Hydrocephalus (hydro=water, cephalus=head) is an increase of cerebral spinal fluid (CSF) in the brain. This can be caused by problems with how the CSF is made, circulated, or absorbed.

When CSF collects in the brain, the ventricles get bigger. This makes pressure in the head increase. This causes sickness. Symptoms vary with the age, and include one or more from the list below:

- Headache
- Vomiting
- Irritability
- Decrease in appetite
- Feeling sleepy
- Increase in infant’s head size
- “Sunset eyes” (eyes which do not look up)
- Blurred or double vision
- Clumsiness in older kids and adults
**Treatment for Hydrocephalus**

To reduce pressure on the brain, the CSF must drain off the brain. One way to do this is to place a shunt during surgery.

A shunt is a soft, narrow piece of tubing that drains the extra CSF from the ventricles to the abdomen or the space around the heart or lungs. Once the shunt is placed, the CSF is absorbed by the body.

**Before Surgery**

- Have a physical exam and lab tests that include blood work and urinalysis. Schedule this exam with your primary care provider or with a nurse in our department. Complete this within 30 days of surgery. We may cancel surgery without an updated exam.
- Contact your insurance company for any referrals you may need.
- Stop these medicines for two weeks before surgery:
  - Aspirin, Excedrin®, Ascriptin®, and Ecotrin®
  - Vitamins and herbal supplements
  - Plavix®
  - Coumadin® or Warfarin
  - Ibuprofen, Advil®, Motrin®, Nuprin®, and Aleve®
- You may use acetaminophen (Tylenol®) if needed

Please no smoking or exposure to cigarette smoke for two weeks prior to surgery. Smoking delays wound healing. Cigarette smoke contains a poison that lowers the level of oxygen in the blood.

See the HFFY “getting your skin ready for surgery” for pre-op bathing instructions.

After midnight the night before surgery:
- Do not eat anything.
- Do not drink any milk or juice with pulp.
- You may drink clear liquids up until 4 hours before surgery.

You will be called the afternoon before surgery. At this time, you will be told what time you need to arrive at the hospital and final details about how to get ready for the next day.

You will need to sign a consent form. The consent states that you understand what was explained to you about the procedure. It also states that you know about the risks and benefits of the surgery.

Do not wear make-up, jewelry, or nail polish to surgery.
During Surgery
A small hole will be made through the skull. Tubing is placed through the hole into the brain. A one-way valve is attached to the catheter and placed under the scalp. The valve is then fastened to the catheter that travels under the skin to the abdomen or the space around the heart or lungs. A small cut is made where the catheter ends. The operation will take about two hours.

After Surgery
There is mild pain with this surgery. You may use acetaminophen (Tylenol®) or ibuprofen for this pain.

You will spend at least one night in the hospital. Once you are eating and drinking and there are no other concerns, your intravenous (IV) line will be removed. You will then be ready to go home.

You may have two dressings in place. One will be on your head and one on your torso. The dressing and staples stay in place until your follow-up clinic visit in 7 – 10 days. Your dressing should remain clean and dry.

After discharge, you may resume your normal routine. You should wait at least two weeks after surgery before getting any vaccines. You will need a regular follow up with a neurosurgeon and MRI scans to check the size of your ventricles.

When to call
A shunt may not work if it becomes clogged, disconnected, or infected. Please call right away if you notice any of these signs and symptoms:

- Redness, pain or swelling of the skin along the length of the shunt, or at the incision sites.
- Drainage from the incision.
- Fever greater than 101.5°F within the first six months of surgery.
- Symptoms of hydrocephalus:
  - Irritability
  - Sleepiness
  - Nausea or vomiting
  - Recurring headaches
  - Blurred or double vision
  - Loss of appetite
  - Sudden or gradual change in personality
  - Rubbing of the head
  - Listless
  - Weakness
  - Balance or coordination problems
  - Sunset eyes

Phone Numbers
American Family Children’s Hospital Clinic: (608) 263-6420

After hours, weekends, and holidays, call the paging operator at (608) 262-0486. Ask for the neurosurgeon on call. Give your name and phone number with the area code. The doctor will call you back. If you live out of the area, call 1-800-323-8942.