About Hydrocephalus for Pediatric Patients

This information explains hydrocephalus for pediatric patients. For the rest of this resource, our use of the words “you” and “your” refers to you or your child.

What is hydrocephalus?

Hydrocephalus is the buildup of extra cerebrospinal fluid (CSF) around the brain and spinal cord.

CSF is the fluid that surrounds your brain and spinal cord. It’s made in the ventricles (hollow spaces) inside your brain. It protects your brain and spinal cord by acting like a cushion. However, when you have too much CSF, it puts pressure on your brain and skull. This pressure makes your ventricles grow bigger and causes brain swelling (see Figure 1).

![Figure 1. Brain without and with hydrocephalus](image-url)
What causes hydrocephalus?

You can be born with hydrocephalus or develop it due to bleeding in your brain, meningitis, a head injury, a tumor, or cysts.

What are the symptoms of hydrocephalus?

The symptoms of hydrocephalus are different depending on your age and which disease stage you’re in.

The most common symptoms of hydrocephalus include:

- Increased head size and bulging soft spot in infants
- Headache
- Nausea and vomiting
- Feeling unusually tired or weak (fatigue)
- Becoming easily frustrated or annoyed (irritability)
- Personality changes
- Problems with thinking and memory (such as confusion)
- Trouble with balance and walking
- Weak bladder control
- Seizures
- High pitched cry in infants
- Having trouble eating
- Problems with seeing, such as:
  - Blurred vision
  - Double vision (diplopia)
  - Eyes that turn downward (also called “sun setting”)
How is hydrocephalus diagnosed?

A physical exam is done to look for signs and symptoms of hydrocephalus. Your doctor will use imaging tests, such as a computed tomography (CT) scan or magnetic resonance imaging (MRI), to take a closer look at your brain and confirm the diagnosis of hydrocephalus.

How is hydrocephalus treated?

Treatment will help prevent problems from hydrocephalus by removing the extra CSF from your brain.

A surgery called an endoscopic third ventriculostomy (ETV) can be used to treat hydrocephalus. During an ETV, a tiny hole is made in the third ventricle of your brain. This allows the extra CSF to drain into another area of the brain where it can be absorbed. For more information, ask your doctor or nurse for the resource About Your Endoscopic Third Ventriculostomy (ETV) for Pediatric Patients or search for it on our website at www.mskcc.org/pe.

When should I call my doctor or nurse practitioner (NP)?

If you’re having any symptoms of hydrocephalus, call your doctor or NP right away.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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