

Brain facts



The average adult human brain weighs about 1.4 kilograms



The cortex comprises 82% of the mass of the human brain



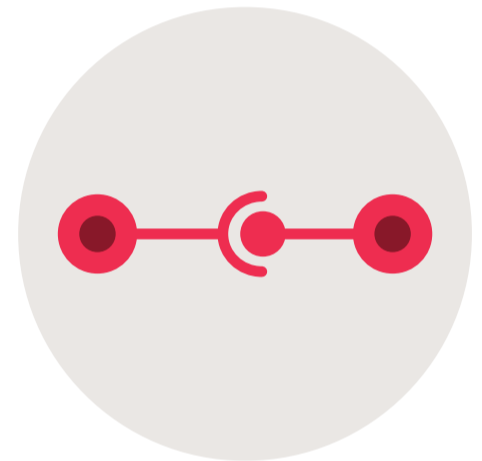
The hippocampus is a sea horse-shaped structure in the brain that can produce 700 new neurons each day



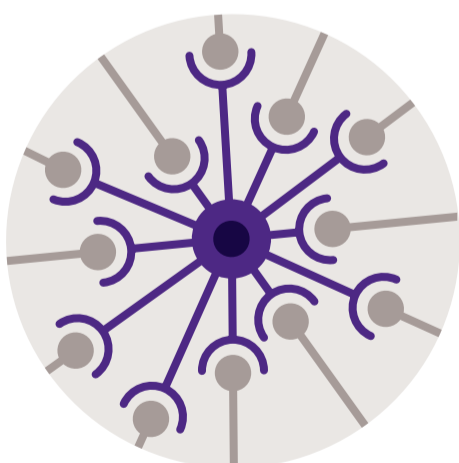
The brain contains about 100 billion (100,000,000,000) nerve cells (neurons)—the “grey matter”



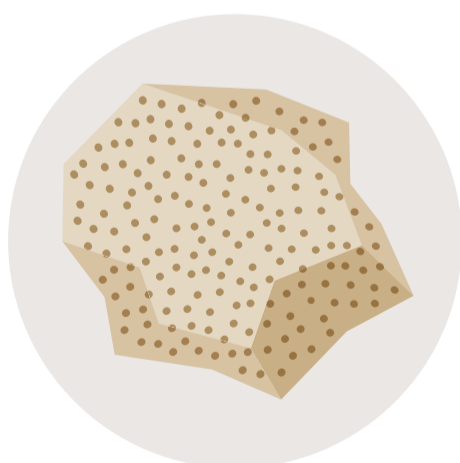
The brains contains billions of nerve fibres (axons and dendrites)—the “white matter”



Neurons are connected by trillions of connections called synapses



Each neuron connects with other neurons by up to 40,000 synapses



A piece of brain tissue the size of a grain of sand contains 100,000 neurons and 1 billion synapses



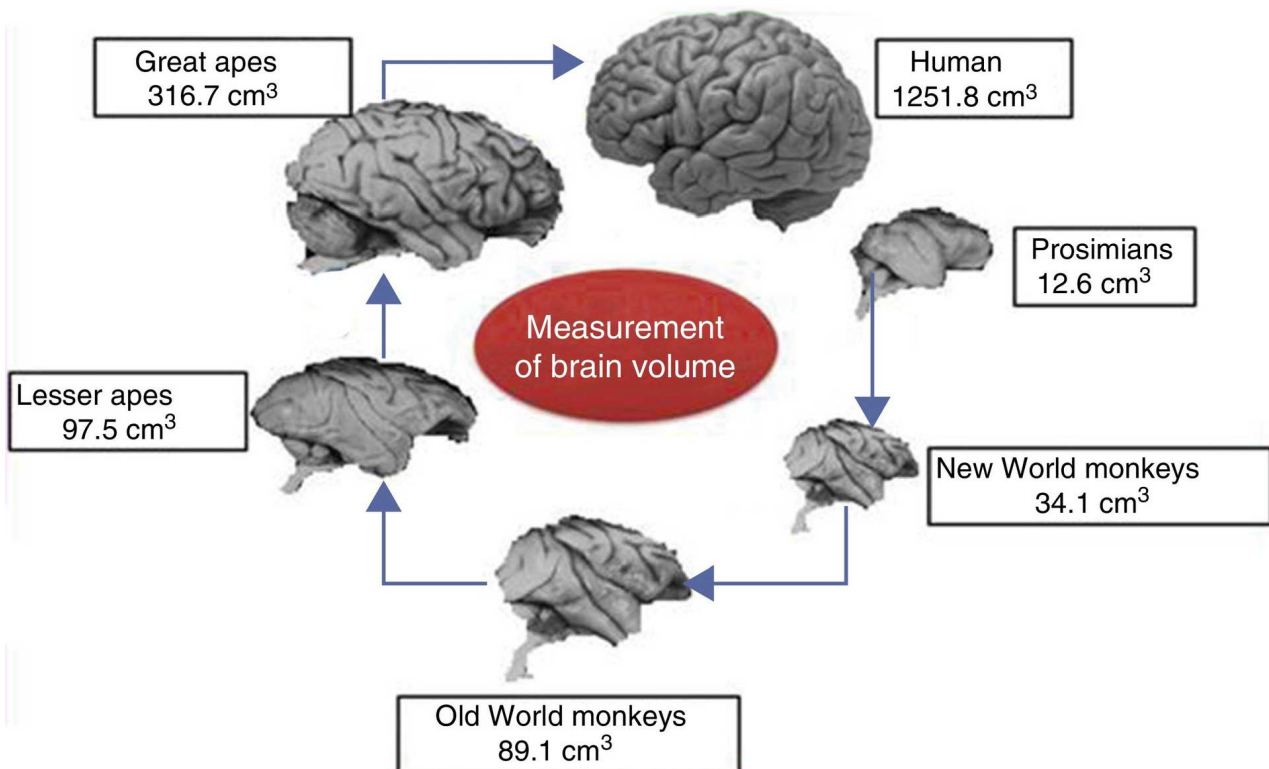
When you are born your brain is a third the size it will be when you are an adult, and it grows by ~1%/day

The human brain

The human brain is an amazing structure that took about 700 million years to develop. It started out as a bunch of nerves at one end of the body, helping the creature sense light, food, and danger. Over time, this bunch of nerves became the brain, and a spinal cord grew to carry messages from the brain to other parts of the body. As the creature evolved, it grew arms and legs and became an ape-like creature with a larger and more complex brain. Finally, humans evolved with a brain capable of reason, emotion, creativity, memory, and the ability to judge right from wrong.

There are still many questions about the brain that scientists haven't answered yet. For example, why do we need to sleep or why do we dream?. The brain used to be thought of as useless stuffing, but now we know it is our control center. The surface of the brain is called the cerebral cortex, and it is the part that makes us intelligent. The cerebral cortex has four parts called lobes: the front lobe, the top lobe, the side lobe, and the back lobe. Each lobe has a different function, like thinking and feeling, processing information from our bodies, hearing and speech, and processing images from our eyes.

Did you know that your brain is more powerful than the world's best supercomputer?. The world's best supercomputer is only about as powerful as half a mouse brain. Your brain is made up of 100 billion brain cells called neurons that send information to your body. It tells your body what to do and helps you think, feel, and remember things. The human brain is truly an incredible and mysterious organ that scientists are still trying to understand.



Multiple Choice Questions

1. How did the human brain evolve over time?

- A) The human brain started out as a bunch of nerves and eventually became the control center of the body.
- B) The human brain evolved from a spinal cord to a complex structure capable of reason and emotion.
- C) The human brain developed arms and legs, becoming an ape-like creature with a larger brain.
- D) The human brain was initially thought of as useless stuffing, but is now known to be the cerebral cortex.

2. What is the function of the cerebral cortex?

- A) The cerebral cortex is responsible for processing information from our bodies and controlling our movements.
- B) The cerebral cortex is the part of the brain that makes us intelligent and capable of reasoning.
- C) The cerebral cortex is where we process images from our eyes and hear sounds.
- D) The cerebral cortex is the surface of the brain that carries messages to other parts of the body.

3. How does the power of the human brain compare to the world's best supercomputer?

- A) The human brain is less powerful than the world's best supercomputer.
- B) The human brain is about as powerful as half a mouse brain.
- C) The human brain is more powerful than the world's best supercomputer.
- D) The human brain has 100 billion neurons that send information to the body.

4. According to the text, what is one function of the spinal cord?

- A) To carry messages from the brain to other parts of the body
- B) To process information from our bodies and control our movements
- C) To help us think, feel, and remember things
- D) To sense light, food, and danger

5. Based on the information provided, why do scientists still have questions about the brain?

- A) Because the brain used to be thought of as useless stuffing
- B) Because the cerebral cortex has four different lobes
- C) Because the human brain is more powerful than the world's best supercomputer
- D) Because there are still unanswered questions about sleep and dreaming

6. According to the text, what are some of the functions of the human brain?

- A) Processing information from our bodies and controlling our movements.
- B) Making us intelligent and capable of reasoning.
- C) Processing images from our eyes and hearing sounds.
- D) Carrying messages to other parts of the body.

7. What can be inferred about the development of the human brain?

- A) It took about 700 million years to develop from a bunch of nerves to a complex structure.
- B) The human brain developed arms and legs and became an ape-like creature with a larger brain.
- C) The cerebral cortex, which is the surface of the brain, is responsible for making us intelligent.
- D) Scientists have fully understood the functions and capabilities of the human brain.

Consider and respond to the questions

1. What are the four parts of the cerebral cortex and what are their functions?
2. How did the human brain evolve over time?
3. What is the role of the brain in controlling our body and helping us think, feel, and remember things?
4. After reading about the different functions of the lobes in the brain, reflect on how these functions impact your daily activities and interactions with others.