



association for
spina bifida
hydrocephalus
ability beyond disability

HYDROCEPHALUS



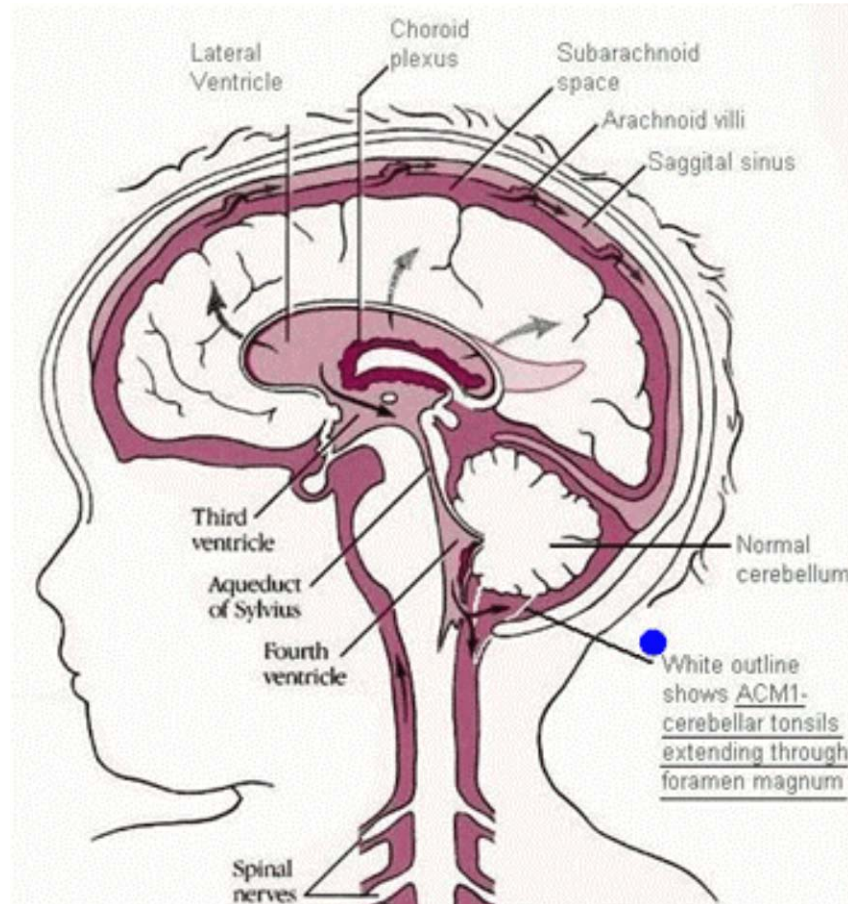
Hydrocephalus

Hydrocephalus is usually a life long condition which can take the child and its family on a journey of continuous rehabilitation



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Circulation of the CSF





Hydrocephalus occurs when there is a disruption in the balance of

- the production of CSF
- the circulation of CSF
- the absorption of CSF



Hydrocephalus

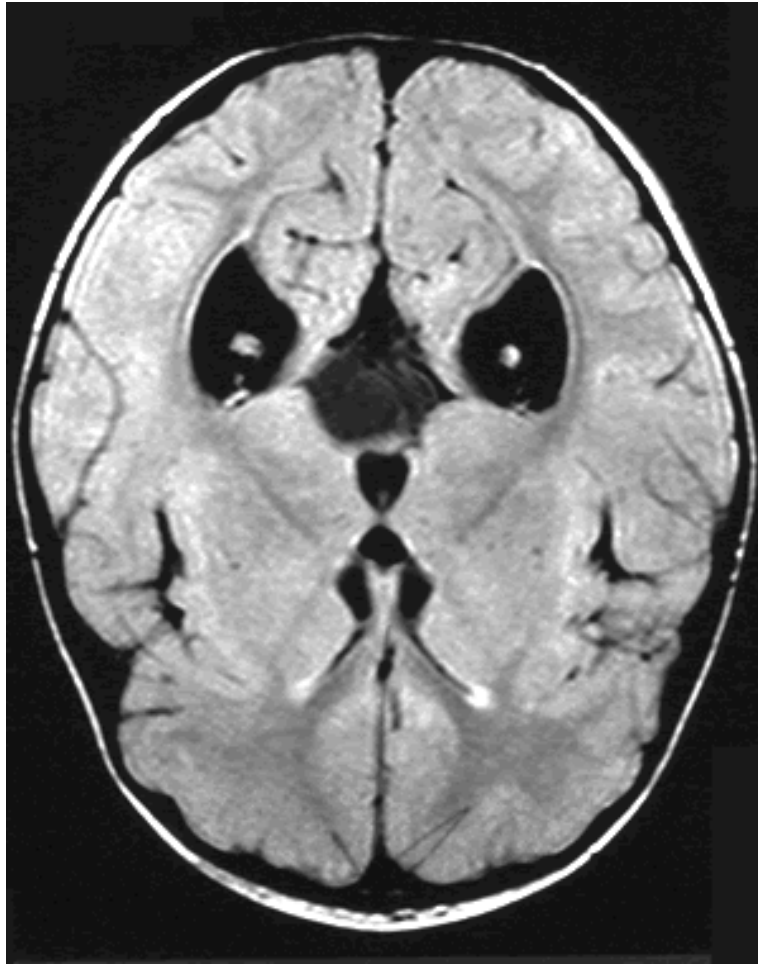
- The skull bones in babies and young children are not fixed together as they are in later life, and the pressure causes the head to increase in size.
- However it is important to realise that hydrocephalus can also arise in older children and in adults, when the skull bones are fixed and the head cannot increase in size.



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Ventricles of the Brain

(2)





Causes of Hydrocephalus

- Congenital
 - Aqueduct stenosis
 - Chiari malformation
 - Cause maybe unknown
- Prematurity
- Meningitis
- Tumours
- Cysts
- Linked to spina bifida
- Head Injury
- Genetic (very rarely)



Treatment by Shunt

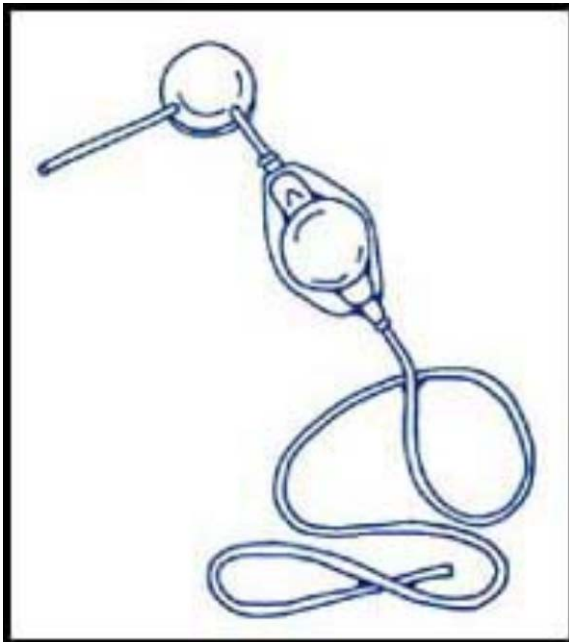
- Insertion of a shunt, from the brain
 - to the abdominal cavity – VP shunt
 - sometimes to the heart – VA shunt
- Endoscopic Third Ventriculostomy (ETV)



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Shunts

Shunt



Programmable Shunt





Shunt Complications

- Infection
- Haemorrhage
- Subdural
bleeding/collections
- Over-drainage
- Slit Ventricles
- Malfunction
- Fracture
- Migration
- Disconnection



Brain Development

- Some forms of hydrocephalus form as a result of the brain not developing in the usual way
- Some brain cells do not travel to the right area of the brain, and do not connect correctly with other brain cells
- This can affect the way the brain works, such as language, learning and coordination



Infant

- Measure head
- Soft Fontanel
- Tract of shunt
- Valve



Home from Hospital

- Handling child
- Movement and play
- Different surfaces
- Vision
- Physio




Information

- Information Sheet
- Information to GP
- Shunt Alert Card





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 **hydrocephalus**
action

TO BE USED IN AN EMERGENCY

I have Hydrocephalus which
is controlled by a
(fixed pressure) shunt
(delete which does not apply)




 **hydrocephalus**
action

TO BE USED IN AN EMERGENCY


I have Hydrocephalus which is controlled by a
programmable shunt

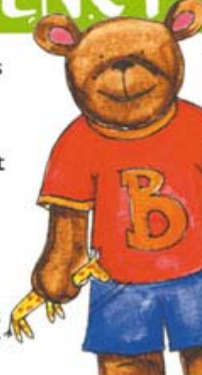
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 **hydrocephalus**
action

TO BE USED IN AN EMERGENCY

I have Hydrocephalus which is controlled by a VP / VA
(fixed pressure) shunt
(delete which does not apply)

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Shunt Malfunction - Acute

- Vomiting / nausea
- Headache
- Dizziness
- Sensitivity to light / visual disturbances
- Drowsiness
- Seizures



Shunt Malfunction - Chronic

- Fatigue
- General malaise
- Visuo-perceptual problems
- Behaviour changes
- Decline in academic performance
- Being just “not right”



Shunt Functioning

- People who develop acute symptoms should be seen by a specialist neurosurgical unit within 4 hours of symptoms developing
- People with hydrocephalus should keep well hydrated with access to clear fluids (not “coke” or caffeine-based drinks) especially in hot weather or after exercise



Hydrocephalus and Behaviour

Some possible trigger factors:

- Sudden change of routine
- Unexpected noise
- Unstructured situations
- Hunger / low blood sugar
- Variations in ventricular pressure after a night's sleep or being up all day
- Fatigue or being below par in health
- Intermittent shunt blockage



Hydrocephalus and Holidays

- Flying, high speed trains
- Being aware of shunt - Carry Shunt Alert Card
- Letters from Consultants / Copy of Scan
- Shunt Passport
- Inoculations
- Insurance
- Prepare ahead



Sports & Activities

Yes to:

- Normal exercise and games
- Gym: most exercises including forward rolls
- Swimming and diving
- Non-contact sports
- Football (though take care if someone with a VP shunt is hit hard in the abdomen and pain or symptoms persist)
- Flying: usually not a problem



Sports & Activities

No to:

- Hanging upside down for any length of time
- Deep sea diving
- Contact sports where the neck is grabbed e.g. Judo
- Use of the tackling bag and high tackles in rugby
- Take advice before parachuting, bungee jumping,



Need to be aware of

- Surgery to abdomen
- Dental Surgery
- Epilepsy
- Precocious Puberty
- Arrested Hydrocephalus



G. 22 year old male

lives with dad

Drives car

Unemployed

Socially isolated



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Thank You



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