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Adult Hydrocephalus

DEFINITION

The term **Hydrocephalus** refers to a condition where the fluid filled spaces (ventricles) in the brain become enlarged due to an abnormal build up of cerebrospinal fluid (CSF). This can be caused by either abnormalities in how the CSF is produced, circulated, or reabsorbed. As the CSF builds up, it causes the ventricles to enlarge and the pressure inside the head to increase. This increased pressure effects brain function, causing symptoms.

Cerebrospinal fluid (CSF) is a clear, water-like fluid, which bathes the brain. The fluid circulates into the space around the brain and spinal cord, where it functions as shock absorber, or as a protective cushion. Under normal conditions, you have about 125ml (a half cup) of CSF. CSF contains dissolved sugar (glucose), proteins, salts, and some white blood cells.

SYMPTOMS

Symptoms of hydrocephalus may include:

- Headache
- Nausea or vomiting
- Irritability or excessive sleepiness
- Vision problems (ie. blurred or double vision)
- Personality changes
- Weakness, balance or coordination problems

CAUSES

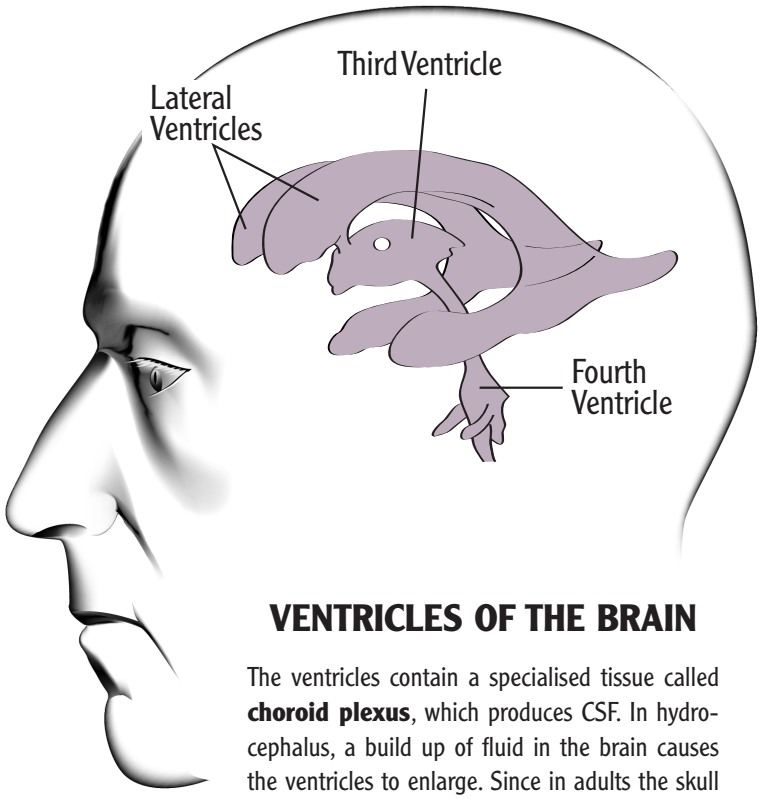
Hydrocephalus is a condition, not a disease, and can develop for a variety of reasons, such as a brain tumour or cyst, meningitis, encephalitis, hemorrhage, or a head injury.

DIAGNOSTIC TESTS

CT scan, Lumbar Puncture (LP), and Magnetic Resonance Imaging (MRI) are the main diagnostic tests used to find out whether or not you have hydrocephalus.

TREATMENT

The placement of a Ventriculoperitoneal (VP) or Lumboperitoneal (LP) shunt is the most common treatment. In a shunt system, a flexible silicon tube is used to drain the excess fluid (CSF) from the brain or the space around the spinal cord to another part of the body (usually the abdominal cavity). The surgery for the placement of a VP shunt is explained in more detail in the patient guide, VP Shunt for Hydrocephalus.



VENTRICLES OF THE BRAIN

The ventricles contain a specialised tissue called **choroid plexus**, which produces CSF. In hydrocephalus, a build up of fluid in the brain causes the ventricles to enlarge. Since in adults the skull is set (like a rigid box), pressure builds up inside the skull as the ventricles expand in size. The result is increased intracranial pressure, or increased ICP, and the compression of the surrounding brain tissue. These in turn lead to clinical symptoms associated with hydrocephalus.

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