If your child needs an external shunt, you should read this handout after reading “Do you know… Ventriculo-peritoneal shunts.” This handout is important because the information can help you keep your child safe with an external shunt.

**What is an external shunt?**

A shunt is a long plastic tube that lets fluid drain from the brain. Doctors use shunts to relieve pressure on the brain. This pressure is usually caused by a condition called hydrocephalus. This condition makes fluid build up inside the brain. The fluid, called cerebrospinal fluid or CSF, needs help to drain. Otherwise, the increased pressure can hurt your child’s brain or even be life threatening.

There are 2 different types of shunts:

- A ventriculo-peritoneal shunt, which drains CSF from the brain to another area of the body, and
- An external shunt, which drains CSF outside the body.

With an external shunt, one (1) end of the tube goes through a small cut in the skin. Then, the tube carries fluid into a bag or other system.

**Why does my child need an external shunt?**

Your child might need an external shunt for several reasons. Below are some reasons doctors use an external shunt.

- To relieve pressure on the brain from hydrocephalus that suddenly gets worse (acute hydrocephalus).
- To relieve pressure caused by bleeding in the brain, an infection called meningitis, or a tumor that blocks normal blood flow.
- To help when your child’s regular shunt gets infected. If this happens, doctors will treat the infection. During treatment, CSF goes into a bag outside the body. When the infection is gone, the doctor might put your child’s VP shunt back in place.
- To keep tumor cells from spreading from the brain to other parts of the body. When your child’s CSF has no more tumor cells in it, the doctor can use a VP shunt instead.
External shunts

What you need to know in the hospital

Keeping your child and the bag system in position

The most important thing to know is that your child’s head and shunt system must both stay in the correct position. An external shunt drains into a bag outside the body. In the hospital, this bag is usually part of a system that checks and controls how the fluid drains. To work correctly, the system and your child’s head must be in the correct position. **Do not move the drainage bag or your child’s bed without asking the nurse or doctor first.** Moving either one makes fluid drain slower or faster. This could cause problems for your child, including serious problems such as a stroke.

Your child’s doctor decides on the best position for your child’s head and the shunt system. The nurse will check this often. The nurse also checks your child’s health and makes sure the bag is draining correctly. The nurse will put a sign on the door about not moving your child without checking with the nurse.

If your child’s bag does not have a system

Sometimes, your child has a drainage bag without the system that checks and controls it. If so, the bag position is important. The bag has a filter at the top that should not get wet. If it does, it could stop working. So make sure the bag stays upright at about your child’s waist level. Ask your child’s nurse to show you the correct position.

When to call the nurse

Call your child’s nurse if:

- The tubing gets disconnected or gets a kink in it,
- Your child has a headache, feels sick to her stomach, or vomits, or
- Your child has any of the signs listed below under “When to get help with your child’s external shunt.”

What you need to know at home

- Always keep the drainage bag at the level the doctor tells you. If the bag is too high, it might not drain enough. If the bag is too low, it might drain too much.
- If you have a hospital bed, keep the head of your child’s bed at the level the doctor tells you. If you do not have a hospital bed at home, you can use pillows to keep your child’s head at the right level.
When to get help with your child’s external shunt

If you notice any of the signs below, get help right away. If your child is in the hospital, call a nurse immediately. If your child is at home, call your nurse or clinic right away. After hours, call St. Jude and ask for the doctor on call.

Here are the signs you should get help for an external shunt.

- You notice that fluid is not draining into the bag, or it is draining more than usual.

Always keep sterile gauze and hemostats with you. Your nurse will give you these. If the tubing breaks, wrap it with sterile gauze and clamp with a hemostat above the break (as shown in the drawing above). Call your nurse or clinic right away.

If the bag is attached to your child’s clothes or bed, be careful when moving your child or taking clothes off.

Keep the bag upright at all times. The bag has a filter on top. If the filter gets wet with CSF, it might not drain correctly.

Your nurse will change the bag daily and send CSF to the lab if needed.
External shunts

- The fluid changes color. Normal CSF is clear. You might see a small amount of blood for several hours after your child gets an external shunt, but the fluid should stay clear after that. Colored CSF can be a sign of infection or bleeding inside the head.
- The filter gets wet with CSF.
- After some activity, the shunt tube looks like it has pulled out of the skin, even a little bit. Do not try to push it back into your child’s body.
- The dressing looks wet, loose, or dirty.
- The shunt tubing breaks or leaks.
- Your child has a fever of 100.4 degrees F (38.0 degrees C) or higher.
- You see redness or swelling in the shunt area, or your child has pain around the shunt or tubing.
- Your child has a headache that hurts more as time passes. Your child might act impatient, grouchy, whiny, or anxious. Acting irritated might be the only sign of a headache in a child who is young or cannot talk.
- Your child vomits (throws up) without feeling sick to her stomach.
- Your child is not alert. **If you cannot wake up your child, take her to the nearest emergency room right away. Or call 911.**
- You notice a change in personality – For example, a child who is easy to deal with becomes hard to handle all of a sudden. Or your child is just not acting right.
- Your child has a bulging soft spot on her head.
- Your child has blurry vision, double vision, or cannot see.
- Your child stops being able to do some things she usually does (milestones that fit your child’s age).

**Questions?**

To learn more about external shunts, talk to your child’s St. Jude doctor or nurse practitioner. Call your child’s primary clinic if there are problems with the shunt or you have questions about it.