

Getting to Know and Love Your Brain

Three important parts of your brain help you think and react to everything that happens around you: the prefrontal cortex, the amygdala, and the hippocampus. Learn how to help these parts work together to become a happier, healthier, brighter you!

Prefrontal Cortex

(pree-FRUN-tuhl KOR-teks)

The prefrontal cortex (PFC, for short) uses important information to focus, decide, compute, analyze, and reason. Here's the catch: the PFC gets information only when the amygdala is calm. Then it passes on to the hippocampus any info worth remembering.

Amygdala

(uh-MIG-duh-luh)

Feeling frightened? Upset? Your amygdala is on alert! It regulates and blocks information from going to your prefrontal cortex (PFC), so you can react in a flash. When you feel safe and happy, the amygdala will pass information on to the PFC so you can think.

Hippocampus

(hih-puh-KAM-puhs)

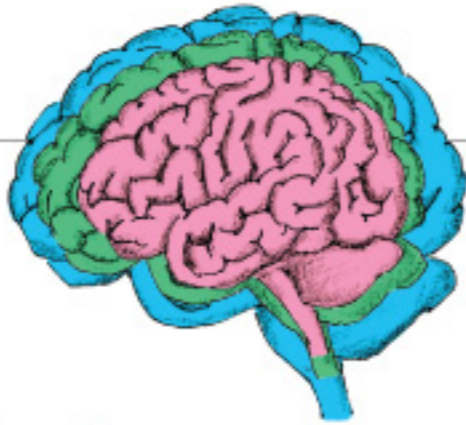
The hippocampus creates, stores, and processes all important facts and memories the PFC passes on to it—such as birthdays, your friends' e-mail addresses, and the brisk, salty smell of the ocean.

Breathing

Anytime you're stressed out, breathing can come to the rescue. Deep, full breathing calms your amygdala and helps you think and remember clearly.

How big is a brain?

Make two fists and put them together. That's about the size of your brain. Your skull—a thick, protective “helmet” of 22 bones—surrounds your brain.



Brains can change.

Your brain is more like plastic than cement. It will change with each experience you have—and it will grow! That's called neuroplasticity (nur-oh-pla-STIH-city).

How does your brain get smarter?

With practice! When you learn something new, like the words to a song, you make new connections between the message-carrying cells of your brain, or neurons. As you practice, the neurons carrying that message grow branch-like structures (dendrites) that act like antennae. They pick up the message more quickly and clearly each time. With enough practice, those song-learning neurons help you remember the words without even hearing the music!

Before practice



After practice



Give it a rest!

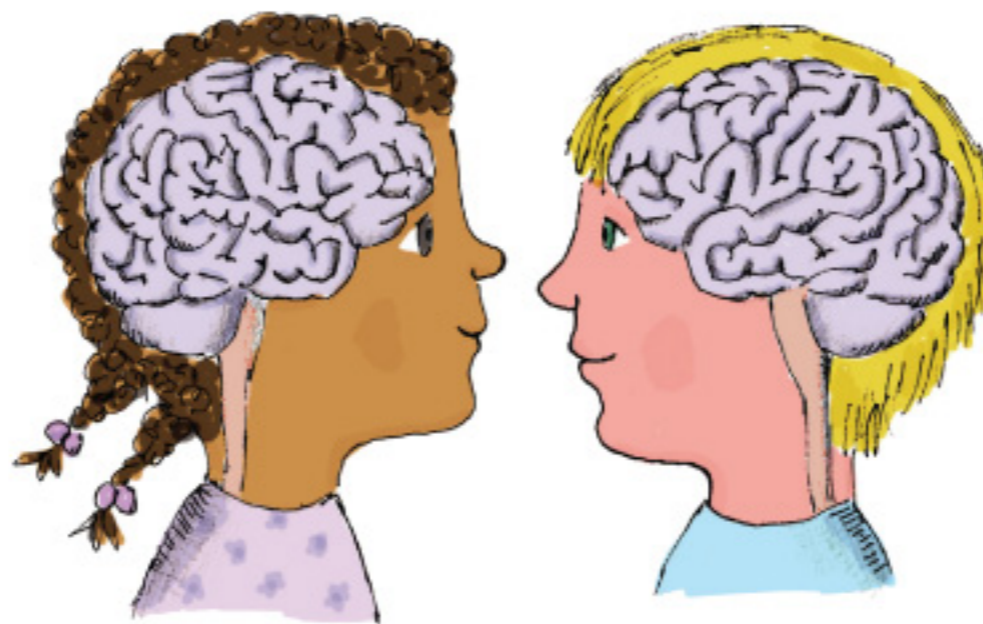
Your brain never stops thinking, even when you sleep. In fact, you need sleep so that your brain can process all the information it has collected during the day. To help your brain do this, you need about 9 or 10 hours of sleep each night!



SCHOLASTIC

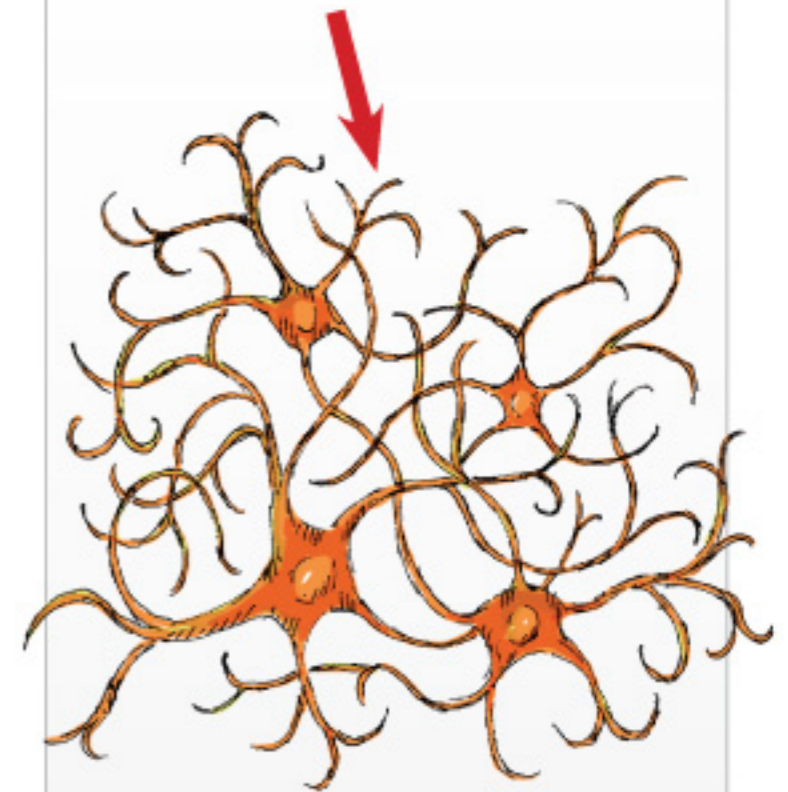
Amazing Facts About Your Brain

How is your brain like mine? Our brains are the same color, no matter how different we look on the outside. Our brains are also about the same size if we're the same age. In what other ways do you think all of our brains are similar?



These webs weren't spun by a spider!

Does your brain really have webs inside of it? Yes, but not spider webs! These webs are too tiny for even the smallest spider. Each thought you think goes through a web, or network, of brain cells (neurons). It looks something like this.



Think fast!

In only a fraction of a second we can recognize a friend's face or recall a math fact. The fastest thoughts racing through our neural network travel at about the same speed as the wind inside a tornado!

