On average, people eat a little less than one and a half kilograms (3 pounds) of food a day. After you swallow, food enters your stomach, where it is bathed in acids so strong that they could burn a hole in your carpet. But no need to worry: the lining of your stomach is protected by a thick layer of goopy mucus. After about six hours of churning and turning, some sugars, salt, and water soak through the walls of your stomach and into your bloodstream. The rest is squirted into your small intestine where the remaining nutrients are removed. Anything left over is dumped into the large intestine, where thousands of good bacteria break it down even further so that it can exit safely from your body.

A lot of chemistry goes on in your digestive system. Your food is broken down into proteins, carbohydrates, and fats, which are then broken down further into even smaller and simpler chemicals that can be absorbed into your bloodstream for delivery to all the parts of your body.

