



Jefferson | Hospital for
Neuroscience

Department of Neurosurgery

Ventriculoperitoneal Shunt



Thomas
Jefferson
University



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Hospital

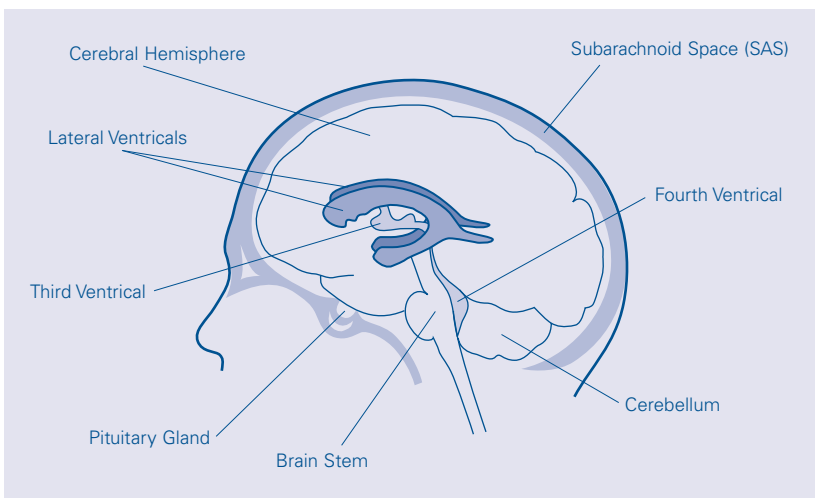
 Jefferson Health System®



Ventriculoperitoneal Shunt

A ventriculoperitoneal (ven-trick-u-low-pair-a-ta-knee-al) (VP) shunt is a device that is used to treat a condition called hydrocephalus. Hydrocephalus (hydro = fluid; cephalus = brain) is a condition in which too much fluid builds up in the brain. This fluid in the brain is called “cerebrospinal fluid” or “CSF.” CSF is believed to carry nutrients to brain cells and also provides a “cushion effect” for the brain.

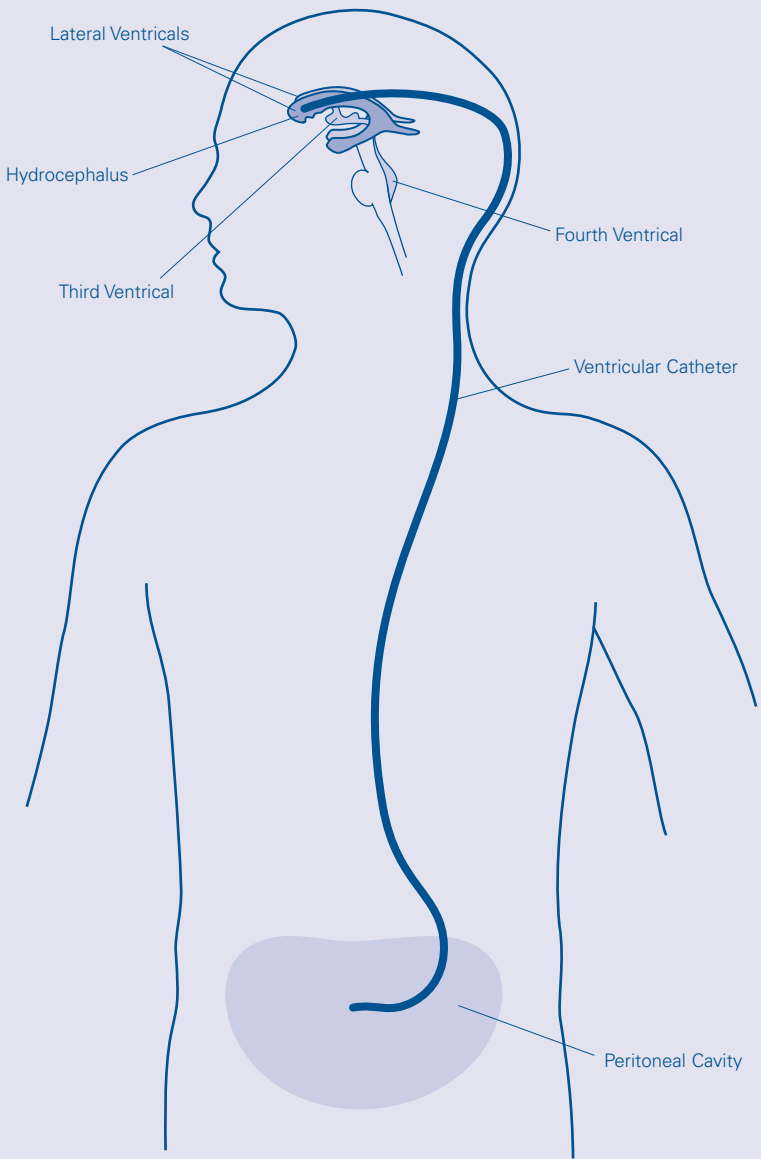
CSF is constantly being produced in special hollow cavities within the brain, called “ventricles.” Some CSF stays inside the ventricles while some circulates around the outside of the brain and the spinal cord within a special compartment called the subarachnoid space.





There must always be a “steady state” or a balance between the amount of CSF that is produced and the amount that is reabsorbed or sent back into the circulation. Sometimes an imbalance occurs if a ventricle becomes blocked. When this happens, the CSF “backs-up” in the ventricles. The ventricles become enlarged and this puts extra pressure on the brain. This is called “hydrocephalus”.

Hydrocephalus is commonly treated with the surgical placement of a shunt system. This system “shunts” or redirects the flow of CSF from the brain to another area of the body where it can be absorbed. When CSF is redirected from a blocked ventricle to the peritoneal area of the abdominal cavity it is called a ventriculoperitoneal or VP-shunt. A shunt is a soft, flexible, but sturdy silastic tube that is well-tolerated by our body tissues. One end of the catheter is placed within a ventricle inside the brain and the other end of the catheter is placed within the peritoneal (abdominal) cavity. A valve located along the catheter maintains one-way flow and regulates the rate of CSF flow. The placement of a VP-shunt is a surgical procedure that is performed by a neurosurgeon. A shunt may be temporary or permanent. Sometimes a shunt may need to be replaced or revised if it is not working properly.



Ventriculoperitoneal Shunt



Evening Before Surgery

- Nothing to eat or drink after midnight.
- You may brush your teeth or take medicine with a small sip of water.
- You may take your regular medicine unless you were told not to do so.

Day Of Surgery

- Report to JHN (Jefferson Hospital for Neuroscience), 900 Walnut Street at 6:30 AM.
- Convenient parking is located in the parking garage attached to JHN at 900 Walnut Street. You enter this garage on 9th Street (left-hand side) between Locust & Walnut Streets. Parking is not discounted at this site.
- After parking, take the garage elevator to the 1st floor (this will be the 1st floor of the hospital). Go directly to Admissions (same floor). This is where you sign in.
- After signing in you will be brought to the 5th floor for your surgery. If your surgery is scheduled for a little later that day you will be brought to a holding or waiting area until it is time for your operation.
- While you are in surgery, your family may go to the Waiting Room which is located on the 6th floor of JHN, across from the elevators. This room has a phone that your doctor will use to notify your family when your operation is done. Your family can also obtain a beeper at the Nurses' Station if they need to temporarily leave the waiting area.

Immediately Before Surgery

- Before your surgery, you will change into a hospital gown.
- You will be seen by the Anesthesiologist. Heart monitor stickers and wires will be placed on your chest and extremities. This is done to monitor your heart rate and rhythm throughout the procedure.
- A nurse will insert an IV into your arm vein so medication can be given to help you fall asleep.
- Your operation will not be performed until you are asleep.

VP-Shunt Surgery

- You will be put to sleep with a general anesthetic.
- The hair over the incision area on your scalp will be shaved.
- Two to three small incisions will be made generally on the scalp, neck and abdominal regions. These incisions allow the catheter to be “tunneled” under the skin from the head to the peritoneal cavity of the abdomen. When the CSF empties into the peritoneal cavity, it is quickly absorbed into the circulation.

After Surgery

- You will be taken to the Recovery Room for about one hour or so.
- Once you are considered stable, you will be transferred to a room on the 6th floor where your family may visit.
- Most patients are able to eat within a few hours after surgery.
- Most patients are discharged from the hospital within 24 hours after surgery.



Discharge Instructions / When You Go Home

- Call the office (215-955-7000) to schedule the following appointments:
 - If you leave the hospital with stitches or staples, schedule an office appointment to have them removed at 2 weeks after surgery.

Exception: Patients who have *dissolvable* stitches do not need to schedule an appointment for stitch removal since dissolvable stitches disappear on their own in about a week. You will be told the type of stitches you have before you are discharged from the hospital.

- Schedule your routine follow-up appointment for 4–6 weeks after your surgery. Keep in mind that the physician who performed your surgery may not necessarily be the physician you see at your follow-up visit.

Incision / Wound Care Instructions

- Sometimes you may see what looks like a “thread” on your incision or wound. This is a stitch so don’t pull on it.
- Do NOT allow your stitches or staples to get wet.
- You may take a shower and get the incision(s) wet *after* your stitches or staples are removed. You can also shampoo your hair at this time but do NOT put hair coloring or gel on the incision area.
- You may clean the incision area with half hydrogen peroxide and half water.
- Do NOT put any cream or ointment on your stitches/staples.
- It is normal for your incision(s) to feel numb and get itchy. Avoid scratching the area since that may lead to infection.
- If your incision(s) starts to drain or gets very red and painful to the touch, call the office.

**Call OUR OFFICE (215-955-7000) Right Away
If You Experience Any Of The Following:**

- Headache
- Vomiting
- Trouble seeing
- Confusion
- Fever higher than 101.5°F (Check your temperature *before* taking Tylenol since Tylenol will lower a fever)
- Increased redness or discomfort or new or excessive drainage from your incision or wound area.
- Increased sleepiness (very sleepy)

Special Instructions For VP-Shunt Patients

- **In the future, if you ever require an MRI of your brain, you must always get a skull x-ray, before and after, the MRI.** This is done to make sure that the MRI does not affect your shunt.
- **In the future, if you ever require dental work or any other type of procedure that involves making an opening in the skin (for example like surgery), you will have to take antibiotics before the procedure.** This is done to prevent shunt infection. Make sure you relay this information to the person doing your dental work or surgery. They will give you a prescription for an antibiotic or, you may call the neurosurgery office for a prescription.

If you have any question, please call the office at 215-955-7000.



Notes



Jefferson Hospital for Neuroscience

Department of Neurosurgery

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