Service:
Neurosurgery

Non-Aneurysmal Subarachnoid Haemorrhage

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What is a non-aneurysmal subarachnoid haemorrhage (NASAH)?

A subarachnoid haemorrhage (SAH) occurs when bleeding takes place into the subarachnoid space, the layer surrounding the brain which contains cerebrospinal fluid (CSF). The bleeding usually arises from an abnormality of blood vessels such as an aneurysm or arteriovenous malformation. In up to 20% of patients no abnormality is identified. The bleeding is thought to originate from a small vein or artery at the base of the brain and is referred to as a non-aneurysmal SAH.

What are the symptoms of a SAH?

Symptoms typically include sudden severe headache, neck pain, nausea, vomiting and photophobia (sensitivity to light). Patients may become confused and rarely following NASAH may lose consciousness.

How is a SAH diagnosed and investigated?

A CT (Computed Tomography) scan is performed to detect signs of blood in the subarachnoid space. If this is done within 24 hours of the onset of symptoms, the scan is positive in over 90% of cases.

If the CT scan does not confirm the presence of blood in the subarachnoid space and a SAH is still suspected, a lumbar puncture (LP) will be performed. Under local anaesthetic a needle is passed between two vertebrae at the base of the spine to draw off a sample of CSF from the spinal canal. This is analysed for the presence of blood breakdown products (bilirubin); if positive, a SAH is confirmed.

Once a SAH has been diagnosed, a CT angiogram (CT scan with intravenous injection of X-ray dye) is performed to look for abnormalities of the intracranial blood vessels such as an aneurysm, arteriovenous malformation or arterial dissection (split in the artery wall).
If a CTA does not show a vascular abnormality, a cerebral angiogram (DSA) may be performed to assess the intracranial blood vessels in greater detail. A catheter is inserted into an artery in the groin (femoral artery). Dye is injected into the blood vessels in the brain and digital X-ray images are taken.

If the CTA and DSA do not reveal an abnormality the diagnosis of non-aneurysmal subarachnoid haemorrhage (NASAH) may be made.

**How long will I need to stay in hospital?**

You will stay in hospital until your symptoms have settled and you are well enough to return home. Length of stay varies according to the severity of the initial bleeding. Most patients will be discharged home within 10 days. Although serious complications are rare following NASAH, it may be necessary to perform further CT scans to exclude problems such as hydrocephalus (an increase in CSF pressure) before patients are discharged.

**Is a NASAH likely to happen again?**

Several studies have shown that the risk of further haemorrhage after a NASAH is rare. The main focus should be on your recovery from your NASAH. We strongly recommend stopping smoking. It is important to control other risk factors such as high blood pressure.
Further advice

In hospital you will be seen by a neurovascular nurse practitioner (NNP) who will discuss your diagnosis and progress and will provide you with advice on your discharge and recovery. You will also receive a telephone consultation with the NNP 4 weeks after discharge.

If you have further concerns you may contact the NNP on: 0117 414 7534. This may be an answerphone; so please leave your number and we will contact you as soon as we are able. There is also a list of useful charities, support groups and agencies at the end of this booklet.

If you have an urgent query post discharge and are unable to speak to a Nurse Practitioner immediately, we recommend that you contact your out-of-hours GP services, or emergency services as appropriate.

Common symptoms and ways of managing these

You are advised to take plenty of rest, as fatigue is common following NASAH. We recommend that you pace your return to your normal levels of activity. You may have days where you may be able to do more than others.

You may suffer with ongoing headaches. They are a normal part of the recovery process and should settle with time. Simple pain killers may help. If you experience worsening headaches that become severe, you should seek medical assistance.

Some patients experience difficulties with short term memory and concentration (cognitive changes) following NASAH. If we detect this as an inpatient we will ask our occupational therapy team to assess you and provide you with appropriate support. Patients may also experience changes in mood and emotions. Anxiety is common. These symptoms improve over time. If you are concerned about cognitive or emotional changes please
speak to the NNP or your GP.

**Frequently asked questions**

**When may I return to work?**

This depends on your recovery, ongoing symptoms, and your work. We normally recommend 6 weeks off work following NASAH. But there is no standard recovery period and you may require longer. Your NNP will discuss this during your follow up consultation. We usually recommend a phased return to work and some patients may require amended duties.

**Will I be entitled to any benefits?**

For advice regarding your entitlements please contact the Department of Work and Pensions and Citizens Advice Bureau. Your employer will inform you if you are entitled to sick pay.

**When may I fly?**

You may fly once you have clinically recovered. We recommend waiting six weeks unless there are urgent reasons to travel.

**When is it safe to resume sexual activity?**

It is safe to resume sexual activity when you feel ready. People may be anxious about physical exertion, particularly if this is when the bleed occurred. Some people may experience reduced sex drive in the early stages of their recovery.

If you are planning pregnancy, speak to your GP, but it is safe to become pregnant.
Testing your vision

Visual changes after a NASAH can be common. These usually settle with time. We recommend that you wait 6 weeks before visiting an optician to allow recovery to take place.

When may I drive again?

You may return to Group 1 (ordinary car and motorcycle) driving on clinical recovery. You do not need to inform the DVLA. The NNP will discuss this with you at your follow-up consultation.

If you hold a Group 2 (HGV) licence you must inform the DVLA that you have had a SAH. You may download a form online or speak to them directly on: 0300 790 6806

www.gov.uk/government/organisations/driver-and-vehicle-licensing-agency

You will normally be allowed to return to Group 2 driving six months after the SAH.

Hobbies and sports

You should gradually build up to your previous levels of activity as you feel able. It is important to pace yourself since doing too much too soon may provoke a recurrence of headache and excessive tiredness.
Other sources of information:

**Headway Charity:** A U.K. wide charity providing support to patients who have had a brain injury, and their families.

Web: www.headway.org.uk  
Tel: 0808 800 2244

**Brain and Spine Foundation:** Charity providing information and support to patients with brain and spine conditions.

Web: www.brainandspine.org.uk  
Tel: 0800 808 100

**Behind the Gray:** Is an online support community for those whose lives have been affected by a subarachnoid haemorrhage

Web: www.behindthegray.net

**British Epilepsy Association Charity:** Organisation providing information and support about Epilepsy.

Web: www.epilepsy.org  
Tel: 0808 800 5050

**ACAS:** Help and Advice for Employees

Web: www.acas.org.uk  
Tel: 0300 123 1100

**Department of Work and Pensions:** Government agency responsible for benefits.

Web: www.gov.uk/government/organisations/department-for-work-pensions  
Public Enquiries: 020 7712 2171

**Carers UK:** Information and Support for people who are carers.

Web: www.carersuk.org  
Tel: 0808 808 7777
If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.