

# Hydrocephalus

## Alerts for Professionals

### Medical Alert

Shunts and ETVs can go wrong so it is vital to be vigilant for signs of shunt malfunction or blockage.

**Shunt malfunction** may present as a **chronic condition** that develops over weeks or even months. Symptoms can include fatigue, behaviour changes, general malaise, decline in academic performance, visuo-perceptual problems or being just “not right”.

If a child or young person with hydrocephalus has any of these symptoms do not assume that someone else knows or that these ‘vague’ symptoms have been noticed.

**Inform parents and carers immediately.**

**In an emergency** symptoms or signs may include:

- Drowsiness/confusion
- Vomiting or extreme nausea
- Photophobia – sensitivity to light
- Visual disturbances
- Severe headache
- Seizures, small fits or ‘absences’

Not all the signs will be seen at the same time or in every child

### THINK SHUNT!

- Inform parents and carers and call 999
- Check child’s shunt alert card for information and advice
- Contact hospital A&E department
- In Acute Shunt Malfunction a child needs to be seen at a Neurosurgical unit within 4 hours:
  - Speak directly to the Ward Sister or Neurological Registrar
  - Messages should not be left

## Sports Alert

It is vital that all children and young people with hydrocephalus have the opportunity to participate in as many sports as they can. Movement is important for all children but especially so for children who may have hydrocephalus, which can lead to disturbances in their vestibular system and proprioception difficulties.

Following hydrocephalus, physical activity can help to 'reprogram' the brain so a child can learn a new skill by repetition and positive feedback.

There are very few sports that are not recommended for children and young people with hydrocephalus.

### **Always communicate with the child's parent carers before starting a new activity programme.**

- Children can run, jump, trampoline, do forward rolls and use gym apparatus. They may need help with balancing activities and should **not** hang upside down from wall bars or other apparatus for any length of time as the shunt will not drain in this position.
- If a child has an LP (lumbar peritoneal) shunt then sports involving twisting of the lumbar region may not be advisable, such as gymnastics, aerobics, golf or ballet.
- Some children and young people may find sports, which require good visual perception and spatial awareness more challenging. Judgement in depth and distance may be difficult and can affect participation in team sports requiring quick and accurate responses.
- Care should be taken with **contact sports** if a child or young person has a shunt, which drains into the abdominal muscle or peritoneal cavity.
- Seek advice from the neurosurgeon of a child or young person with hydrocephalus before playing **rugby** or joining a **martial arts** class.
- Any sport where a child is grabbed around the neck is not advisable.
- Protective clothing for different sports is recommended for all children, with or without the condition.

**Close-fielding positions** in **cricket** or **rounders** should be avoided.

If a child is hit hard in the abdomen by a ball then watch out for signs of shunt malfunction. See Medical Alert section for more information.

**Swimming** is a recommended sport. If a child has epilepsy supervise closely.

If in doubt, seek advice from the child's neurosurgeon or **Shine's** health specialists

## Health and Safety Alert

All staff should be aware of the symptoms of a shunt malfunction understand that this can be life threatening and know the protocol to follow.

**School trips** - children and young people can do most activities in school and on trips but care should be taken to avoid the following situations:

**Physical Education** – see Sports Alert information

**Technology** – pupils should have a safety assessment for handling tools and equipment

**Magnets** – some programmable shunts are sensitive to magnets and children with this type of shunt should be supervised closely when using one in classroom experiments. Any classroom equipment, which contains magnets should be monitored. Young people should avoid placing technology, which has an electro-magnetic field, very close to the shunt valve (usually in the neck area).

If a pupil with a programmable shunt becomes unwell then the **shunt malfunction protocol** should be followed

**Hydration** – it is important that pupils with hydrocephalus do not become dehydrated. It is recommended they children drink a small glass of water approximately every hour. Dehydration can cause fatigue, headaches and behaviour changes. If a child is noticeably more tired in the afternoons first check their water intake

**Visiting the toilet** - children who are drinking water regularly will need to use the toilet more often so an out-of-class pass may be needed. Children with hydrocephalus sometimes do not notice the messages their body gives them for going to the toilet so, in order to avoid 'accidents' in class, prompts to go to the toilet may be needed

**Out of school** – remember that some pupils will have difficulty finding their way around and that it cannot be assumed that a particular route has been internalised and remembered. Pupils who have difficulty judging speed and distance must be supervised when crossing roads.