

Endoscopic Third Ventriculostomy (ETV)

Information for Patients, Parents and Carers

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01 892 1753
Monday to Thursday 8am and 4pm
Friday 8am -12pm**

Main Hospital Number

01 878 4200

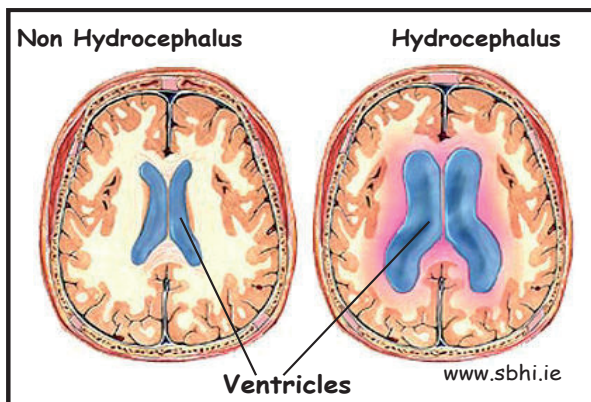
What is an Endoscopic Third Ventriculostomy ?

Endoscopic Third Ventriculostomy (ETV) is a surgical procedure that treats a condition known as **hydrocephalus**.

What is Hydrocephalus ?

Hydrocephalus is a condition caused by a build up of fluid in the brain. This fluid is called Cerebrospinal Fluid. **Cerebrospinal Fluid (CSF)** is a clear colourless fluid which surrounds your child's brain and spinal cord; it acts as protection. The fluid is constantly produced and reabsorbed.

Children with hydrocephalus usually have a failure of fluid reabsorption or a blockage to the flow of CSF. This can cause a build up of fluid which increases the pressure on their brain. If the pressure is not reduced, it will cause brain damage which will affect their development.



What is the Cause of 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. Most commonly it can happen as a result of the following conditions;

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

The reason your child has hydrocephalus will be explained to you by your child's doctor. Not all types of hydrocephalus are suitable for the ETV procedure. Some children with hydrocephalus will require a Ventriculoperitoneal (VP) Shunt. The doctor will do CT Scans or MRI scans to decide if your child is suitable.

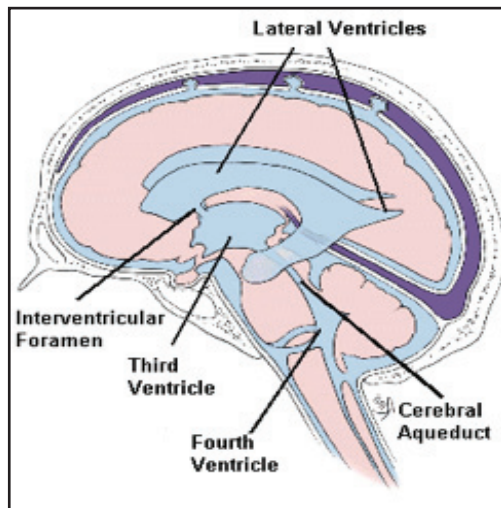


What Does ETV Involve ?

ETV is an operation which is performed when your child is asleep under anaesthetic. The ETV will make a new pathway for fluid to flow. To do this, an opening (a hole) is created to bypass any blockage stopping the normal flow of fluid.

Your child's neurosurgeon will make a small hole called a burrhole in your child's head to allow them to look into your child's ventricles with the endoscope. An opening will be made at the bottom of the "Third Ventricle" (see picture). Once the fluid starts to flow through the hole the pressure in your child's brain will reduce.

Ventricle System of the Brain



How Will I Know if the ETV Has Been Successful ?

After the operation, your child's condition will be monitored closely. We will be observing for signs that the pressure is reducing inside your child's head such as;

- Improvement in signs of hydrocephalus e.g. headaches and vomiting will decrease.

It will not always be obvious straight away if the ETV has been successful so your child will be followed up in out patients and may need a scan of his/her head.

What Will Happen if the ETV Doesn't Work ?

If the ETV does not work, the team treating your child will discuss other surgical options with you. In most cases where ETV does not work these children may need a Ventriculoperitoneal (VP) Shunt. If your child needs this it will be discussed with you.



How Long Will my Child Need to Stay in Hospital ?

This will depend on the reason your child needed the ETV.

In most cases your child will need to come into the hospital the night before surgery. If your child recovers well following the surgery and has no other complications he/she may go home the following day. Your child's doctor will discuss expected length of stay with you.

If your child's ETV fails and your child needs a VP Shunt then your stay in hospital will be longer.



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 anaesthetist who will explain how your child will be given medication to make sure they are asleep and pain free during his/her operation.

Before surgery your child may have to have a number of tests including blood tests, CT scan or MRI scan and Cranial Ultrasound.

During your child's stay in hospital nursing staff will monitor your child by carrying out a number of simple checks which include;

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

Your child will need to be monitored regularly. For this, he/she may need to be woken from sleep.

Small babies will have their head measured before and after surgery.

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, he/she may be a bit sleepy. The nurse looking after them will monitor your child's recovery by carrying out some of the tests mentioned above.

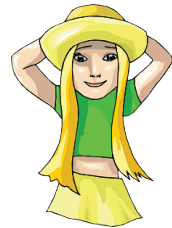
Your child will have a small wound on his/her head. Sometimes the doctor will need to shave a bit of hair around this area during surgery.

This hair will grow back in a short period of time, covering their scar. The wound will be covered with a plaster or an antibiotic cream to help the healing.

Some children may vomit or have an upset stomach from surgery. If this happens your child may be given medication to help relieve it.

When your child returns to the ward after the operation they she may have some discomfort as the pain medication given during their operation wears off. The nurse caring for your child will give him/her pain medication to help control any pain or discomfort.

Some children will have a small drain in their head after their operation to allow fluid drain, this may be clamped. This drain is usually removed within a day or two after their operation.



What Do I Need to Watch Out for When I Go Home ?

It is very important to remember when you go home that ETV is **not a cure for hydrocephalus. If the ETV fails your child will develop hydrocephalus again, even years after your child has had the ETV.**

This can happen at any time. You need to watch out for the signs of hydrocephalus. The most common signs are listed on the next page. If your child shows any of these signs it is important to get medical attention.

Signs and Symptoms of Hydrocephalus

Baby

- Enlargement of the baby's head (getting bigger)
- The fontanelle (soft spot on top of head) may become full and hard
- 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



Toddlers/Older Children

- Head enlargement /getting bigger
- Headache or Vomiting
- Dizziness
- Visual (eye) problems/Sensitivity to lights
- Drowsiness/sleeping alot
- Irritability/change in personality
- Loss of previous ability- for example weakness in legs or arms.
- Seizures / fits



Unfortunately, some of these signs are common to many childhood illnesses. If your child has any of the above symptoms you must visit your family doctor or local Emergency Department to check their ETV is working.

At the back of this booklet, there is contact information for the team caring for your child. **If your child has an unexpected seizure attend your nearest Emergency Department immediately; RING 999 or 112 for an ambulance.**

It is very important that your child carry a ETV medical alert card at all times. This will inform emergency medical staff about your child's condition.

If you have not been provided with an ETV medical alert card please contact the neurosurgical nurse co-ordinator who can arrange one to be sent to you (contact details provided at back of booklet).

Will I Have to do Anything With my Child's Wound?

Usually, it will take the wound about two weeks to heal. After the first week the plaster can be taken off unless your child would prefer to have the wound covered.

Usually, the stitches are dissolvable and will be absorbed by your child's body over a short period of time. The doctor caring for your child will let you know if his/her stitches are dissolvable. At home, if you notice any redness, swelling, or discharge from your child's wound please contact your child's doctor as they may have a wound infection. If the wound becomes very raised or leaks fluid it may be a sign that the ETV has failed.

When I Can Bath my Baby / Child ?

It is ok to bath your baby the day after surgery if you do not wet your child's hair. It is important to keep the wound dry for 5-7 days so you should not wash the hair until after this time.



Can my Child Return to School ?

We would advise 2 weeks off school to recover from surgery. After that once he /she has recovered there is no reason to delay the return to school. The school should also be informed about the signs and symptoms of hydrocephalus listed above.



Can I Take my Child on Holidays ?



It is safe to travel with your child. However it is advisable to have travel insurance. It is also important to carry your child's ETV medical alert card in case your child needs medical attention abroad.

What Follow up Will my Child Need ?

Once you have been discharged from hospital you will be given an appointment to come back to see your child's doctor. In the first year he / she may need to see you more often to check on their progress but after that your child will be seen on a yearly basis. Your child may also be followed by a paediatrician to monitor his/her progress.

If you have any further questions please contact the
Neurosurgical Nurse Co-ordinator on
01 892 1753
8am and 4pm Monday to Thursday
or
Friday 8am -12pm

Alternatively you can contact the Department of
Neurosurgery on 01 878 4254

These numbers are not an emergency service. If you have
urgent concerns please contact your family doctor or local
emergency service on 999 or 112.

Spina Bifida and Hydrocephalus Association www.sbhi.ie

Brainwave Irish Epilepsy Association www.epilepsy.ie

**Please make sure you recieved a medical alert
card - it must be with your child at all times.**

**Remember to wash your hands or use
hand gel when visiting the hospital**

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The information contained in this booklet is correct at time of print