

The background features a large white circle in the center, partially overlapping a light blue area on the left and a light pink area on the right. A dark blue shape, resembling a stylized brain or a large letter 'C', is positioned at the bottom, framing the white circle.

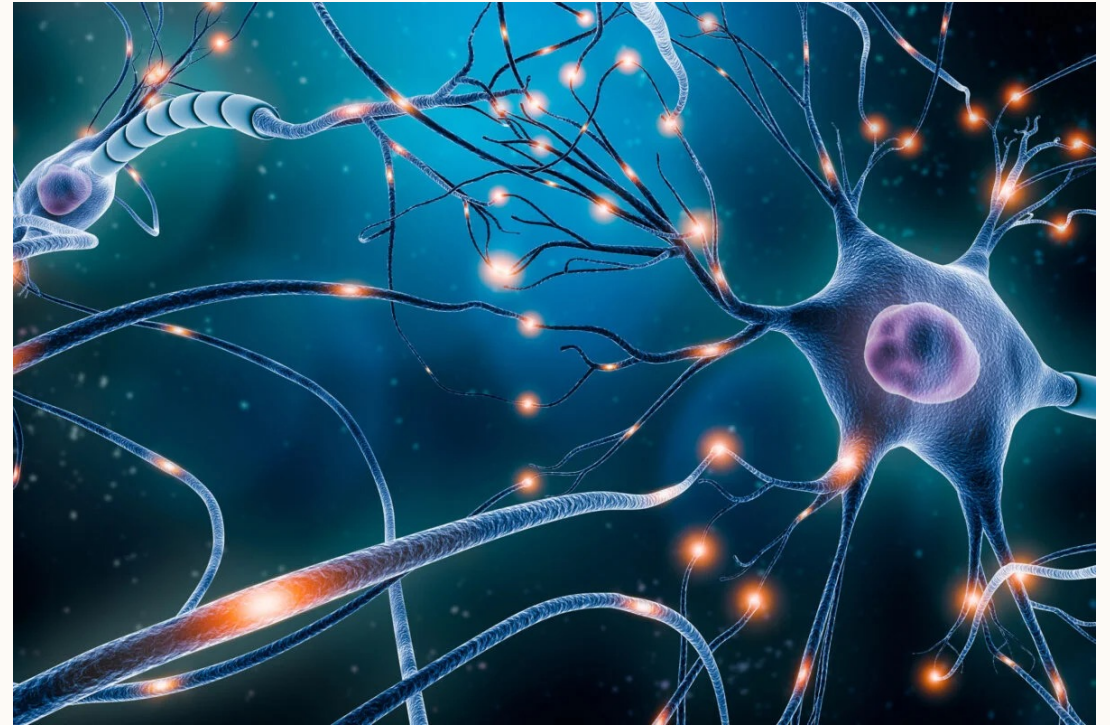
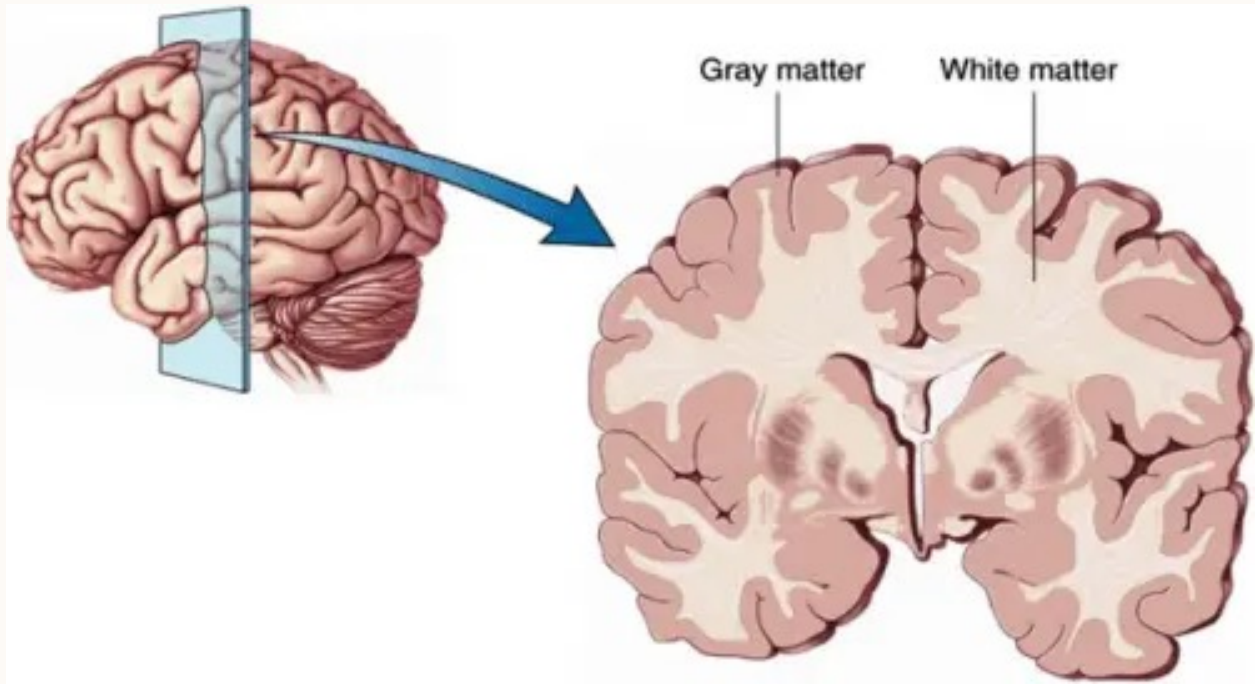
TRAUMA AND THE BRAIN



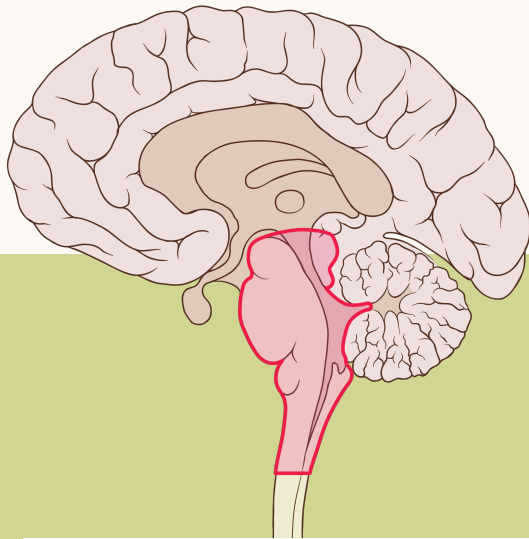
THE BRAIN

WHAT IS THE BRAIN MADE OF?

- The brain is composed of 60% fat, and the other 40% consists of water, protein, carbohydrates, and salt.

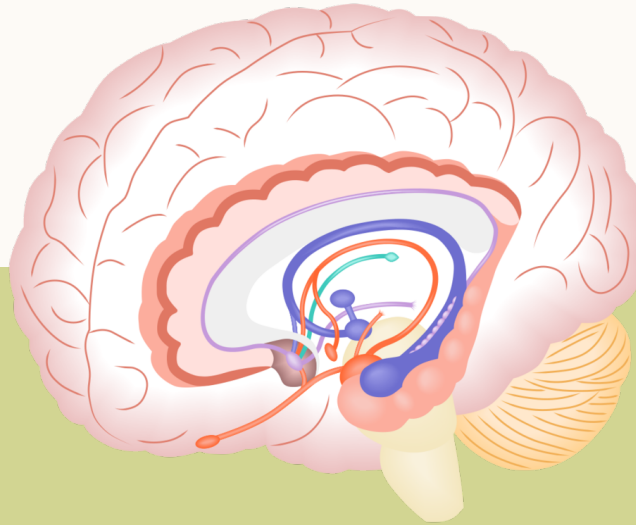


THE TRIUNE BRAIN MODEL



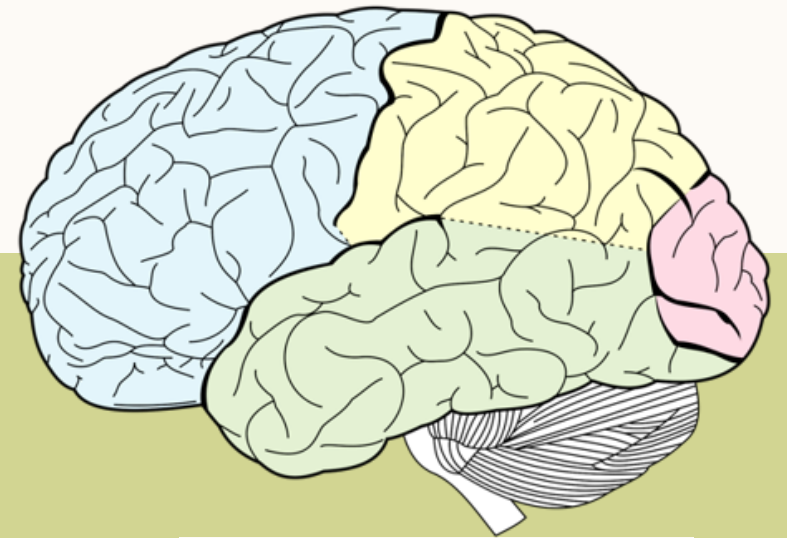
REPTILIAN BRAIN

Survival instincts – the four
F's (fleeing, feeding,
fighting, reproduction)
Autonomous processes



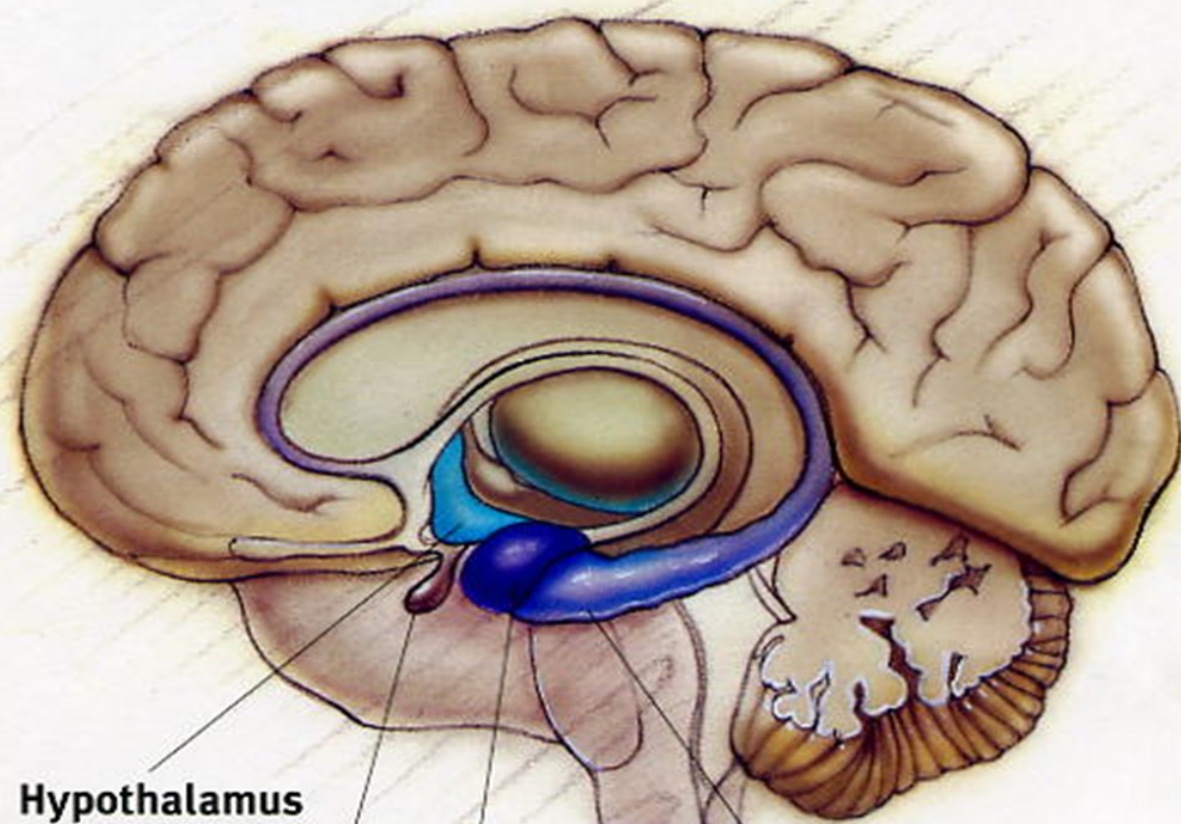
MAMMALIAN BRAIN

Contains limbic system,
which processes emotions,
nervous system activation,
and memory



NEOMAMMALIAN BRAIN

Sensory processing,
learning, decision-making,
complex problem-solving,
and emotional regulation.



Hypothalamus

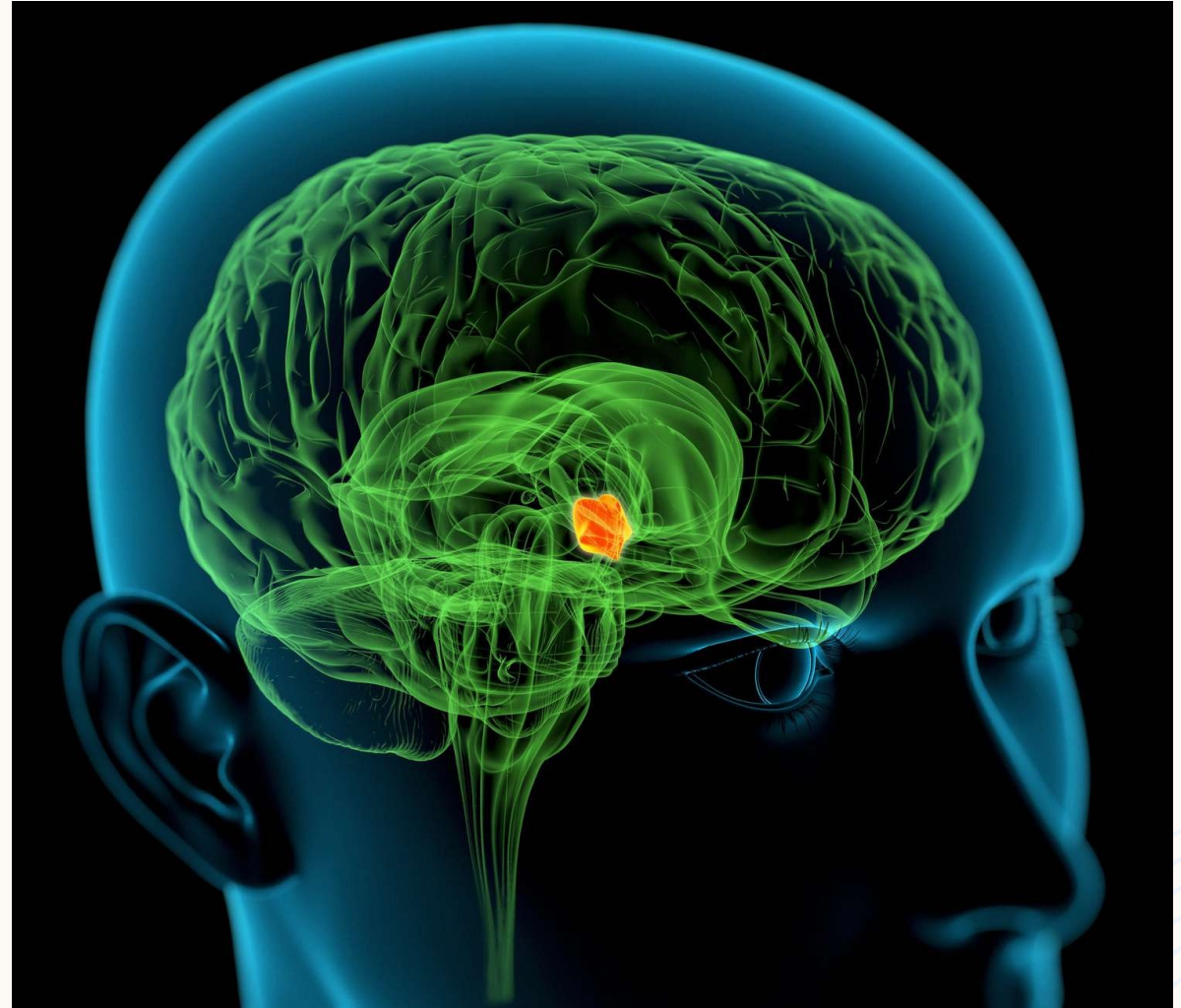
**Pituitary
gland**

Amygdala

Hippocampus

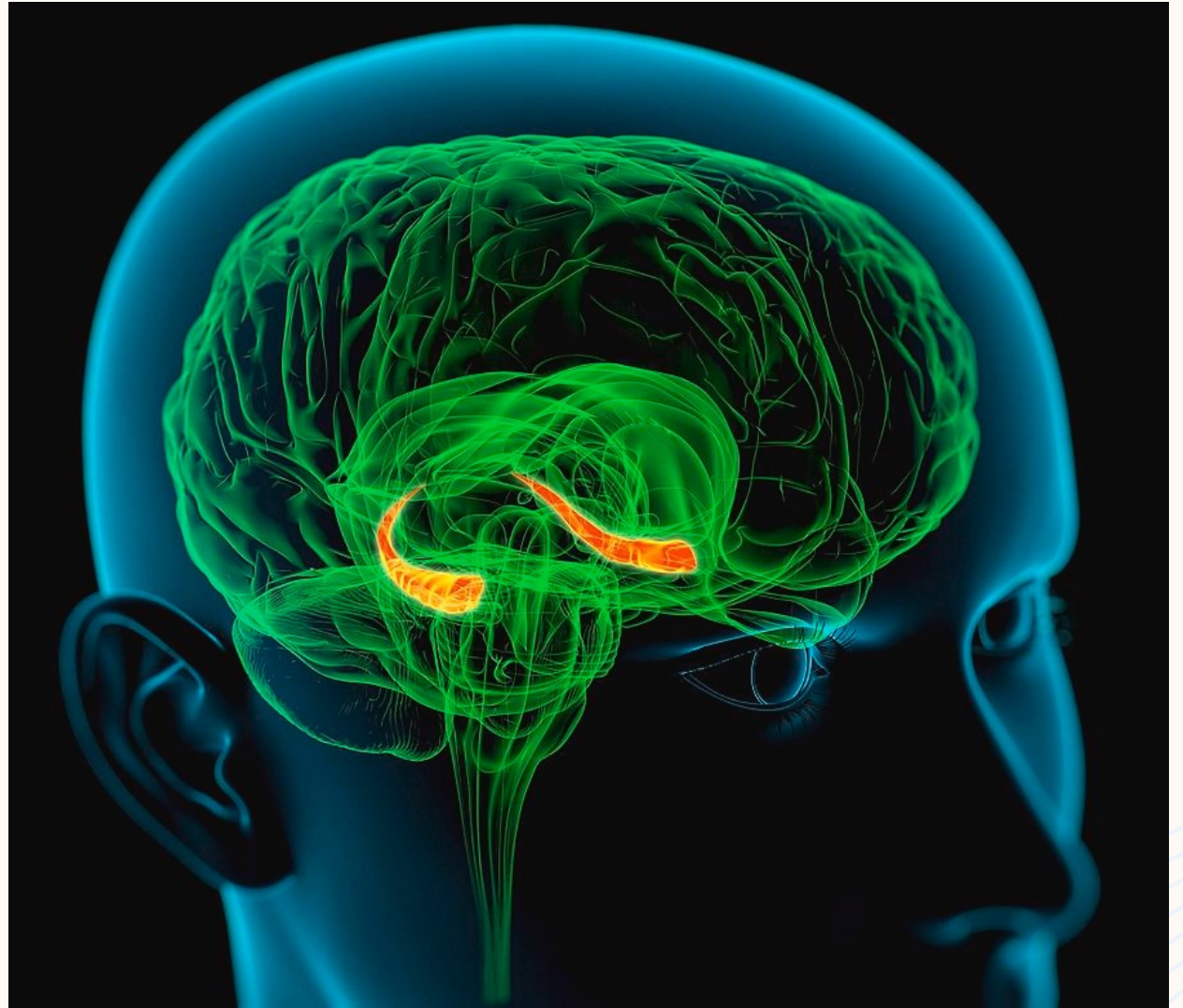
HYPOTHALAMUS

- Main role is to maintain homeostasis
 - If hypothalamus receives signal that the internal temperature is too high, it responds by telling the body to sweat.
- Part of the endocrine system which is a network of hormone-producing glands and organs that help to regulate body functions.



HIPPOCAMPUS

- Plays a role in processing and retrieving memories and spatial relationships.
- Short-term memories are converted into long-term memories in the hippocampus and stored elsewhere.



AMYGDALA

- Emergency dispatcher of the brain
- Once danger is sensed, the amygdala activates fight-or-flight mode.
- Input from thalamus and sensory cortices.
- Output to the hypothalamus and brainstem allows for sympathetic nervous system response.
- With trauma, the amygdala doesn't differentiate past threats from a current threat.
 - These are called triggers and can include anything that reminds one of the traumatic event.



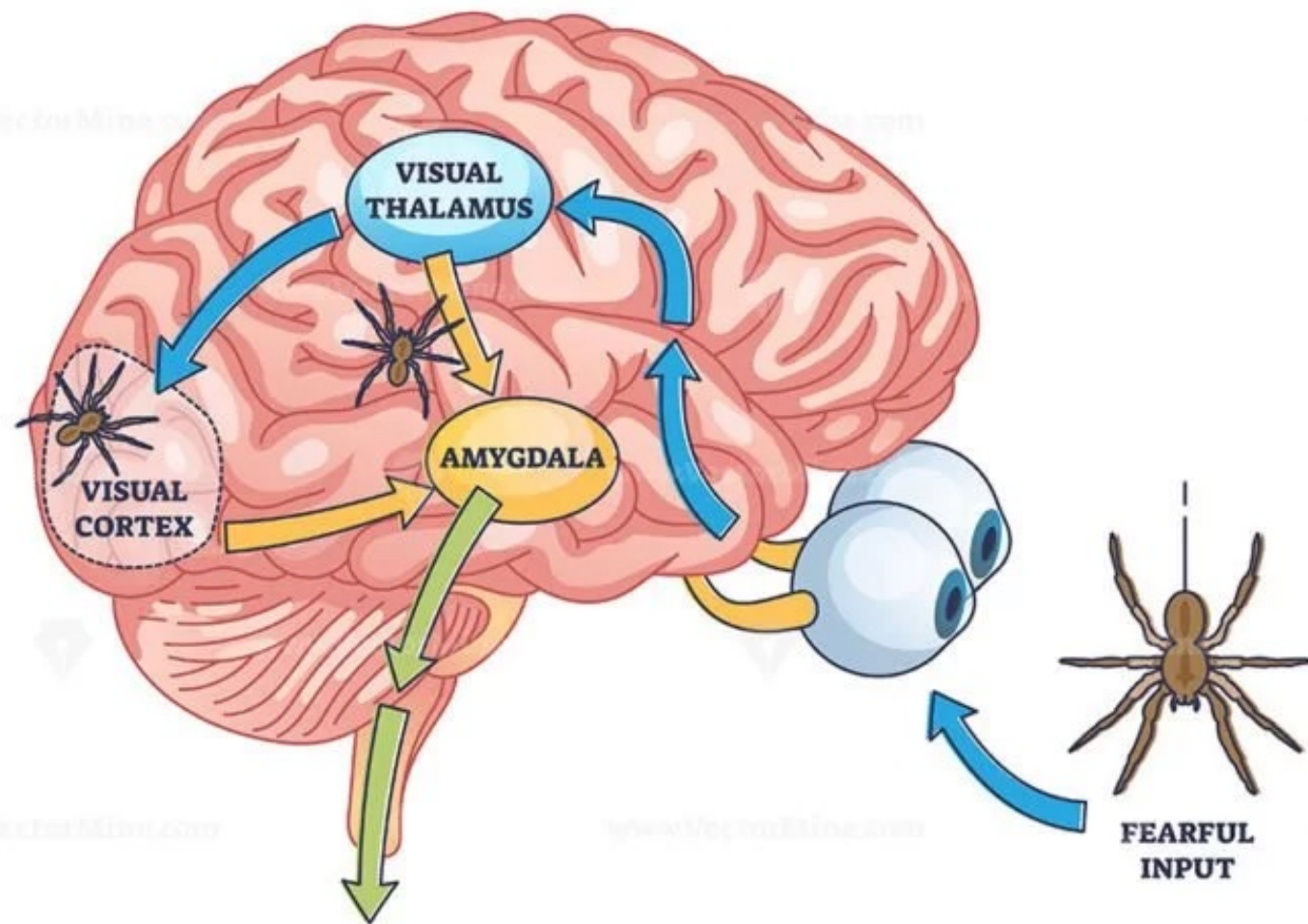
LITTLE ALBERT

- Experiment conducted in the early 20th century by John B. Watson.
- Involved conditioning an infant, “little Albert” to fear something that isn’t scary.
- Example of classical conditioning in which a neutral stimulus, in this case, a rat, is paired with a naturally occurring reflex that produces a conditioned response.
- In the case of little Albert, a rat was paired with a loud noise which caused the child to cry. After repeated pairing of stimuli, Albert would cry just by seeing the rat.

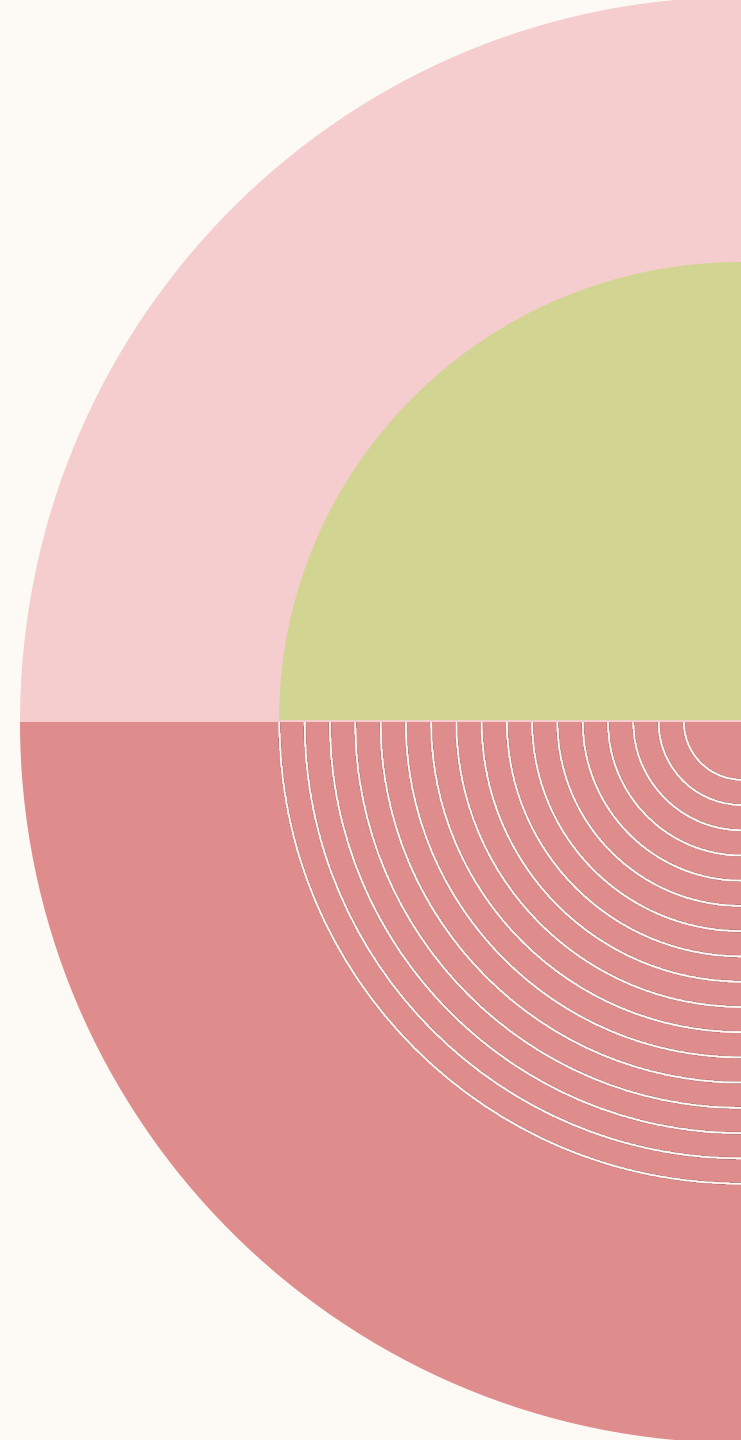
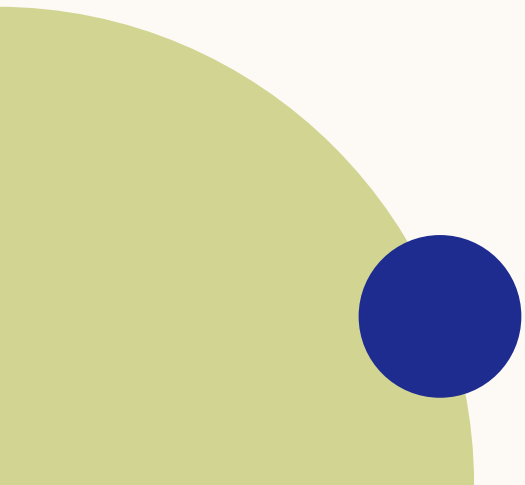


Now he fears even Santa Claus

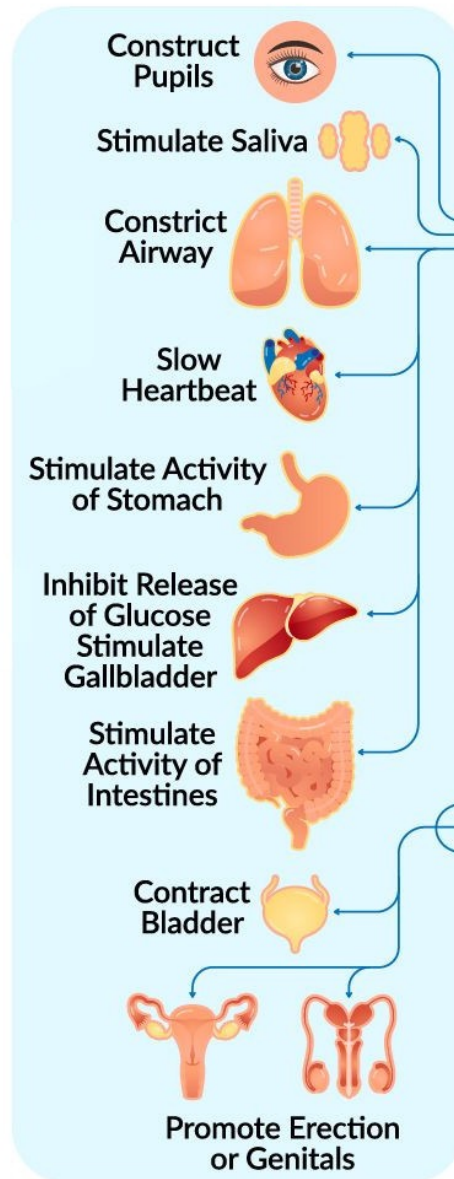
AMYGDALA FUNCTION



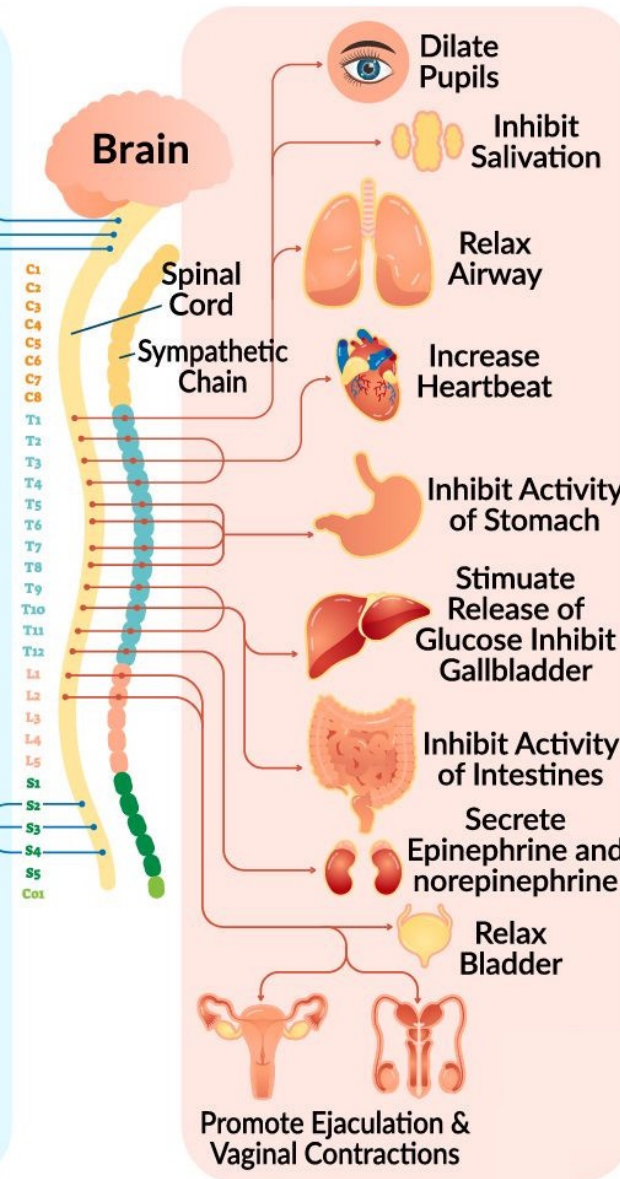
FIGHT OR FLIGHT



Parasympathetic Nerves



Sympathetic Nerves





WHAT IS TRAUMA?

Trauma is the lasting response resulting from experiencing a distressing event.

Traumatic events are subjective as the same event may be more traumatic for some than others.

When memories and thoughts of the traumatic event persist, they may lead to posttraumatic stress disorder.

SYMPTOMS OF TRAUMA

Psychological:

Emotional distress, shock, denial, anger, fear, anxiety, sadness, feelings of helplessness

Physical:

Fatigue, insomnia, sweating, trembling, changes in eating habits

Cognitive:

Memory problems, intrusive thoughts/flashbacks, hypervigilance, difficulty concentrating





THANK YOU

Any questions?