

Encephalocele

What is an encephalocele?

An encephalocele is a **neural tube defect** (a birth defect associated with an opening in the skull, neck, or spine) characterized by the presence of **brain tissue and membranes** outside the skull.

Neural tube defects (NTDs), including encephaloceles, result from failure of the **neural tube** to close as a baby grows. Normally, skin and other tissues grow around the **spinal cord** and fuse (close) early in a baby's development. If this fusion does not occur, a neural tube defect is the result. Neural tube defects can range in size and occur anywhere along the neck or spine (backbone); when a neural tube defect occurs in the skull or neck, this is referred to as an encephalocele.

Children with encephaloceles may have additional birth defects, such as **hydrocephalus** (extra fluid around the brain, also called "water on the brain"), **microcephaly** (small head size), **seizures**, **developmental delay** (failure to meet developmental milestones on time), **mental retardation**, **problems with coordination or movement**, or **paralysis**.

What causes encephaloceles?

Studies have shown that taking **folic acid** can greatly decrease the chance of having a baby with a neural tube defect, such as an encephalocele. Women who are of childbearing age are recommended to take **0.4 milligrams (mg) of folic acid every day, even before becoming pregnant**. **Women who have had a previous child with a neural tube defect are recommended to increase the daily dose of folic acid to 4.0 milligrams (mg) each day, even before becoming pregnant**. Having one child with a neural tube defect increases the risk of having a second child with an NTD.

Although taking folic acid has been shown to decrease the risk of neural tube defects, the exact cause of encephaloceles and other NTDs is not known. Neural tube defects are thought to be **multifactorial** conditions, meaning that both genetic and environmental factors contribute to the development of an NTD.

How are encephaloceles treated?

Surgery can be done to place the brain tissue and membranes back in the skull and correct any skull or facial abnormalities that may be present. Other treatments depends on what additional birth defects, if any, are present. Your child's doctor(s) will discuss appropriate treatment options with you.

For more information

National Institute of Child Health and Human Development - http://www.nichd.nih.gov/health/topics/neural_tube_defects.cfm
National Institute of Neurological Disorders and Stroke (NINDS) - <http://www.ninds.nih.gov/disorders/encephaloceles/encephaloceles.htm>

Source: The National Institute of Neurological Disorders and Stroke (NINDS)