The largest division of the brain. It is divided into two hemispheres, each of which is divided into four lobes.
ALIEN HAND Syndrome
WERNICKE’S APHASIA
The oldest of the three, controls the body's vital functions such as heart rate, breathing, body temperature and balance.

• Our reptilian brain includes the main structures found in a reptile's brain: the brainstem and the cerebellum. The reptilian brain is reliable but tends to be somewhat rigid and compulsive.

• “survival state”, “fight or flight”
• the main conducting unit of the neuron, capable of conveying electrical signals along distances that range from as short as 0.1 mm to as long as 2 m.

• many axon split into several branches, thereby conveying information to different targets.
DENDRITES

- These structures branch out in treelike fashion and serve as the main apparatus for receiving signals from other nerve cells.
- They function as an "antennae" of the neuron and are covered by thousands of synapses.
- The dendritic membrane under the synapse (the post-synaptic membrane) has many specialized protein molecules called receptors that detect the neurotransmitters in the synaptic cleft.
**NEUROTRANSMITTERS VS HORMONES**

<table>
<thead>
<tr>
<th>SYSTEM TRANSMISSION</th>
<th>Nervous System</th>
<th>Endocrine System</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORIGIN</td>
<td>Neurons</td>
<td>Endocrine glands</td>
</tr>
<tr>
<td>TARGET CELLS</td>
<td>can be specific neurons or other cells</td>
<td>can be some distance from endocrine gland</td>
</tr>
<tr>
<td>ACTION</td>
<td>Extremely fast</td>
<td>Not that fast</td>
</tr>
<tr>
<td>LASTING EFFECTIVITY</td>
<td>Short-lasting (millisecond)</td>
<td>From few seconds to few days</td>
</tr>
<tr>
<td>EFFECT on the TARGET</td>
<td>Able to stimulate postsynaptic membranes</td>
<td>Able to regulate target organ</td>
</tr>
<tr>
<td></td>
<td>Can be synthesized outside the body</td>
<td>Cannot</td>
</tr>
</tbody>
</table>
ADRENALINE/EPINEPHRINE

THE FIGHT OR FLIGHT NEUROTRANSMITTER

• also known as epinephrine

• hormone produced in high stress or exciting situations.

• Increased of heart rate, contracts blood vessels, increase blood flow to the muscles and oxygen to the lungs

• Leads to physical boost and heightened awareness
ENDORPHINS

THE EUPHORIA NEUROTRANSMITTER

• reduces the perception of pain and acts similarly to drugs such as morphine and codeine (pain killers)

• they are released in the brain during exercise, excitement, pain, and sexual activity, and produce a feeling of well-being or even euphoria
THINKING THEORIES

Brain Dominance Theory
Whole-Brain Theory
Multiple Intelligence
There is no strong neurological evidences that supports localization of, even basic, cognitive functions in this way in hemisphere.