

Functional hemispherectomy

The cerebrum is the largest part of the brain. It is divided into right and left hemispheres. The corpus callosum is in the middle of the two hemispheres and connects them.

The left hemisphere controls the right side of the body. In most kids, the brain's speech and language centers are in the left hemisphere.

The right hemisphere of the brain controls movement of the left side of the body. It may control speech and language in some left-handed kids. It may also control them in some kids whose left hemisphere is injured or malformed.

What is a functional hemispherectomy?

This surgery is done to treat epilepsy. Parts of the brain in one hemisphere are removed and the corpus callosum is cut. This surgery disconnects the side of the brain that is causing seizures from the rest of the brain. After surgery, abnormal electrical discharges cannot spread to cause seizures.

The surgery most often takes about 4 hours. Your child will have general anesthesia. They are in a deep sleep during surgery.

- This surgery is an option for children whose seizures come from one hemisphere of the brain and are **not** controlled by seizure medicine.
- This surgery can help kids with disorders like Rasmussen's Encephalitis, Sturge-Weber Syndrome, hemimegalencephaly, cortical dysplasia, or stroke.

What happens after surgery?

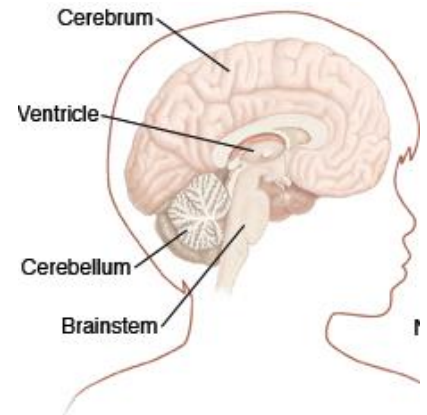
After surgery your child will stay in the ICU for 1 to 2 nights. When ready, your child will move to a regular hospital room. Your child should be ready to go home within 1 to 2 weeks after surgery.

Will my child have any permanent side effects after surgery?

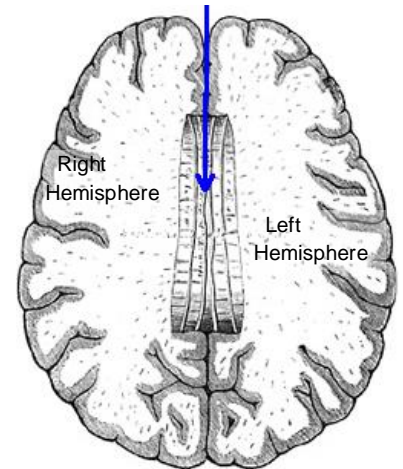
There are some common side effects from this surgery. Your child may have already had many of them before surgery. Therapists will start working with your child soon after surgery. Continued physical and occupational therapies can improve function of the affected side.

After surgery your child will have:

- Weakness and paralysis of one side of the body. This is called hemiparesis.
 - A right-sided hemispherectomy will cause your child's left side to be weak.
 - A left-sided hemispherectomy will cause your child's right side to be weak.



corpus callosum



- Your child will be able to walk and likely run again after this surgery. A brace may be needed to keep the affected foot from dragging.
- Your child will be able to move their elbow and shoulder to use their affected arm. They may have trouble using their hand and fingers for fine motor tasks. Things like buttoning, picking up small items, or holding a pencil may be hard to do.
- Visual field cut. This will be explained more before surgery. Many children will get used to this change.
- About 3 out of 10 children will have **hydrocephalus** after this surgery. This is an extra fluid build-up in the brain. A shunt may be needed to keep the fluid draining the way it should.

Other teaching sheets that may be helpful

[Hydrocephalus #1792](#)

Resources

The Hemispherectomy Foundation is a very good resource for families. Please take time to explore their website at <http://hemifoundation.intuitwebsites.com>.

ALERT: Call your child's doctor, nurse, or clinic if you have any questions or concerns or if your child has special health care needs that were not covered by this information.

This sheet was created to help you care for your child or family member. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment and follow-up.