



Name of Child: \_\_\_\_\_ Date: \_\_\_\_\_

# Shunts

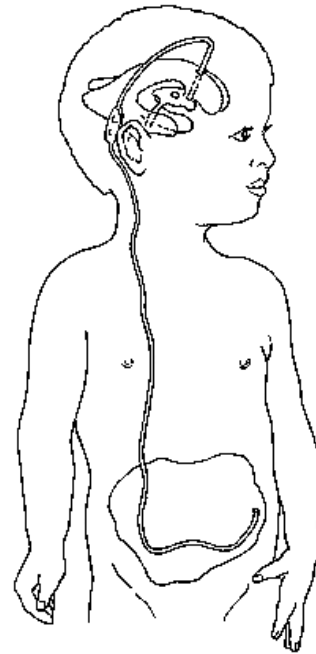
## to treat hydrocephalus

### What is hydrocephalus?

Hydrocephalus is a build up of water (cerebrospinal fluid) in a child's head. This water can press on the brain and hurt it. Many things can cause hydrocephalus. One way to fix it is to put in a shunt.

### What is a shunt?

A shunt is a flexible tube about the size of the ink tube inside a pen, but longer. It is put into the ventricles of the brain. It carries the fluid away from the brain to another part of the child's body, where it safely goes into the blood.



**A shunt carries fluid away from the brain to another part of the child's body.**

### There are two types of shunts:

yes  no **The VP Shunt**

VP stands for **ventriculo-peritoneal**. It carries the fluid from the ventricles of the brain (**ventriculum**) to the belly (**peritoneum**).

yes  no **The VA Shunt**

VA stands for **ventriculo-atrial**. It carries the fluid from the ventricles of the brain (**ventriculum**) to the heart (**atrium**).

## How does the shunt work?

- The shunt has a small one-way valve. When the fluid builds up in your child's brain, the extra pressure pushes the fluid through the tube. The valve keeps the fluid from flowing back into the brain.
- Some shunts can be programmed by the neurosurgeon to open at different fluid pressures.

Your child has a programmable shunt:  yes  no

## How is the shunt put in?

A brain doctor, called a **neurosurgeon**, puts the shunt in your child, making only two or three small cuts.

1. The doctor makes a half moon cut on the top of the head (scalp) for the tube to enter. A small hole is made in the skull and the shunt is passed into the ventricle of the brain. Hair will grow back to cover the cut on the scalp.
2. The doctor makes a cut on your child's belly. The other end of the tube is passed under the skin behind the ear and down into your child's belly. Sometimes the doctor makes a cut at the back of the child's head to help thread the tube down into the belly.

## To do after surgery

- After the shunt is put in, do not let the stitches (**sutures**) or cuts (**incisions**) get wet until the stitches fall out or are removed. Your doctor will tell you what kind of stitches your child has.  
You may give your child a sponge bath every day.
- Your child may sleep in any position, unless your doctor tells you something else.
- Your child may eat the same food as usual.
- There may be a small raised area about the size of a quarter behind the ear. This is the valve.



**Do not let the stitches (sutures) or cuts (incisions) get wet until the stitches fall out or are removed.**

# Things to Know

- The shunt can get plugged up and stop draining spinal fluid. This causes the fluid to build up in the brain.
- If the shunt is not working right, is infected or your child has outgrown it, the shunt will need to be replaced. This is called a **shunt revision**.
- Programmable shunts may need to be reprogrammed after MRI tests. If your child has a programmable shunt and needs an MRI, make sure the neurosurgeon is called to check the pressure setting after the test.
- When your child has a shunt, it is very important to keep your follow-up visits with the doctor.
  - Bring your questions about the shunt to the doctor.
  - Your child may need tests to check the shunt.
  - Your baby's head will be measured with each visit. If your child's head gets larger quickly, it may mean the shunt is not working well.
- If your child has trouble developing or learning, talk to your doctor, nurse or school nurse. One of them can talk with your child's teacher or refer you to programs or services.

yes  no For new babies:

- Handle your baby the same way you would any baby. You can hold him upside down, bounce him, or play with him like any baby. It is important to talk to and touch your baby.
- Use the first month home to get to know your baby and get things settled.
- Most children need the shunt for the rest of their lives. A few babies outgrow their need for a shunt.

## Sometimes the shunt stops working.

Signs that a shunt may have stopped working include:

- ✓ when your baby sits quietly on your lap, the soft spot is hard or raised.
- ✓ upset stomach
- ✓ fussy, crying, changes in behavior
- ✓ not eating well
- ✓ jerking arms and legs (seizures)
- ✓ eyes looking down, called sunset eyes
- ✓ throwing up
- ✓ very sleepy



**upset  
stomach**

- ✓ eyes change: pupils not equal, crossed eyes
- ✓ headache
- ✓ stiff neck
- ✓ blurry vision
- ✓ double vision
- ✓ has trouble walking; wobbles or sways
- ✓ weakness on one side of the body
- ✓ fluid coming from the incision
- ✓ swelling on or along the shunt tube
- ✓ head size grows very quickly



**wobbles  
or sways**

- The shunt can get infected. Make sure you quickly treat any infection your child gets, such as ear infections, throat infections, boils or skin infections.

### Signs that the shunt is infected include:

- ✓ temperature over 101° F. rectally
- ✓ redness on or along the shunt tube
- ✓ sores on or along the shunt tube
- ✓ fussy, crying
- ✓ very sleepy
- ✓ fluid coming from the incision



**One sign of shunt  
infection: your child may  
be very sleepy**



### Call the doctor right away if your child

- ✓ has any signs that may mean the shunt is not working
- ✓ has any signs that may mean the shunt is infected

### Now that you've read this:

- Tell your nurse what you might see if the shunt was not working. (Check when done.)
- Tell your nurse what you might see if your child's shunt got infected. (Check when done.)



**If you have any questions or concerns,**

**call your child's doctor or**

**call \_\_\_\_\_**

**In an emergency, call 911.**

**If you want to know more about child health and illness,  
visit our library at The Emily Center at Phoenix Children's Hospital  
1919 East Thomas Road  
Phoenix, AZ 85016  
602-546-1400  
[www.phoenixchildrenshospital.com](http://www.phoenixchildrenshospital.com)**

**Disclaimer**

The information provided at this site is intended to be general information, and is provided for educational purposes only. It is not intended to take the place of examination, treatment, or consultation with a physician. Phoenix Children's Hospital urges you to contact your physician with any questions you may have about a medical condition.

**#123 • Written by Melani Jaskowiak, BSN, RN, CNRN**

**• Illustrated by Dennis Swain**

**This handout is also available in Spanish as #561/123s.**