The Head and Brain

Parts of the head

- The **scalp** is the skin covering of the head that is often covered with hair.
- The **skull** is the hard bony covering that encases and protects the brain.
- The **meninges** are the three layers inside the skull that cover the brain. These layers provide added protection to the brain. The layers are called the **dura**, **arachnoid** and **pia**.
- **Cerebrospinal fluid (CSF)** surrounds the brain in the space between the arachnoid and pia. It also fills the open spaces within the brain to provide a protective cushion. The fluid is normally clear and looks like water. It is made inside the brain and provides nutrients to the brain.

Parts of the brain

The brain is the control center of the body. It controls thoughts, memory, speech and movement. It regulates the function of many organs.

- The **cerebral cortex (cerebrum)** makes up the largest portion of the brain. It is divided into two halves called the left and right hemispheres. The **left hemisphere** controls movement of the right side of the body. The **right hemisphere** controls movement of the left side of the body.
Each hemisphere has four lobes. Each lobe controls certain body functions.

- The **frontal lobe** is behind the forehead. It controls thought, personality, behavior, judgment and problem solving. Concentration, attention and the abilities to organize and plan are also controlled here.
- The **occipital lobe**, which is located in the back of the brain, controls vision.
- The **parietal lobe** controls sense of touch, perception, awareness of body parts, talking, writing, math, grammar, organization of speech and one’s ability to tell size, shape and color of things.
- The fourth lobe, called the **temporal lobe**, regulates hearing, smell, taste, memory, organization and speech.

- The **brain stem** is located under the cerebral cortex. It connects the cerebral cortex to the spinal cord. It sends messages back and forth from the cerebral cortex to other parts of the body. Attention, arousal, and sleep and wake functions are based here. The brain stem also controls breathing, heart rate and blood pressure.
- **Cranial nerves** are twelve pairs of nerves that come out from the base of the brain and brain stem. These nerves control smell, hearing, eyesight, taste, swallowing, eye movement, tongue movement and facial expression.
- The **cerebellum** lies at the back of the skull under the cerebral cortex. It helps to coordinate movement of the arms and legs, and balance.
- The **spinal cord** is the communication line for messages to travel to and from the brain.

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**Talk to your doctor or health care team if you have any questions about your care.**

For more health information, contact the Library for Health Information at **614-293-3707** or e-mail **health-info@osu.edu**.

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