

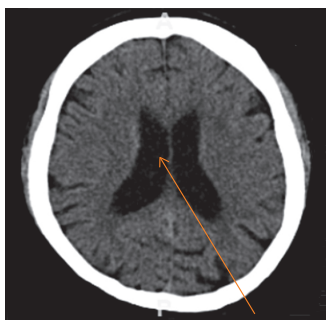
# Adult Hydrocephalus



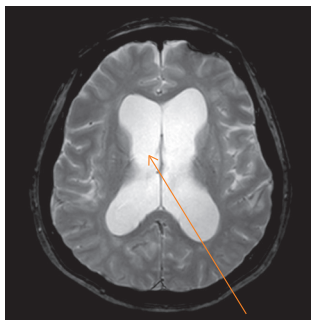
## Understanding Adult Hydrocephalus

Cerebrospinal fluid (CSF) is produced by and flows through the brain and spinal cord. It protects and provides nutrients to the brain and spinal cord. CSF is absorbed into the bloodstream.

Hydrocephalus is a condition where there is excessive CSF in the brain. When the production and absorption of CSF are affected, the cavities (ventricles) of the brain enlarge, increasing brain pressure (Figure 1).



Normal ventricles



Enlarged ventricles

Figure 1

Comparison between normal ventricles and enlarged ventricles

The cause of hydrocephalus is usually unknown but could develop due to:

- Injury or trauma to the head or brain
- Infection
- Bleeding
- Tumour

## Signs & Symptoms of Hydrocephalus

- Headache
- Blurred/double vision
- Nausea and/or vomiting
- Drowsiness
- Problems with thinking and memory
- Balancing and/or walking issues
- Inability to control bladder

## Diagnosing Hydrocephalus

An examination and a Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) scan are needed to confirm the diagnosis.

## Treating Hydrocephalus

Treatment depends mostly on the type of hydrocephalus and the patient's condition.

### 1. External Ventricular Drain (EVD)

A drain is temporarily inserted to remove excess CSF and reduce brain pressure.

### 2. Shunt

A permanent tube (shunt) may be inserted to direct CSF from the brain to other parts of the body like the abdomen for absorption (Figure 2).

Though uncommon, shunt complications include:

- Infection
- Bleeding
- Stroke
- Shunt malfunction
- Flow obstruction
- Over or under-draining of CSF

Generally, patients are on long-term monitoring but can go about their daily activities.

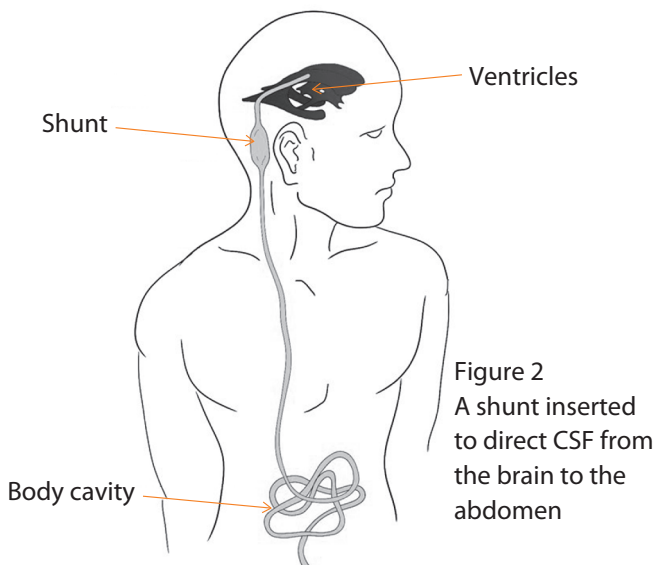


Figure 2  
A shunt inserted  
to direct CSF from  
the brain to the  
abdomen

### 3. Endoscopic Third Ventriculostomy (ETV)

Procedure to open a path in the brain cavities for CSF to flow.

## Understanding Normal Pressure Hydrocephalus

Normal Pressure Hydrocephalus (NPH) is seen in older adults and occurs when CSF builds up slowly in the brain cavities. Brain enlargement takes place over time and common signs and symptoms include:

- Difficulty walking, resulting in falls and head injuries
- Memory issues
- Inability to control bladder

Not all symptoms are present at the same time. Sometimes, only one or two show up.

Patients with NPH may respond to shunt treatment. Speak to your doctor for details on how to manage NPH.

## Contact Information

### **NNI@TTSH**

Tan Tock Seng Hospital, NNI Block, Neuroscience Clinic  
11 Jalan Tan Tock Seng, Singapore 308433

Main Tel: (65) 6357 7153

Appt. Tel: (65) 6330 6363

Email: [appointments@nni.com.sg](mailto:appointments@nni.com.sg)

Website: [www.nni.com.sg](http://www.nni.com.sg)



### **NNI@SGH**

Singapore General Hospital, Block 3, Clinic L  
Outram Road, Singapore 169608

Main Tel: (65) 6222 3322

Appt. Tel: (65) 6321 4377

Email: [appointments@sgh.com.sg](mailto:appointments@sgh.com.sg)

Website: [www.nni.com.sg](http://www.nni.com.sg)



### **NNI@CGH**

Changi General Hospital  
2 Simei Street 3

Singapore 529889

Appt. Tel: (65) 6850 3333

### **NNI@KKH**

KK Women's and  
Children's Hospital

100 Bukit Timah Road

Singapore 229899

Appt. Tel: (65) 6294 4050

### **NNI@KTPH**

Khoo Teck Puat Hospital  
90 Yishun Central

Singapore 768828

Appt. Tel: (65) 6555 8828

### **NNI@SKH**

Sengkang General Hospital  
110 Sengkang East Way

Singapore 544886

Appt. Tel: (65) 6930 6000



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Information correct as of September 2020