Hydrocephalus and Shunt Obstruction

What is hydrocephalus?

Hydrocephalus occurs when too much cerebrospinal fluid (CSF) builds up in the cavities of the brain (called ventricles). Too much CSF puts pressure on the brain (increased intracranial pressure) and can cause brain damage.

How is it treated?

A tube (shunt) is used to drain the extra CSF out of the brain. In a surgical procedure, one end of the tube is passed through a small hole in the skull and through the brain tissue into one of the ventricles. The other end of the tube is passed under the skin into the space around the organs in the abdomen, where the CSF is absorbed back into the bloodstream. Whenever your child is ill for any reason, remind your medical provider that he has a shunt.

What are signs of increased pressure in the brain?

If the shunt stops working, your child will have symptoms and could get brain damage, or even die, if not treated. It is very important to watch for symptoms of increased intracranial pressure so that you know when to call the doctor.

Symptoms of increased intracranial pressure from shunt blockage or failure

If your child has <u>severe</u> or <u>critical</u> symptoms, call 911 right away and then call your nurse or doctor.

<u>Critical</u>

- Unresponsive (does not wake up even to pain)
- Pupils dilated, not responsive to light or unequal pupil sizes
- Irregular breathing or changes in blood pressure or heart rate

<u>Severe</u>

- Difficult to wake up
- Pain or headache down neck
- Pupils still react to light, but may be sluggish

If your child has <u>mild</u> or <u>moderate</u> symptoms, call your nurse or doctor right away.

<u>Moderate</u>

- Headache behind the eyes that does not go away
- Vomiting
- Sleepier than usual
- More irritable than usual

Continued

Symptoms of increased intracranial pressure from shunt blockage or failure, continued

Mild

- Decreased school performance (hand-eye coordination, visual motor skills worsen, grades decline)
- Confusion, memory or attention problems
- Sudden personality or emotional changes
- Recurring headache
- Decreased activity
- Change in speech/noisy breathing
- Increased dependence on caregivers
- Increased or decreased appetite or trouble swallowing
- Change in vision or eye alignment
- Increase or onset of tightness or stiffness in the legs
- Change in bowel or bladder control
- Worsening scoliosis
- Enlarging head size (seen only in young infants)

Phone numbers

- Neurodevelopmental Nurse Line: (206) 987-2184
- Neurosurgery Nurse Practitioner: (206) 987-2000 (paging operator)
- Primary Care Provider: _____

If the child is not a patient of Children's Hospital and Regional Medical Center, the child's private neurosurgeon should be contacted immediately.

Early diagnosis and treatment is the key!

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FOR MORE INFORMATION

- Neurodevelopmental / Birth Defects, (206) 987-2184
- Your Child's Health Care Provider

Children's will make this information available in alternate formats upon request. Please call Marketing Communications at (206) 987-5205.

This handout has been reviewed by clinical staff at Children's Hospital. However, your child's needs are unique. Before you act or rely upon this information, please talk with your child's health care provider.

Children's
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