

VentriculoPeritoneal Shunt (VP SHUNT)

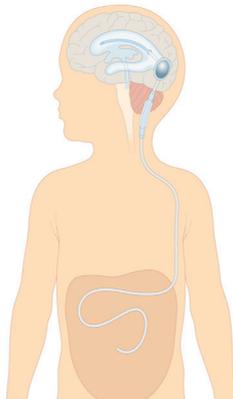
Information for Children, Parents and Carers

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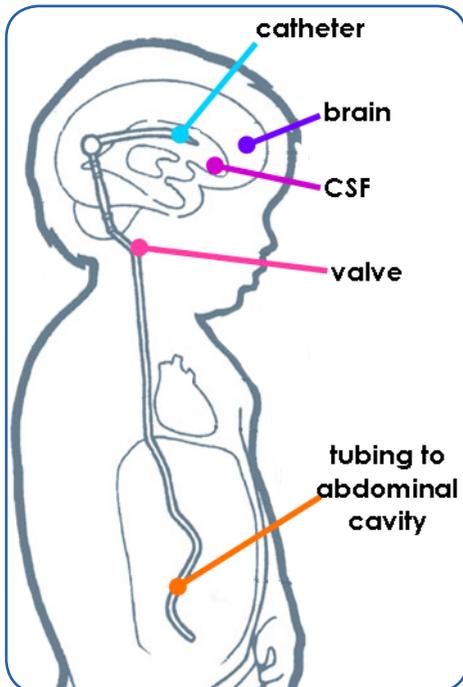
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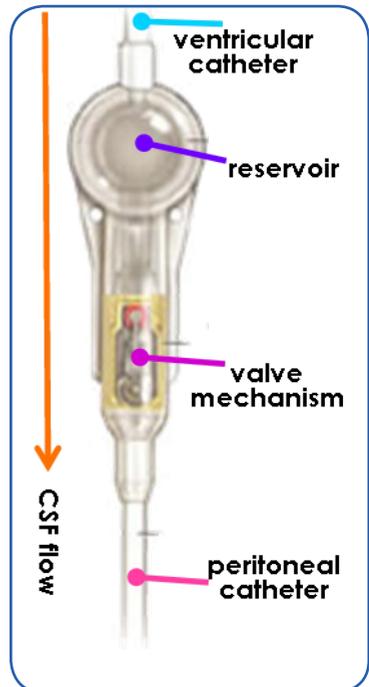
What is a VP Shunt?

A VP Shunt is a piece of tubing that goes from the ventricles (fluid chambers) in your child's brain into the peritoneal cavity (this is the area surrounding your child's stomach). This tubing acts as a drainage system for excess fluid in the brain, this is called cerebrospinal fluid. The fluid drains into the abdomen / tummy area where it is reabsorbed by your child's body.

Shunt in Position



Shunt in Detail

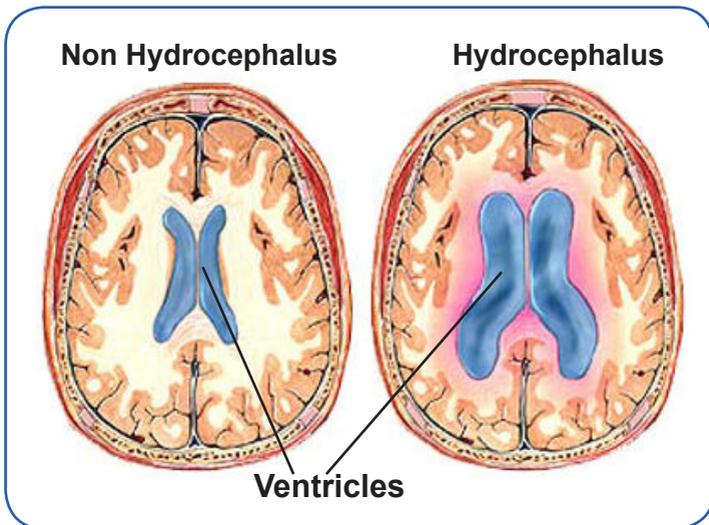


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What is CSF and hydrocephalus?

Cerebrospinal Fluid (CSF) is a clear colourless fluid which surrounds your child's brain and spinal cord; it acts as protection. If too much fluid is present it can cause an increase in the pressure on their brain. If the pressure is not reduced it will cause brain damage which will affect your child's development.

A build up of CSF is called "Hydrocephalus"



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What causes hydrocephalus?

There are many causes of hydrocephalus, however, sometimes the cause is unknown.

Hydrocephalus may be present when a child is born but is not usually inherited from a parent.

It may also happen as a result of other conditions, most commonly:

- Spina Bifida
- Prematurity
- Meningitis
- Tumours or Cysts
- Head injury
- Some Syndromes

The reason your child has developed hydrocephalus will be explained by your child's doctor.

What to expect before and after surgery?

Before surgery

Your child's doctors will meet with you to explain the surgery and to ask you to sign a consent form. You may also meet the anesthetist who will explain how your child will be given medication to make sure they are asleep and pain free during their operation.

Before surgery your child may have to have a number of tests including blood tests, CT scan or MRI scan, cranial ultrasound and lumbar puncture.



During your child's stay in hospital before their operation nursing staff will monitor them by carrying out a number of simple checks which include:

- Level of consciousness
- Blood pressure
- Temperature
- Heart rate
- Reaction of eyes to lights
- How they can move their arms and legs
- Monitor if there are any changes in behaviour



How often your child is monitored will depend on their condition; your child may need to be woken from their sleep.

Small babies may have measurements taken of the size of their heads. On the day of surgery your child will fast for a number of hours. This means they will not be allowed to eat or drink. The nurse looking after your child will tell you how long your child will need to fast.

After surgery

When your child first returns to the ward they may be a bit sleepy. The nurse looking after them will monitor their recovery by carrying out some of the tests mentioned above. Your child will have two small wounds, one on their head and one on their

tummy. Sometimes the doctor will need to shave a bit of hair around the site on their head. This hair will grow back in a short period of time covering their scar. There may be some bruising around your child's neck and chest area from where the shunt was guided down into the stomach area.

The wound on your child's head may look slightly raised because this is where the shunt's valve has been placed. Over time as their hair grows and this will be less noticeable.

Your child's stomach wound will have a plaster in place following surgery. This will be removed before their discharge. Their head wound may not have a plaster in place as it can be difficult to stick if the hair is not shaved

When your child returns to their ward after their operation they may have some discomfort as the pain medication given during their operation wears off. The nurse caring for your child will



give them pain medication to help control any pain or discomfort.

If this is your child's first shunt they may feel sick or dizzy as they adapt to the shunt. If your child feels unwell they should sit up gradually following surgery. This might take a couple of days after surgery for them to settle down.

If your child vomits following surgery they may require some anti sickness medication. Once your child has recovered from the anaesthetic they will be able to eat and drink.

Going home

How long your child will need to stay in hospital will depend on their condition. The doctors and nurses will talk to you about this as they update you on your child's recovery.

The move from hospital to home can be an anxious time for all parents and carers. Here are some answers to the most commonly asked questions;

What do I need to look out for when my child goes home?

Sometimes a shunt may stop working due to blockage, disconnection or infection. The following signs are things you need to watch out for.

Baby

- Enlargement of the baby's head (getting larger)
- The fontanelle (soft spot on top of head) may become full and hard.
- Fluid swelling at shunt wound on their scalp
- Leaking of fluid from shunt wounds
- Swelling or redness along the shunt track
- Fever (high temperature)
- Vomiting or refusing feeds
- Sleepiness
- Irritability-more difficult to settle/comfort
- Downward looking eyes (Cannot look upwards)
- High pitched crying
- Seizures /fits
- Leaking of fluid from wounds



Toddlers/older children

- Head enlargement /getting larger
- Headache or Vomiting
- Dizziness
- Visual (eye) problems / sensitivity to lights
- Drowsiness/sleeping a lot
- Irritability/change in personality
- Loss of previous ability- for example weakness in weakness in legs or arms.
- Swelling in the neck or abdomen (tummy area)
- Seizures / fits
- Leaking of fluid from wounds

Who should I contact if I am concerned

If your child shows any of the signs mentioned and you are worried it is important to contact someone. If the symptoms are not acute please contact the neurosurgical nurse specialist or neurosurgery advanced nurse practitioner for advice. If you are unable to get in touch with these nurses, please go to your GP. If the symptoms are acute and worrying, please bring your child to your nearest paediatric (children's) hospital.

If your child has an unexpected seizure you should attend your nearest Emergency Department immediately; you may need to ring 999 or 112 for an ambulance.

Can I give my child painkillers at home?

Yes. If your child continues to have discomfort or pain in their head or tummy when they go home after the operation you can give over the counter pain medication such as

Paracetamol or Paediatric Ibuprofen. Follow the instructions on the bottle for recommended amount for your child's age or weight. Any discomfort or pain should settle after a couple of weeks.

Will I have to do anything with my child's wound?

Usually, it will take the wound about two weeks to heal. The neurosurgical team will advise you how long to leave your child's wound covered.

Usually, the stitches used are dissolvable. If the stitches are not dissolvable, arrangements will be made for you to bring your child to the hospital and have them removed. Every effort will be made to remove the stitches without sedation, however there are occasions when sedation must be used. Alternatively, if sedation does not work, your child may need to have a general anaesthetic and go to theatre to have the sutures removed.

At home if you notice any redness, swelling, or discharge from your child's wounds please contact your child's doctor as they may have a wound infection. It is especially important to report to team if there is any clear fluid leaking from the wound.

When can I wash my child's hair?

Usually children can have a bath and hair wash one week after surgery. Check with the nurse caring for your child when they can have a bath.

When can I take my baby/child swimming?

Taking your child swimming is perfectly safe once the wounds are fully healed. We would usually recommend about one month after surgery.



When can my child return to normal activities?

After their operation your child will need a few weeks to recover. We suggest they stay at home for the first week to rest and recover. After this they can slowly return to their normal routine at a pace that suits them.

Can I take my child on a plane?

We would advise you to wait till after your first out-patient appointment before taking your child on a plane. Individual cases can be discussed with your child's doctor.

If you are travelling abroad it is recommended that you carry a letter with details of your child's condition and doctor's contact details. It would be advisable to have travel insurance when travelling with a child with a VP Shunt. Remember to bring your child's shunt card with you.

When can my child return to school?

Your neurosurgery team will discuss this with you. For the most part, we recommend that you monitor your child and let them back when you feel they are ready to return to school.

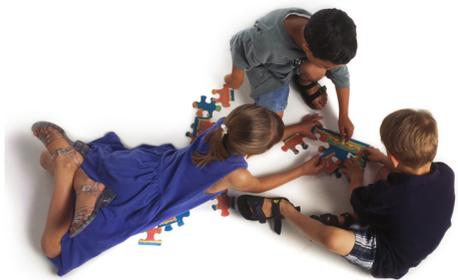
What should I tell my child's teacher /child minder?

It is important your child's teacher is informed of your child's shunt. The school should know what signs to look out for if your child's shunt is not working correctly (Signs listed previously). We recommend that you give them a copy of this booklet. Your child should carry a shunt alert card. These are available from the neurosurgical nurse or the spina bifida and hydrocephalus association.

When can my child play sports again?

All sports activity should be avoided until your child has been seen as an out-patient.

If your child takes part in contact sports such as rugby or boxing, this should be discussed with your child's doctor.



Can my child have dental procedures or surgery?

Dental procedures or surgery can be carried out without any special consideration for children with a VP Shunt

However, If your child has a Ventricular Atrial (VA) Shunt they should be given antibiotic cover to prevent infection. Your consultant / nurse will inform you if your child has a VA shunt



Can my child have an MRI scan?

Most VP shunts are MRI compatible. If your child requires an MRI in another hospital it is important to inform them that your child has a VP Shunt.

Can my child have vaccines

A shunt is not a contraindication for vaccines. We recommend your child receive their childhood vaccinations.

Other types of shunts

Programmable Valve

Some children with more complex hydrocephalus require a programmable valve

The settings of the shunt can be altered from the outside by the neurosurgical team without the need of an operation. If your child has a programmable valve your nurse / doctor will inform you of the settings of the valve. It is important that if your child requires a MRI that you inform the staff your child has a programmable valve as it will need to be discussed with the neurosurgical team.

You should receive a special programmable shunt alert card, before leaving the hospital to go home. The card should include details of your child's shunt settings.

Ventriculoatrial Shunt (VA Shunt)

The preferred type of shunt a VP Shunt. However, if your child has had problems with repeated surgery on their stomach, or infection (peritonitis) the neurosurgeon may consider a Ventriculoatrial (VA) Shunt

A Ventriculoatrial shunt diverts fluid from the ventricles to the right atrium of the heart. Your child will have a wound on their neck instead of on the stomach. If your child requires a VA shunt the signs and symptoms of shunt problems are similar to a VP Shunt, however, you should also seek medical attention if your child experiences breathlessness or chest pain.

Further information

Spina Bifida and Hydrocephalus Association www.sbhi.ie

Brainwave Irish Epilepsy Association www.epilepsy.ie

Head Injury Support www.headwayireland.ie

Meningitis Support and Counselling www.meningitis-trust.ie/

If you have urgent concerns, please go to your local paediatric (children's) emergency department.

Your child's neurosurgical team

Ward _____ Phone 01 878

Consultant _____ Phone 01 878 4254

Physiotherapist _____ Phone 01 878

Occupational Therapist _____ Phone 01 878

Social Worker _____ Phone 01 878

Other Numbers _____

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