

# Getting to Know and Love Your Brain

To react or to think it out ... that is the question. The way you use three key players in your brain determines how you'll respond to everything that happens around you. As you learn how to help your brain tell the difference between true emergencies and stressful situations, you'll get better at handling every situation and have more time to enjoy life!

## Prefrontal Cortex

(pree-FRUN-tuhl KOR-tek)

The prefrontal cortex, or PFC, is your ace for making thoughtful decisions, doing careful calculations, talking through a problem and staying focused on what you're doing. Here's the catch: the PFC gets information only when the amygdala is calm. The PFC passes on to the hippocampus anything that is worth remembering.

## Amygdala

(uh-MIG-duh-luh)

The amygdala is programmed to keep you safe at all costs. It regulates and blocks information from going to your prefrontal cortex (PFC), so you can react in a flash. The problem is, it can't tell a stressful situation from a true emergency and it can cause you to react without thinking. Mindful practice can help keep the amygdala in check so that you can think clearly.

## Hippocampus

(huh-puh-KAM-puh)

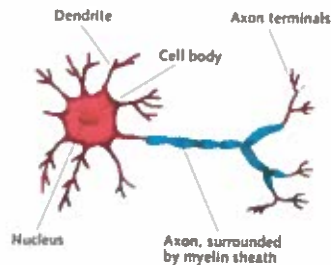
What are your favorite memories? The most useful facts you know? The hippocampus creates, stores, and processes all important facts and memories the PFC passes on to it—such as texting shortcuts, your class schedule, and the deep, warm smell of freshly baked biscuits or bread.

## Breathing

Want to keep your amygdala in check when you get stressed out? Breathe deeply. Deep, full breathing calms your amygdala and helps you think and remember clearly.

## A neuron at work

Your brain has a network of neurons, or brain cells, 100 billion strong to help you think, feel, and remember. Each neuron has three important parts: Dendrites receive information—everything you sense and perceive. The nucleus regulates information signals that are sent or received. The axon sends information to other nerve cells through its terminals. Myelin is the protective coating around the axon.



### The green brain?

Your brain has a special energy-efficient feature: myelin. Myelin is to an axon what plastic coating is to electrical wires. Like insulation on a wire, myelin helps the electrical impulses travel quickly and directly through the axon without losing any energy.



## Growth spurts!

The brain grows rapidly at two times in our lives:

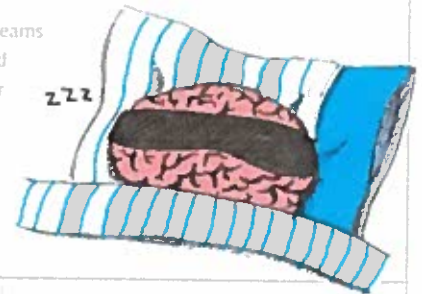
1. From before birth to 3 years old, all the neurons are rapidly growing and creating a network.
2. You're living through the second growth spurt, which peaks at 11 years old in girls and 12 years old in boys. This is when neurons are branching out and making connections.

### "Use it or lose it!"

At about age 12, our brains start pruning away all the unused branches to make our brains more efficient.

## Sleep and freeze!

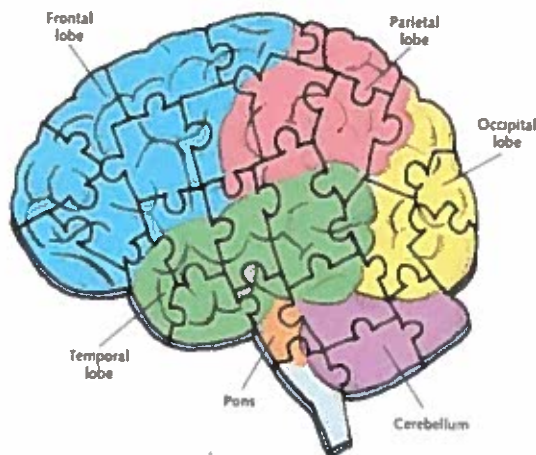
Do you have action-packed dreams or nightmares? Aren't you glad you don't act them out in your sleep? When you fall asleep, your brain releases a hormone that paralyzes you so that you don't move around a lot and hurt yourself.



 SCHOLASTIC

# Amazing Facts About Your Brain

Do you enjoy collecting facts to store in your hippocampus? Here's more brain food for that spongy, wrinkly organ inside your skull that loves to solve riddles, puzzles, and problems.



## Powering your brain

Each day your brain generates enough energy to light a light bulb—between 10 and 23 watts! How do you keep it powered up to do all that work?

- **Get your Z's.** Getting between 8.5 and 11 hours of sleep each night helps your PFC absorb information and send it to the hippocampus. Being well rested helps your amygdala, too—studies show that alert people have fewer accidents.



- **Eat brain food.** Fuel for thinking includes food high in protein (meat, eggs, beans), omega-3 fatty acids (fish, nuts), antioxidants (berries, broccoli, spinach, whole grains), and vitamin B (clams, lamb, beef), and low in trans fats—so, limit fried foods and fatty sweets!

- **Chat it up.** Staying socially connected with friends and volunteering or playing sports are ways to keep your brain engaged and happy.



- **Protect it.** Brains are hard to fix. To dramatically reduce your chances of concussions or brain injury, wear a seatbelt whenever you ride in a car and a helmet in any high-speed or impact sports. Why take the risk?



# 5 Ways to Calm an Anxious Child

Article by:

- [Katie Hurley, LCSW](#)

Jump to: [Deep breathing](#)   [Self-talk](#)   [Get moving](#)   [Journal](#)   [Hug it out](#)

Anxiety is a normal reaction to stress and can actually be beneficial to kids at times. Anxious thoughts trigger the brain to send out a warning signal for impending danger. When a child begins to cross the street without looking and an oncoming car is in the child's path, for example, the anxious response signals the child to step back to the curb.

For some children, however, anxiety can become excessive and interfere with normal daily living. Anxiety can make it difficult for children to interact with peers and establish friendships, separate from parents to attend school or other activities and make it difficult for kids to learn. It can also negatively impact their sleep, their eating habits, and their physical health.

According to the National Institute of Mental Health, 25.1% of children have a lifetime prevalence of an anxiety disorder.<sup>1</sup> Not all children who experience anxiety have an anxiety disorder. Children experience a wide range of emotions and some stress is inevitable. Knowing how to cope with stress is an important skill for children.

All children are different, so the best strategy is to help kids build a toolbox of coping skills. While one calming technique might work well for one child, it might not work well for another. Building coping skills requires some trial and error, and it's always a good idea to begin by asking your child to close his or her eyes and name three things that inspire a feeling of calm. More often than not, kids know what they need or what calms them, but they don't know how to begin.

Try a few of these strategies to help your child learn to cope with anxious thoughts and feelings.

Article continues below

**Are you suffering from anxiety?**



Take our 2-minute anxiety quiz to see if you may benefit from further diagnosis and treatment.

[Take Anxiety Quiz](#)

## 1. Deep breathing

Kids are often told to take a deep breath when they feel anxious, but learning to use deep breathing effectively actually requires practice. Daily deep breathing, especially when kids are calm, helps kids learn to control their breathing on their own. When they're anxious or under stress, using deep breathing will slow their heart rate and regulate their physical responses to anxious feelings.

Adding a visual to deep breathing makes it more fun for kids and helps them remember what to do when they are under stress. Try these two strategies from *The Happy Kid Handbook*, to practice deep breathing in your home:

- **Balloon breathing:** Ask your child to close her eyes and picture herself blowing up a balloon. First, she should choose the color for her balloon. Second, explain that blowing too hard or too fast will cause the balloon to pop right out of her mouth. To inflate the balloon, she needs to inhale and exhale slowly. Third, cue her to breathe in for a count of four, hold for a count of four, and exhale into her balloon for a count of four. Repeat three times. Finally, ask her to "write" one worry on that balloon and let it fly off into the sky.
- **Rainbow breathing:** This strategy often appeals to older elementary children. Have your child lie down on the floor in a comfortable position and play some relaxing music in the background. Cue your child to inhale, hold, and exhale while you count out loud, but add one color per breath. Tell your child that when she takes a red breath, you want her to visualize as many happy red things as she can (e.g. strawberries, watermelon, kites, etc.) Repeat for all seven colors of the rainbow. Talk about the rainbow or relaxing things she created while working on her breathing. <sup>2</sup>

One great way to practice deep breathing is to use the Stop, Breathe, & Think Kids app each night before bed. This app takes kids through guided meditation in short increments to help them understand and practice mindfulness for feeling calm. <sup>3</sup>

## 2. Self-talk

Kids can learn to boss back their worries by reframing their thoughts and using self-talk to feel empowered. While it might feel strange for kids to talk to

themselves at first, bossing back their worries in an assertive voice helps kids gain control over their anxious thoughts.

Practicing self-talk is easy and can be fun for kids. Follow these steps to work on bossing back those pesky worries:

- State the anxious thought
- Talk about why that thought keeps popping up
- Come up with a reasonable counter statement
- Boss it back

If a child is afraid of dogs, for example, practicing might look like this:

*Dogs are scary because dogs bite.*

*I once saw a dog bite someone and that scared me.*

*Dogs can be friendly and are soft to pet.*

*Stop it worry brain! I'm not afraid of dogs! My friend has a friendly dog and I know I will be safe near that dog.*

### **3. Get moving**

Daily exercise can help reduce the body's physical response to anxiety. One study found that kids who practice yoga not only experience the uplifting effects of exercise immediately following the workout, but that the results last long after they are finished. †

Kids also benefit from playing on team sports, taking exercise classes, and simply taking a walk through the park. Going for a nature walk, be it a hike along a trail or a walk through your neighborhood, helps kids reconnect with the world, calm anxious thoughts, and practice mindfulness.

### **4. Write it down; tear it up**

Kids need time to vent their feelings, but they also need to learn how to get their anxious thoughts out on their own. They need strategies they can use at school, and camp, or even on a sleepover.

Writing down anxious feelings is a great way to vent those negative emotions on paper. Encourage your child to write down his anxious thoughts and then tear them up and throw them away. The process of getting it down on paper and tearing up the paper helps kids symbolically throw away their worries for the moment. Sure, those worries might come back another time, but once kids learn that they can overcome them by bossing them back and throwing them out, they feel greater control over their anxiety.

## **5. Hug and empathize**

Sometimes we underestimate the power of human touch. Physical touch releases oxytocin, a feel-good hormone, and reduces cortisol, a stress hormone. A long hug can help comfort an anxious child in the moment and restore a feeling of calm.

It also helps to empathize with your child during that hug. It's perfectly normal to experience stress and anxiety, and anxious children need to hear this often. Whisper empathic statements, hold your child tight and wait for the physical symptoms subside. Once your child is calm you can also talk about the fact that giving yourself a hug or holding your own hand (by clasping your hands together) can actually help you control the physical symptoms of anxiety.