

If Your Child Has Hydrocephalus

Information for Children,
Parents and Carers



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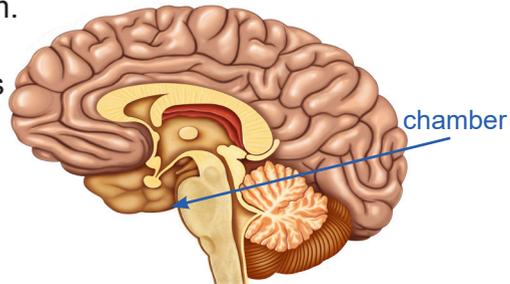
Children's Health Ireland
at Temple Street

Your child has been referred to a neurosurgeon as your child's head is growing a little quicker than the average child. Your child may simply have a larger than average head or may have more fluid in or around their brain than average. Your child's neurosurgeon will discuss the reason for this with you and your child, they will examine your child and look at some pictures of your child's brain.

What does it mean if my child has large fluid chambers?

We all have fluid chambers in our brain called ventricles. They are filled with a clear fluid called cerebrospinal fluid (CSF). This fluid is very important as it protects and nourishes the brain and the spinal cord. Fluid collection in these spaces usually does not cause a problem.

However, if these fluid collections exert pressure on the brain and cause symptoms or accelerated head growth, surgical treatment may be necessary.



Ventriculomegaly is a condition when the fluid chambers in the brain are larger than average. In many cases, Ventriculomegaly (large fluid chambers) is an isolated condition, unlinked to other health problems and will resolve on its own.

However, sometimes your child's ventricles can get too large and put pressure on your child's brain. This is called hydrocephalus and if not treated can cause problems. Your child will be monitored closely by a paediatric neurosurgeon over the coming months.

Your child's neurosurgical team and public health nurse (PHN) will monitor your child's head growth over a period of time. The neurosurgery team prefer the 'four in one' growth charts and will use this when plotting your child's head circumference measurements.

Assessment of your child's growth is essential. It provides a guide to your child's health, development, nutritional status and response to their treatment.

Growth measurements include height, weight and head circumference. These measurements are recorded into a special chart called a Centile Growth Chart. Each measurement is plotted on a specific curve in the chart (one for head, one for length and one for weight), to give an indication of the child's development.

What are we looking for when we measure an infant's head?

- Head circumference measurement can show any excessive or limited growth.
- The size of your child's skull reflects the growth of their brain. So if a baby's brain isn't growing and developing normally, their head circumference may not be increasing as it should. On the other hand, if their skull grows too quickly, it could be a sign of a problem like hydrocephalus (the build-up of fluid in the brain). Both conditions are unlikely, but important to rule out.
- An increase in your child's head size, may mean they simply have larger than average fluid spaces.



- Babies heads are disproportionately large compared to adult's heads, so don't worry if your baby's head looks big to you. Consider your own proportions. If you or your partner has a large or small head, your baby might too.
- By plotting your child's head circumference on the centile chart we can see what the rate of growth is and can detect different head shapes and size.

What causes hydrocephalus?

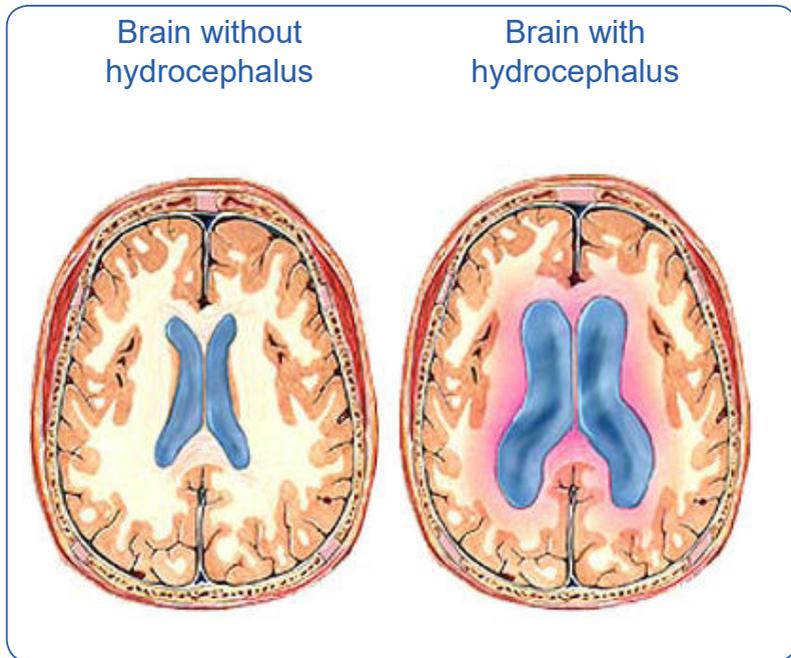
There are many causes of hydrocephalus. Sometimes however, the cause is unknown. Hydrocephalus may present when a child is born but is not usually inherited from a parent. It may also happen as a result of other conditions such as:

- Prematurity
- Spina Bifida
- Meningitis
- Tumours or Cysts
- Head Injury
- Some syndromes



How will we know if your child has developed hydrocephalus?

Your child will have signs and symptoms of hydrocephalus. Your doctor may need to do an MRI or a CT scan to have a closer look at your child's fluid chambers in the brain. Your doctor will do a physical exam to measure the circumference of your child's head and plot it in a growth chart. The diagram below shows the effects of hydrocephalus.



The signs and symptoms of hydrocephalus in a baby less than 1 year old include:

- Enlargement of their head (getting larger)
- The fontanelle (soft spot on top of head) may become full and hard.
- Your baby may vomit or refuse feeds
- Your child may sleep more
- Irritability-more difficult to settle/comfort
- Downward looking eyes (Cannot look upwards)
- May have a high pitched cry
- Seizures / fits

The signs and symptoms of hydrocephalus in toddlers and older children include:

- Enlargement / head getting larger
- Headache or vomiting
- Dizziness
- Seizures / fits
- weakness in legs or arms.
- Drowsiness / sleeping a lot
- Irritability / change in personality
- Visual (eye) problems / Sensitivity to lights
- Loss of previous ability- for example weakness in legs or arms.



How is hydrocephalus treated?

If your child develops hydrocephalus, they will need an operation to relieve the pressure caused by a build-up of fluid / CSF. There are two ways this can be done

One involves the neurosurgeon inserting a tube called a shunt into your child's ventricles to drain the excess fluid

Another alternative is an Endoscopic Third Ventriculostomy; this also involves an operation, where a small hole is made, allowing the excess fluid to drain.

If an operation is needed to manage your child's hydrocephalus, your neurosurgeon will discuss this in detail with you and will advise you on the most suitable treatment for your child.

Further information about these procedures are available from the neurosurgical team here in Temple Street.

Our approaches to treating hydrocephalus are both patient-focused and family-centered. We believe that your child is, first and foremost, an individual—not merely a patient—and we include your family at every stage of the treatment process.



Our contact numbers or on the cover of this booklet, they are not an emergency service. If you have urgent concerns, please go to your local paediatric (children's) hospital emergency department or call 999 / 112.

For More 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/

**Please 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