

Normal Pressure Hydrocephalus

May 2007

Hydrocephalus is perceived as a condition affecting babies and children. Normal pressure hydrocephalus (NPH) usually occurs in the sixth and seventh decade of life.

What is NPH?

Normal pressure hydrocephalus is an abnormal accumulation of cerebrospinal fluid (CSF) in the ventricles (cavities) of the brain with little or no increase in pressure.

Under normal conditions, about a pint of CSF is produced daily in the adult brain. This circulates through the ventricles and the brain and spinal cord carrying nutrients to the brain and acting as a buffer to prevent injury.

NPH results when the flow of CSF is blocked in some way.

What causes NPH?

In most people, the cause is unknown: in others it can be secondary to head injury or subarachnoid haemorrhage or infection such as meningitis.

What are the symptoms?

There are three symptoms common to everyone diagnosed with NPH.

These are: **gait disturbance**
urinary incontinence
dementia

1. Gait (walking) disturbance

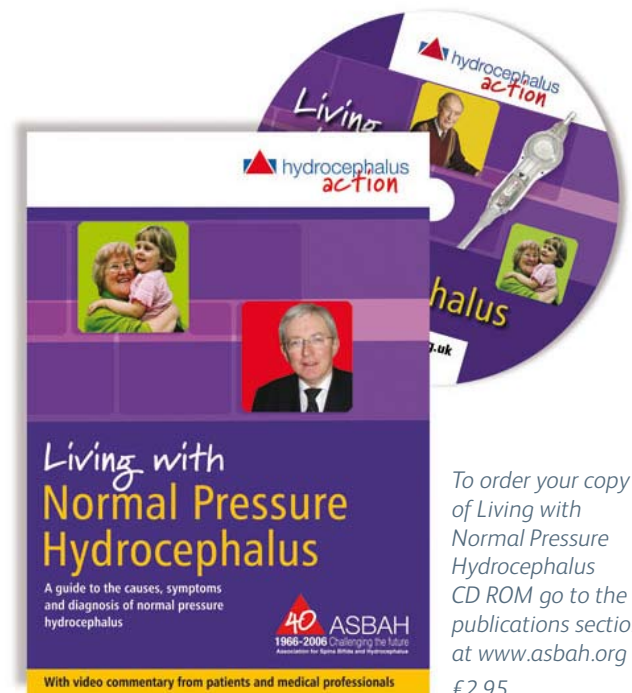
This is usually the first symptom that people notice.

Although there is no "classical" pattern, some people develop a wide based walk whilst others take small shuffling steps.

They may have poor balance and have frequent falls.

2. Urinary incontinence

Usually starts as frequency and/or urgency. But, incontinence may be due to walking difficulties (unable to reach the toilet in time) or normal consequence of age i.e. prostate problems.



To order your copy of *Living with Normal Pressure Hydrocephalus* CD ROM go to the publications section at www.asbah.org £2.95

3. Dementia

Dementia is usually mild, progressing to moderate and will include short term memory loss, forgetfulness and difficulty in dealing with everyday tasks.

Because these symptoms are of gradual onset and are commonly associated with increasing age, many people think that this is the norm and assume that they must learn to live with their problems. Even GPs and other medical professionals may not initially consider a diagnosis of NPH when presented with a patient with this triad of symptoms.

How is NPH diagnosed?

The initial point of contact is likely to be the GP who should consider referral to a neurologist or neuro-surgeon. Computerised tomography (CT) or magnetic resonance imaging (MRI) of the brain will show dilated (enlarged) ventricles in NPH and the clinical assessment will include lumbar puncture which will show normal or near normal pressure.

Can NPH be treated?

At lumbar puncture some 30ml of CSF will be withdrawn. Those patients whose symptoms improve after lumbar puncture are those likely to benefit from surgery. At operation, a shunt (fine tube) is inserted into one of the ventricles in the brain so as to drain the excess CSF and re-route it to another part of the body (usually the abdomen). The shunt is under the skin and is permanent: by this method NPH can be controlled.

How successful is the shunt operation?

Advances in shunt technology mean that today's treatment will, in the majority of cases, mean an improvement in symptoms.

Will I know if the shunt is not working properly?

Onset of headaches may mean that the shunt is over-draining. This can be minimised by the surgeon using an adjustable shunt so that the doctor can alter the pressure without further surgery. People with NPH may need frequent adjustments in the early months.

If the shunt is under-draining, the walking problems will usually be the first symptoms to re-occur. The neurosurgeon needs to be informed as this may mean that the shunt has malfunctioned.

Further information

For further information on Normal Pressure Hydrocephalus please contact our Helpline on **0845 4507755** to speak to a Specialist medical adviser.



hydrocephalus action

Codman and ASBAH are working in partnership to promote 'Hydrocephalus Action', a campaign aimed at heightening hydrocephalus awareness.

Link magazine

The essential magazine for people with hydrocephalus and spina bifida.

Link is published quarterly (Winter, Spring, Summer and Autumn) and is packed with the latest news, events and issues for individuals, carers and people living with hydrocephalus and spina bifida. To subscribe contact ASBAH's Helpline **0845 450 7755** email: helpline@asbah.org or visit our web site: www.asbah.org and click on the publications page.



SHUNT ALERT CARDS

ASBAH has a series of Shunt Alert Cards for adults. These should be carried at all times by people with hydrocephalus treated by a shunt (this will include some people with spina bifida).

The cards are available from ASBAH, Helpline & information, Telephone **0845 450 7755**.

The card emphasises that, if the card-holder is showing signs similar to those which occur when there is shunt blockage or infection, urgent assessment of shunt function should be carried out in a specialist neuro-surgical unit, in order to eliminate shunt failure as a cause.

People applying for a Shunt Alert Card can also request that an information sheet about hydrocephalus, specially written for doctors, is sent to their GP.

Employers can ask for "Shunt malfunctions: a guide to symptoms and suggested actions for employers".



Help us

ASBAH relies on people's generosity and support so we can help our clients who depend on us for help and advice - people with hydrocephalus, spina bifida, their families and carers. To donate to ASBAH please visit www.asbah.org or call **01733 421327**.