



Fun Brain Facts

Brain Uses 20 Percent of Blood

Approximately 20% of the blood flowing from the heart is pumped to the brain. The brain needs constant blood flow in order to keep up with the heavy metabolic demands of the neurons. Brain imaging techniques such as functional magnetic resonance imaging (fMRI) rely on this relationship between neural activity and blood flow to produce images of deduced brain activity.

Brain Uses 20% of Oxygen Breathed

Although the brain accounts for only 2% of the whole body's mass, it uses 20% of all the oxygen we breathe. A continuous supply of oxygen is necessary for survival. A loss of oxygen for 10 minutes can result in significant neural damage.



Ears Emit Sound

Did you know that healthy ears actually emit sounds? These sounds are usually very soft, but can occasionally be heard by others. Surprisingly, the sounds are rarely heard by the person whose ear is emitting the sounds! The cause of these sounds is still under debate, but is thought by some to be due to input from the central nervous system.

Even Reptiles Yawn

Yawning is an age-old activity that occurs in reptiles, birds and, of course, mammals. This behavior is controlled by chemicals in the brain called neurotransmitters.

Neurotransmitters, such as nitric oxide and dopamine, act in the hypothalamus to induce and control yawning.



Miles and Miles of Neurons

There are one hundred billion neurons in the brain. A stack of one hundred billion pieces of paper would be about 5000 miles high, the distance from San Francisco to London.

Nasal Neurons Regenerate

Olfactory receptor cells, the neurons in our nose that allow us to smell, are neurons that can regenerate throughout life. Although these cells are continually being born and dying, they maintain the same connections as their ancestors. The result is that once we learn a smell, it always smells the same to us -- despite the fact that there are always new neurons smelling it!

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No Pain in Brain

There is no sense of pain within the brain itself. This fact allows neurosurgeons to probe areas of the brain while the patient is awake. Feedback from the patient during these probes is useful for identifying important regions, such as those for speech, that are spared if possible.

Peripheral Night-Vision

At night, our peripheral vision is better than our foveal (straight on) vision. Hikers at night do better when they look slightly above the trail, and airplane pilots are taught to look for traffic out of the sides of their eyes. This is because our rod cells, photoreceptors that respond best to dim light, are located mostly in the periphery of the retina.

Stimulating Environment Affects Learning

A child's ability to learn can increase or decrease by 25 percent or more, depending on whether he or she grows up in a stimulating environment.



Why We Scratch an Itch

Scratching an itch is a puzzling biological response, because it seems to hinder rather than help a wound's healing. One theory of why we itch suggests that scratching stimulates the release of endorphins, naturally occurring opiates which block pain sensation. Because scratching injures our skin a little more, we release a flood of endorphins to block the pain of the initial injury more effectively.

Working Memory Stores Seven Digits

It's no accident that telephone numbers in the United States are seven digits long. Our working memory, a very short-term form of memory which stores ideas just long enough for us to understand them, can hold on average a maximum of seven digits. This allows you to look up a phone number and remember it just long enough to dial.



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