Ventricular Shunt for Hydrocephalus

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

When CSF collects in the brain, pressure in the head increases and the ventricles enlarge. This causes sickness. Symptoms vary with the age of the patient 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 of 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 excess 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.

During surgery
• A small hole will be made through the skull bone.
• 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 incision is made where the catheter ends. The operation will take about two hours.

Before surgery
• You will have a physical exam and lab tests that include blood work and urinalysis.
• Please schedule this pre-operative appointment with your primary care provider or with a nurse practitioner in our department.
• This appointment should be done within 30 days of surgery—we may cancel surgery without an updated pre-operative exam.
• Please contact your insurance company to obtain any needed referrals.
• Please stop the following medicines for two weeks before surgery. It is alright to use acetaminophen (Tylenol®) if needed.
  o Aspirin, Excedrin®, Ascriptin®, and Ecotrin®
  o Vitamins and herbal supplements
  o Plavix®
  o Coumadin® or Warfarin
  o Ibuprofen, Advil®, Motrin®, Nuprin®, and Aleve®
• Wash your hair, neck, chest, and abdomen twice before surgery. Please use an antibacterial soap. Wash (do not scrub) for 2-3 minutes. Rinse well. Do not use lotions, powders, or perfume.
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.

After midnight the night before surgery
- You may not eat anything
- You may not drink any milk or juice with pulp

Up until 4 hours before surgery
- It is alright to drink clear liquids

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

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

Do not wear make-up, jewelry, or nail polish to surgery.

After surgery
There is mild pain involved with this surgery. Acetaminophen (Tylenol®) or Ibuprofen may be used for this mild pain.

You will spend a minimum of one night in the hospital. Once you are eating and drinking and there are no other concerns, your intravenous (IV) line will be removed. When all of this happens you will be ready to go home.

There may be two dressings in place. One will be on the head and one on the torso. The dressing and staples stay in place until the follow-up clinic visit in 7 – 10 days. The dressing should remain clean and dry. If there is any clear drainage from the incision, call the neurosurgery department right away.

After discharge, you may resume your normal routine.

You should wait at least two weeks after surgery before getting immunizations.

You will need regular follow up with a neurosurgeon. You will also need MRI scans to check the size of the ventricles.
**When to call**
Sometimes a shunt does not work because it becomes clogged or disconnected. It also may not work if it becomes 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**

Spanish version of this *Health Facts for You* is #5972

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person’s health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 2/2015 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#5258