

External ventricular drain (EVD)

Information for patients, parents and guardians

CSF is the fluid that surrounds the brain and fills the four ventricles inside it. It helps to cushion and protect the brain as well as carrying nutrients and waste products to and from the brain.

An external ventricular drain (EVD) is a temporary drain that drains cerebro-spinal fluid (CSF) from the lateral ventricles in the centre of the brain to an external reservoir.

The EVD consists of a thin plastic tube (catheter) which is placed into the ventricles of the brain and connected to an external drainage system.

The two main reasons EVDs are inserted are:

- 1) To divert infected CSF away from the brain and allow antibiotics to be given directly into the CSF to remove infection.
- 2) To reduce the pressure inside the brain caused by a build up of CSF due to a blockage or abnormal flow of CSF within the brain.

Inserting an EVD

The drain is inserted under a general anaesthetic.

If your child has an infected ventricular peritoneal (VP) shunt this will be removed at the same time.

The procedure takes about one to two hours.

Before your child goes to theatre the surgeon will discuss the procedure with you and you will have to sign a consent form. The risks involved are small, but as with any surgery there is always a risk of infection and bleeding.

After the EVD has been inserted

Your child will be observed closely and the drain will be set at a level specified by the surgeon. This may be 5cm, 10cm or 15cm above the level of the catheter tip (approximately at the level of the top of the ear hole).

The fluid flows out into the measuring chamber and is monitored closely by the nursing staff.

The amount of drainage is measured and recorded every two hours. If too much or too little fluid is draining, the nurses may need to change the level.

If you wish to move or pick up your child the drain must be clamped, repositioned and then unclamped again, so please call a nurse to assist with this. It is very important not to pick up your child while the drain is open. It is also important that the drain isn't left clamped for too long, unless antibiotics have just been administered.

CSF can be taken from a port in the tubing and sent for analysis in the laboratory. This port can also be used to give antibiotics directly into the CSF. When antibiotics have been given the drain must be clamped for about 60 minutes to allow the antibiotic to be absorbed.

The nurses on the ward will support you in caring for your child. If you are worried about anything please ask.

Removing the EVD

The length of time an EVD is in varies from child to child, depending on why it was required.

However, it is temporary and will rarely be in for more than ten days. Your child will have to stay in hospital until the drainage system is removed.

They may require insertion or re-insertion of a VP shunt as a permanent means of CSF drainage.

There may be a stitch where the drain has been removed which will have to be removed in about five days, either on the ward or at your GP surgery.

Back at home

There aren't any long term effects of having an EVD, but if you have any concerns please contact the ward on **023 8120 6692**.

This leaflet is intended for general information only. For individual advice please contact your doctor.

If you need a translation of this document, an interpreter or a version in large print, Braille or on audiotape, please telephone **023 8120 4688** for help.

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