

## Chiari I Malformation (Arnold Chiari I)

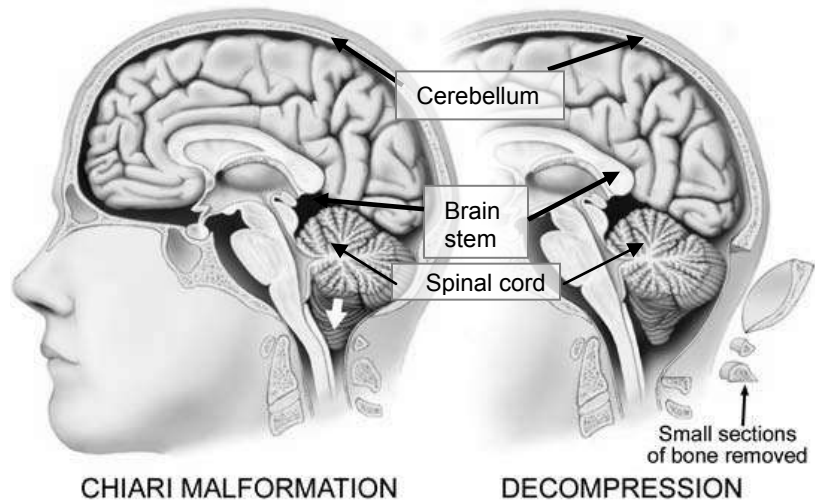
### What is Chiari I malformation?

This problem occurs in the cerebellum, at the base of the brain.

- There are two pegs of tissue that hang off the bottom of the cerebellum at the base of the brain. These pegs are called cerebellar tonsils.
- In Chiari I malformation, the cerebellar tonsils hang lower than normal. They hang past the base of the skull, into the spinal canal.

This space gets very crowded. Spinal fluid is not able to flow normally through it.

- 30 to 75% of children with Chiari I malformation also have a syrinx. A syrinx is an abnormal collection of spinal fluid (CSF) inside the spinal cord. It may also be called hydromyelia or syringomyelia.



### How does Chiari I malformation affect my child?

Not all children will have symptoms. Symptoms can begin at any age and may include:

- Headaches, most often in the back of the head. These may occur or get worse when straining, coughing or sneezing.
- Jerking eye movements. This is called nystagmus
- Trouble with balance and coordination.
- Weakness.
- Trouble swallowing.
- Tight muscles especially with movement.
- Abnormal feelings in the body. This may include numbness or tingling.

### What tests might need to be done?

- A special doctor called a neurosurgeon will do an exam.
- An MRI (magnetic resonance imaging study) of the brain may be done. The MRI looks at the cerebellum and the cerebellar tonsils.
- An MRI of the spine may be done. The MRI is done to show if your child has a syrinx.

- A special type of MRI study called a cine flow study may be done. This study will show if CSF has enough room to flow at the base of the skull.

## **How is it treated?**

Chiari I malformation is treated with surgery. The surgery is called Chiari decompression.

Surgery is most often recommended if your child has:

- Symptoms that are severe or getting worse.
- A syrinx of the spinal cord.

If symptoms are mild, surgery may not be needed at all.

The goal of the surgery is to make more room around the cerebellum at the base of the skull. This will let CSF flow easier at the base of the skull. It will also relieve pressure on the spinal cord.

Your child's doctor will talk with you about the treatment recommended for your child. It is not always possible to fix all the symptoms your child is having.

**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 teaching sheet is meant to help you care for your child. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment, and follow-up.**