



Oxford University Hospitals  
NHS Foundation Trust

# Non aneurysmal subarachnoid haemorrhage (NASAH)

**A guide for you and your family**



# **Subarachnoid haemorrhage (SAH)**

A subarachnoid haemorrhage 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 approximately 85% of SAH cases, it is caused by a ruptured aneurysm from one of the cerebral vessels; this type of SAH is called aneurysmal subarachnoid haemorrhage (aSAH).

**This leaflet will be a guide towards non-aneurysmal causes of subarachnoid haemorrhage (NASAH).**

## **Non aneurysmal SAH – No vascular abnormality found**

In up to 20% of patients no abnormality is identified. This bleeding is thought to originate from a small vein at the base of the brain and is referred to as a NASAH. Patients who experience a NASAH differ from patients who suffer an aneurysmal subarachnoid haemorrhage in initial presentation, clinical course, and outcome. There is also a subtype of NASAH, called a perimesencephalic NASAH. This is characterised by a specific pattern of localised blood on the CT scan. Research suggests that the majority of patients have good outcomes and in most cases, return to their previous level of functioning. The risk of a future haemorrhage is also extremely low and the outlook for recovery is positive.

## **What are the symptoms of a SAH?**

Symptoms typically include the following:

- Sudden severe headache.
- Neck pain.
- Nausea/vomiting.
- Photophobia (sensitivity to light).
- Patients may become confused and rarely following NASAH lose consciousness.

# How is a SAH diagnosed and investigated?

## Computed Tomography (CT)

This is performed to detect signs of blood in the subarachnoid space. This type of scan uses X-rays and a computer to create detailed images of the inside of your body. If the CT scan does not confirm the presence of blood in the subarachnoid space and an SAH is still suspected, a lumbar puncture (LP) will be performed.

## Lumbar Puncture

This procedure involves taking spinal fluid from inside the lower back for testing. This is usually carried out under a local anaesthetic.

## CT Angiogram (CTA)

Once a SAH has been diagnosed, a CTA (CT scan with intravenous injection of X-ray dye) is performed to examine the cerebral blood vessels (blood vessels in your brain).

## Angiogram

If a CTA does not show a vascular abnormality, a cerebral angiogram may be performed to assess the intracranial blood vessels in greater detail. Blood vessels don't show up clearly on ordinary x-rays, so a catheter is inserted into an artery in the groin (femoral artery) or arm (radial artery) and a contrast is injected. The contrast highlights the cerebral blood vessels and will show up any abnormalities.

**If the CTA and Angiogram do not reveal an abnormality the diagnosis of non-aneurysmal subarachnoid haemorrhage (NASAH) or perimesencephalic SAH may be made.**

## Is a NASAH likely to happen again?

This is a very common fear for all patients, particularly if no cause was found. The chance of another bleed is extremely rare and is usually no higher than anyone else in the general population. It is important to learn a coping strategy as this fear may prevent your recovery. The main focus should be on your recovery from your NASAH.

### **We strongly recommend the following:**

- **STOP** smoking.
- **CHECK** your blood pressure.
- **MODERATE** your consumption of alcohol.

## 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.

# Medication

## **Nimodipine**

You may stop this whilst in hospital, some people may be required to complete the full 21 day course of Nimodipine. This medication is used to reduce the risk of developing complications with vasospasm (a process where the blood vessels narrow after a brain haemorrhage as a reaction to the blood). This complication is unlikely with NASAH. You would only need to take the tablet for 21 days and the course does not have to be continued.

## **Pain relief**

You may go home with pain killers. You should take these regularly to begin with if you need them. They should be cut down as soon as tolerated as taking them for too long may make headaches worse not better.

## **Anti-epilepsy drugs**

These may have been prescribed for you. You may only have to take these drugs for a few weeks or months, but in some circumstances you may have to take them for life.

## **Anti-emetics**

These drugs can help to stop you feeling sick, and stop you vomiting.

## Going home

Once it is decided that no further investigations are needed as an inpatient and your medical team are happy that you are recovering, you will be allowed home. You may need further investigations as an outpatient. The tests you will need should be discussed with you before you go home.

## 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. Headaches can be triggered by dehydration, stress, illness, too much or too little sleep and missing meals. Prolonged or regular use of analgesia may also worsen or prolong headaches so should be used sparingly and stopped if no longer required. **If you experience worsening headaches that become severe, you should seek medical assistance.** Some patients experience back discomfort, again this is normal and usually resolves over time.

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 should improve over time.

**If you or your family are concerned about any new changes please speak to the Advanced Clinical Practitioner (ACP).**

# Recovery

Recovery is very individual and dependent on how you feel. You will need to pace yourself for the first month or more after going home because of tiredness and headaches. Save your energy for the things you have to do and those you want to do. Looking after yourself in the early days of recovery is beneficial to your wellbeing in the long term. Feelings of anger, frustration and sadness are not uncommon following a brain haemorrhage. This may be due to the condition but could just as well be due to the sudden life changing event and usually passes with time and support. If you are affected, you should talk to your ACP or GP.

## Extreme tiredness

You will probably need rest once you get home particularly if you are having a lot of visitors. Even simple tasks such as a walk to the local shop may leave you feeling exhausted. This will usually improve with time although for some it doesn't always completely go away. You will know if you have done too much as you will be exhausted and may experience more headaches.

## Pacing

You may benefit from pacing your activity for the first 4 weeks following going home. Take some gentle exercise and build up your activity as you feel able. Try to go outside for regular walks if you can; otherwise you may lose your confidence and fitness.

## Sensitivity to noise

This is not uncommon following a brain haemorrhage. Everyday noise such as television or background conversations can be just as difficult to cope with as loud noises. This usually settles down with time as you recover.

## Unusual sensations

Some people experience unusual or strange sensations in their head following a brain haemorrhage. These are common symptoms and we are not sure why they occur. Do not worry about them as they should ease with time.



## **Family and friends**

Enlist the support of your family and friends whilst you recover. They will be a great help with shopping, transport and support and will be the biggest influence in your successful recovery. It is advised to have someone stay with you for the first week or so after going home.

## **Headaches**

Headaches are common after a subarachnoid haemorrhage and usually they ease with time. They may, however, persist. Headaches can be triggered by dehydration, stress, illness, too much or too little sleep and missing meals. Prolonged or regular use of analgesia, (paracetamol, ibuprofen, codeine, morphine etc.) may also worsen or prolong headaches so should be used sparingly and stopped if no longer required. Drinking 2 to 3 litres of water per day, taking regular meals, and ensuring a good sleep pattern can help reduce the frequency and severity of headaches. In some instances avoidance of certain triggers like (caffeine, alcohol, cheese etc.) can help. You could try some non-invasive treatment options such as menthol sticks to rub on the forehead which may help.

**If you experience worsening headaches that become severe, you should seek medical assistance.**

# Frequently asked questions

## **When can I return to work?**

This depends on your recovery, ongoing symptoms, and your work. There is no standard recovery period. Your ACP will discuss this with you before discharge. Headway the brain injury charity should be able to help you if you are having problems with returning to work.

## **When can I drive again?**

You cannot drive if you have had a seizure as a result of the subarachnoid haemorrhage. Currently NASH patients need to inform the DVLA and are not able to drive until instructed to do so. The ACP and medical teams will discuss with you whilst you are an inpatient.

**Driving restrictions are enforced by the DVLA and each case has to be approved individually. You must speak to your medical team or nurse to clarify driving restrictions.**

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

You may be entitled to sick pay from your employer, or you may be able to claim benefits appropriate to your specific situation. You should contact an agency such as Citizens Advice Bureau or Headway to discuss individual circumstances and what you are entitled to.

## **When can I fly?**

You may fly once you have clinically recovered. We recommend waiting six weeks unless there are urgent reasons to travel. **You must ensure you have adequate travel insurance in place.**

## **When can I test my vision?**

Visual changes after a NASAH can be common. These usually settle with time. We recommend that you wait a few months before visiting an optician to allow recovery to take place. If you have any vision changes we are concerned about as an inpatient we will refer you to the appropriate teams for follow up.

## **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.

## **What about 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.

## **Can I drink alcohol?**

If you are taking Nimodipine, do not drink alcohol until the 21 day course is completed and you have reduced the number of pain killers you take. However, most people find they are not able to tolerate large amounts of alcohol. Please refer to current government guidelines regarding the suggested weekly alcohol unit allowance.

## **Advice**

In hospital you will be seen by a Advanced Clinical Practitioner (ACP) who will discuss your diagnosis and progress. They will provide you with advice on discharge and on your recovery.

You will also receive a telephone consultation with the NNP approximately 8 weeks after discharge.

If you have concerns before this time you can contact the **NNP on: 01865 231 660**. This may be an answerphone; so please leave your name, phone number and a brief message. You will be contacted as soon as we are able.

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

## Useful sources of information:

### Headway Charity:

This is a UK wide charity providing support to patients who have had a brain injury, and their families.

Oxford Head Injury Services: **01865 326 263**

Headway Thames Valley: **01491 411 469**

Headway Aylesbury: **01296 415 469**

Headway Swindon: **01793 674 820**

Headway Basingstoke: **01256 314 969**

Headway Milton Keynes: **01908 696 700**

Headway South Bucks: **01628 850 315** or **07704 860 754**

Headway East Northants: **01933 652 311**

Headway Northampton: **01604 591 045**

If you are not in one of these areas, use the following will link to take you to the correct Headway group for your postcode:

[www.headway.org.uk/supporting-you/in-your-area/groups-and-branches](http://www.headway.org.uk/supporting-you/in-your-area/groups-and-branches)

### Brain and Spine Foundation:

Charity providing information and support to patients with brain and spine conditions.

Website: [www.brainandspine.org.uk](http://www.brainandspine.org.uk)

Telephone: 08088 081000

### The Stroke Association:

A charity that deliver stroke services across the UK.

Website: [www.stroke.org.uk](http://www.stroke.org.uk)

Telephone: 0303 3033 100

**Same You:**

Same You charity is dedicated to increasing access to rehabilitation services after brain injury.

Website: [www.sameyou.org](http://www.sameyou.org)

**Carers UK:**

Information and Support for people who are carers.

Website: [www.carersuk.org](http://www.carersuk.org)

**British Epilepsy Association Charity:**

Organisation providing information and support about Epilepsy.

Website: [www.epilepsy.org.uk](http://www.epilepsy.org.uk)

Telephone: 0808 800 5050

**ACAS:**

Help and Advice for Employees

Website: [www.acas.org.uk](http://www.acas.org.uk)

Telephone: 0300 123 1100

**Benefit Advice:**

Websites: [www.gov.uk/browse/benefits](http://www.gov.uk/browse/benefits)  
[www.gov.uk/employment-support-allowance](http://www.gov.uk/employment-support-allowance)  
[www.gov.uk/universal-credit](http://www.gov.uk/universal-credit)

**Citizens Advice:**

Citizens advice can provide lots of guidance.  
It is free, impartial and confidential.

Website: [www.citizensadvice.org.uk](http://www.citizensadvice.org.uk)

## **Mental health:**

### **Mind:**

Research, information and support on mental health

Website: [www.mind.org.uk](http://www.mind.org.uk)

### **Anxiety UK:**

Information and support on anxiety

Website: [www.anxietyuk.org.uk](http://www.anxietyuk.org.uk)

### **NHS:**

Get support from a mental health charity.

Website: [www.nhs.uk/nhs-services/mental-health-services](http://www.nhs.uk/nhs-services/mental-health-services)

# Oxford based SAH support group

## Head2Head

The 'Head2Head Support group' affiliated to the John Radcliffe hospital can also offer support and practical (not medical) advice from patients and families personal experiences.

We recognised there was a need for a support service for SAH patients and their families. This focus group is a **FREE** service.

We feedback to clinical areas through the trusts Neuroscience teaching days any issues highlighted from the group. By relaying this information back we are helping to change & improve practice.

## **Group Meetings held in West Wing – not on Neuroscience ward.**

This group meets every 4 months for support with free tea and cake. All patients have a chance to talk about their experience from their initial diagnosis, hospital stay and discharge. Family members are also encouraged to talk about their experiences.

If you have not been given details on joining this group on discharge, email: [head2head@ouh.nhs.uk](mailto:head2head@ouh.nhs.uk) for further details.

Also further information on Subarachnoid Haemorrhage and the group can be found at: [www.ouh.nhs.uk/head2head](http://www.ouh.nhs.uk/head2head)

*This booklet has been uniquely designed with the help of the Head2Head focus group members.*

## Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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Oxford University Hospitals NHS Foundation Trust

[www.ouh.nhs.uk/information](http://www.ouh.nhs.uk/information)



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