



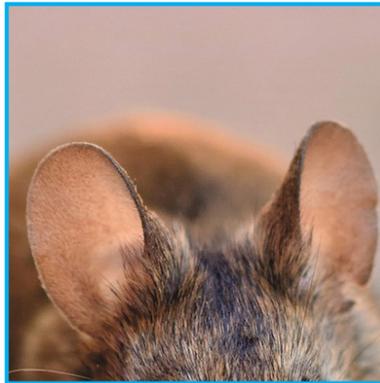
Sense receptors send signals

Different types of sense receptors in your body help you understand the many types of stimuli that exist in the world. A **stimulus** is something you can sense that makes you react. If you couldn't hear, you wouldn't be able to talk to each other. If you could not taste, you might accidentally eat something poisonous. Each type of sense receptor specializes in detecting only one type of stimulus.



Sight

Photoreceptors sense light.



Hearing

Hairlike sense receptors in the ear detect sound.



Taste

Taste receptor cells, or taste buds, detect taste.



Temperature

Sense receptors that sense temperature are called thermoreceptors.



Hunger

Sense receptors that sense hunger are called gustatory receptors.



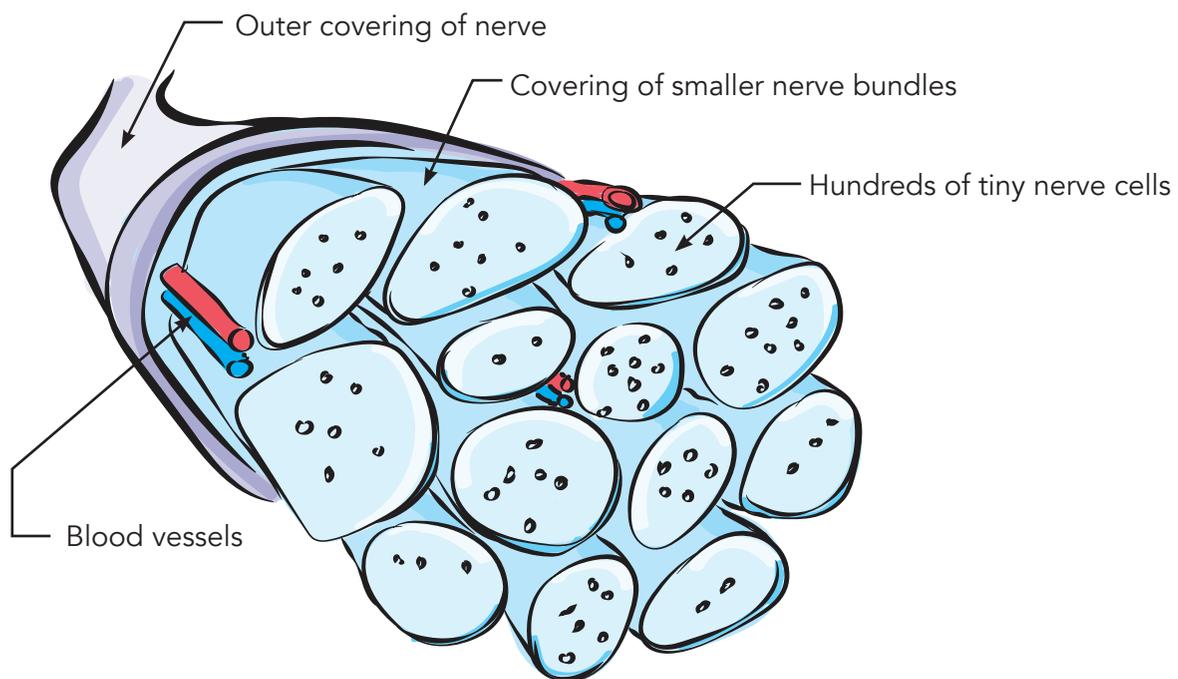
Pain

Sense receptors that sense pain are called nociceptors.

Nerves carry signals to and from the brain

Nerves are bundles of nerve cells that stretch from the brain to the rest of the body. They extend from your brain to the tips of your fingers and toes. Nerves extend to every organ and tissue in your body. Nerves look like soft, long, smooth white cords. Some nerves send signals to the brain and others receive signals from the brain. Signals can only flow through nerve cells in one direction.

Diagram of a nerve



Nerves are like wires that run through the body and send signals to the brain.



The brain can learn and store memories

The brain can think and store memories. Research shows that blind people, like myself, can remember things with greater detail than sighted individuals. Why? Blind people have more daily practice using their memories to do things.

Think of the simple task of knowing what's in my refrigerator. A sighted person uses sight to tell yogurt flavors apart. In my refrigerator, I put different flavors in a certain order—for example, first vanilla, then peach, then cherry. To choose a flavor, I memorize a sequence. I am very good at remembering sequences because I get a lot of practice doing it.



I organize my refrigerator using sequences—first vanilla, then peach, then cherry.

Think of a solution! How could we make packaging more useful to blind people?

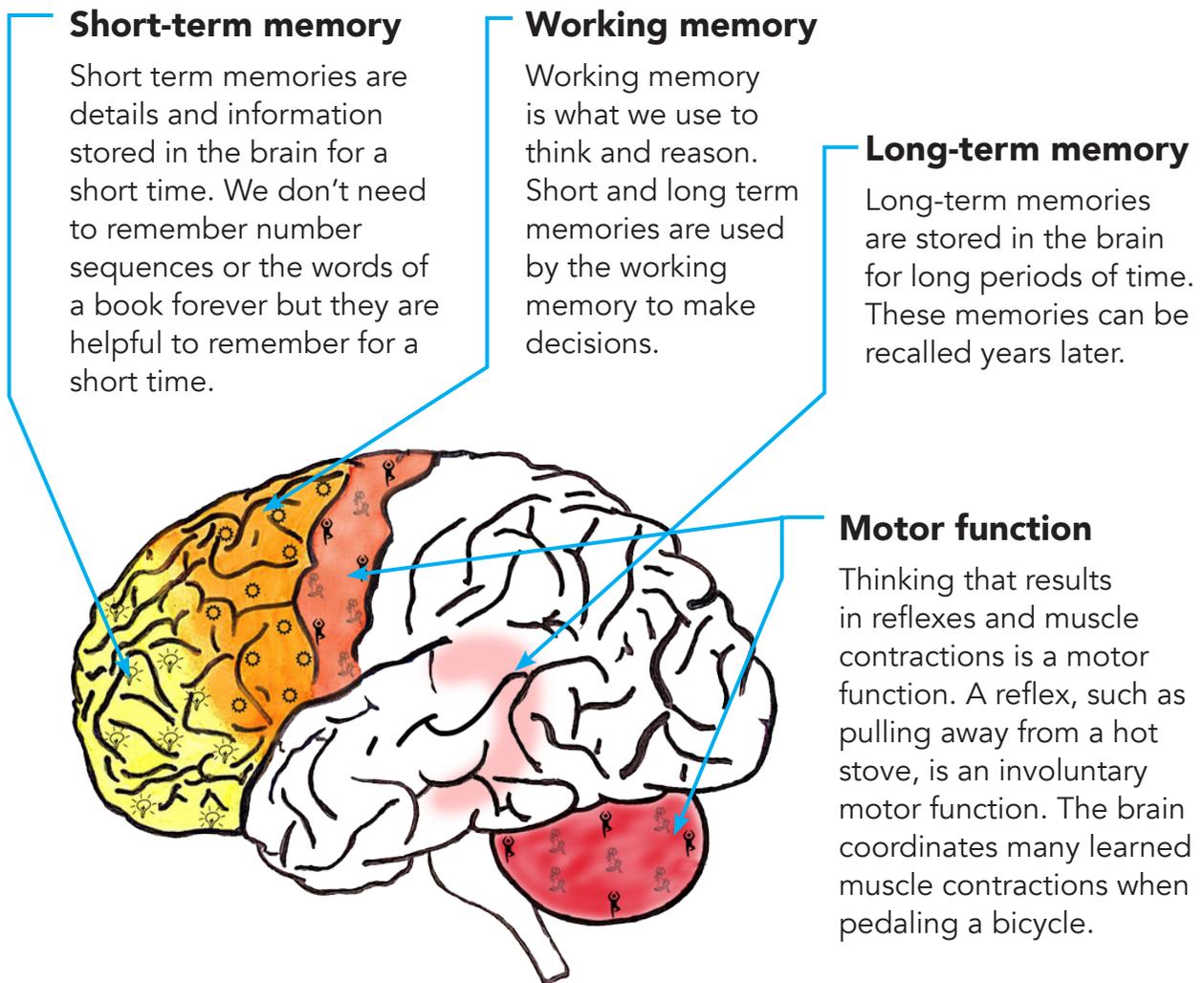


Parts of your brain think in different ways

When you sense something, your brain can use the information for immediate reaction—you pull your hand away from a hot stove. When we use memories to influence our future behaviors and actions, we have learned something! By remembering the painful feeling when touching a hot stove, you learn to avoid touching a hot stove again.

Thinking centers of the brain

Different areas of the brain think and store memories for later use.



This diagram shows the types of thinking that occur in different parts of the brain.