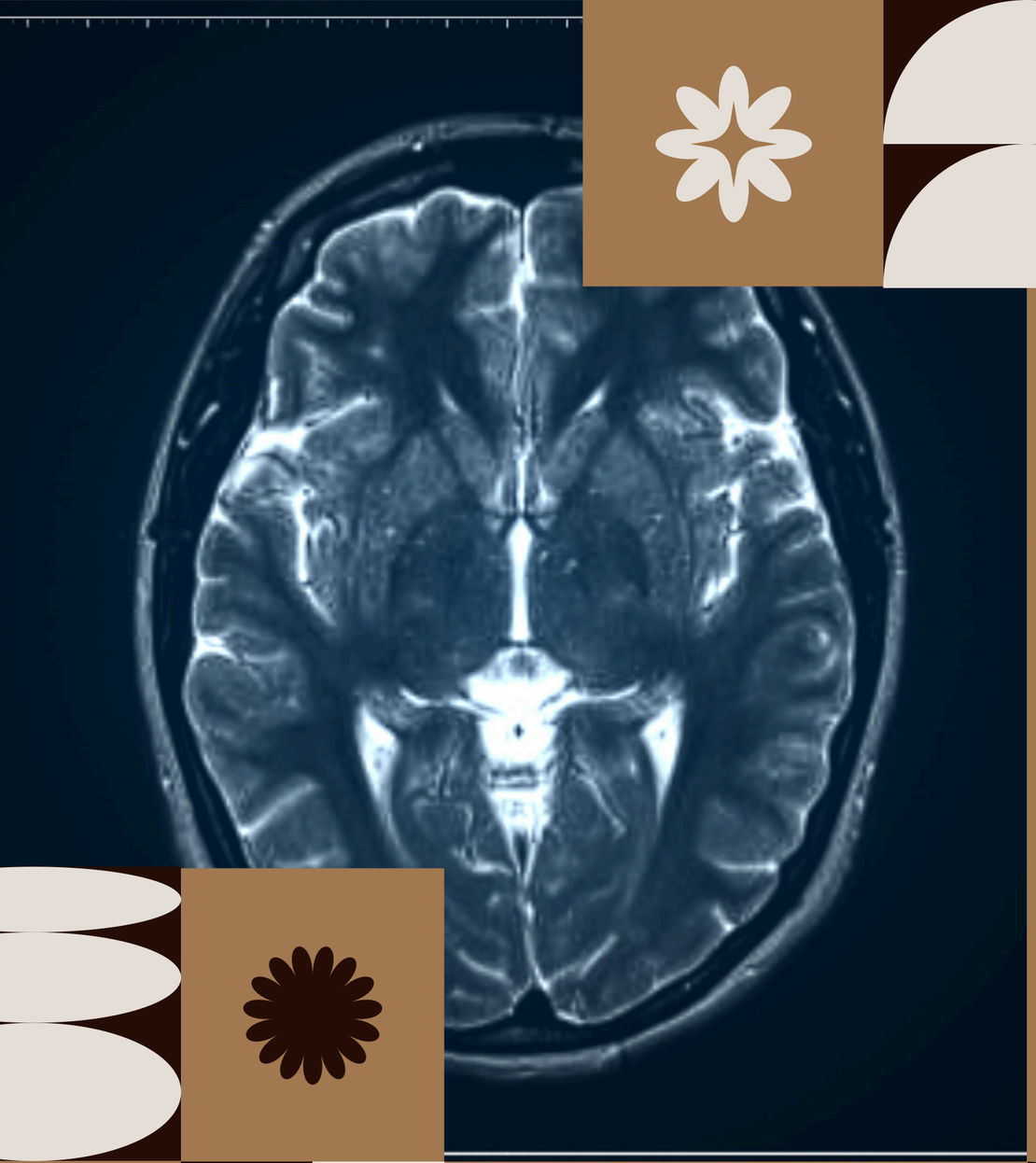


The Human Brain Explained

Exploring Complexity and Functions

Understanding the Human Brain's Role

The brain as the body's CEO

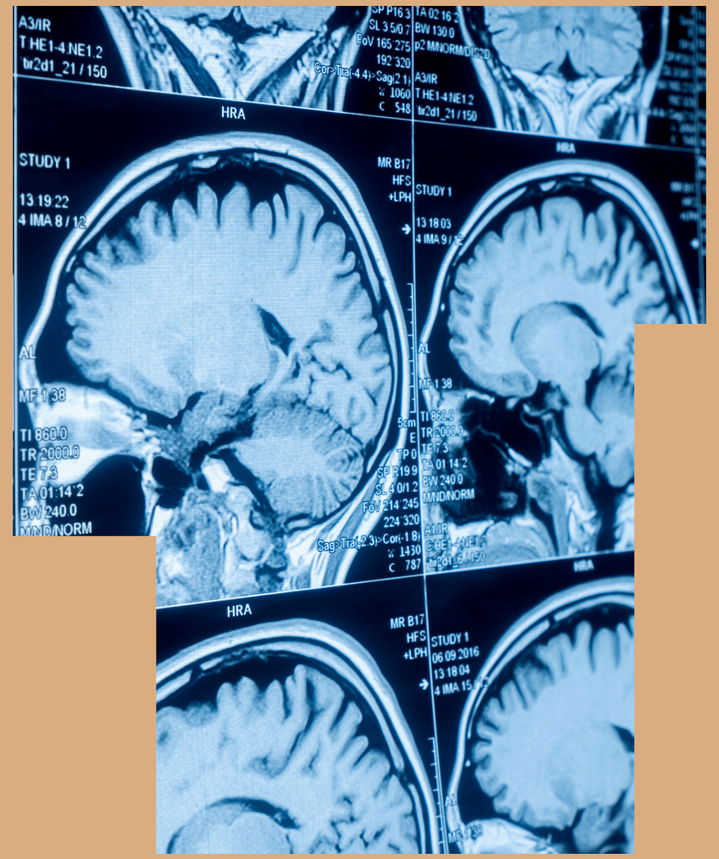
Weight and Size

- About 3 pounds
- Size of grapefruit
- Largest organ in the body

Complexity and Neurons

- Approximately 86 billion
- Complex connections
- Constantly active

Brain Structure: Key Components



Cerebrum: The Largest Part

Responsible for higher functions and **voluntary actions**.



Cerebellum: Coordination Center

Manages balance, movement, and **motor skills**.

Understanding Neurons and Their Functions

Types of Neurons

There are **sensory, motor, and interneurons**, each serving distinct roles.

Parts of Neurons

Neurons consist of **dendrites, axons, and cell bodies** that facilitate communication.

How Neurons Communicate

Neurons transmit signals through **action potentials and synapses**, enabling information flow.

Neurotransmitters

These chemicals **carry messages between neurons**, affecting mood and behavior.

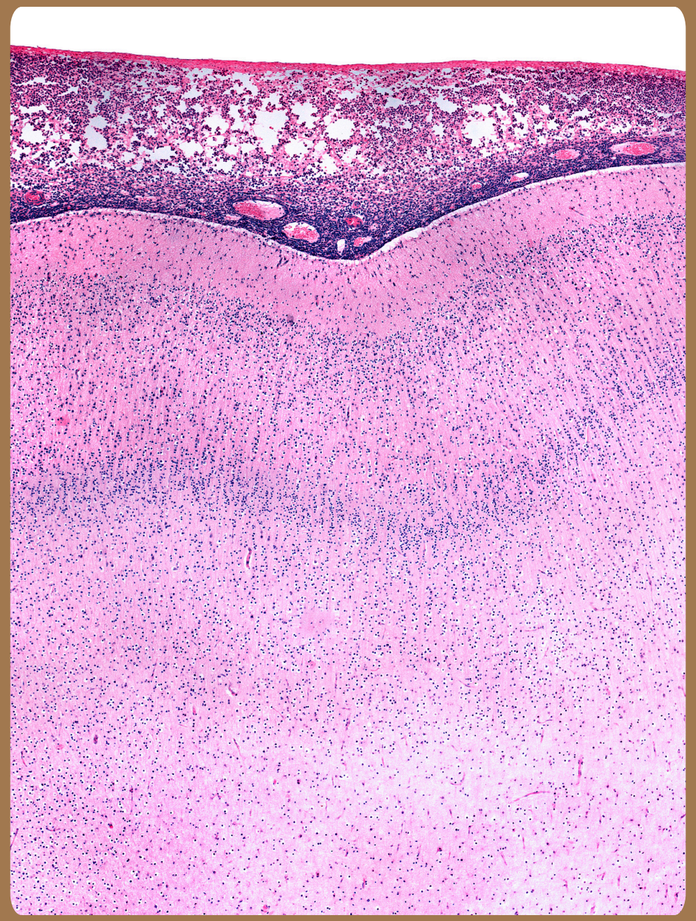
Brain's Connection to Body Systems

The brain **communicates and controls** the nervous, endocrine, muscular, and circulatory systems, ensuring the body functions harmoniously and responds effectively to internal and external stimuli.



Protecting Our Most Valuable Asset







20% of total energy

The brain's **massive energy demand**

100% of sensory input

Processes all **incoming sensory information**

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70 billion neurons

The brain's core **cellular network**

