

Service: **Neurosciences**

Subarachnoid haemorrhage



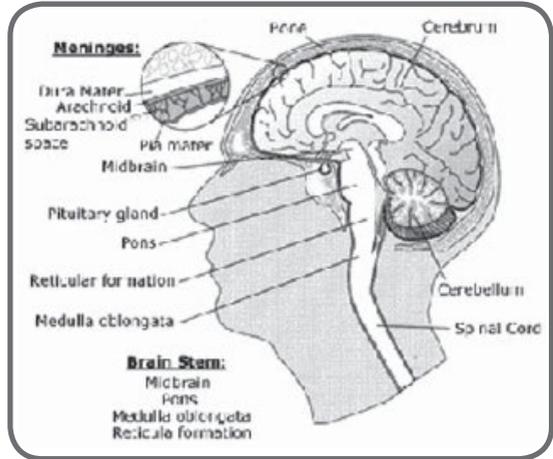
What is subarachnoid haemorrhage?

This is bleeding into the sub arachnoid space - a layer of membrane that lies beneath the skull protecting the brain. The bleeding can occur due to trauma, but usually the cause is an aneurysm or an arteriovenous malformation.

What is an aneurysm?

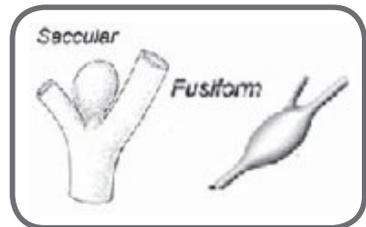
Aneurysms form where the artery wall weakens and a portion of the wall bulges out. If the aneurysm bursts, the blood leaks into the subarachnoid space.

This can block the pathway of the cerebrospinal fluid (CSF) that bathes the brain with nutrients. A condition called hydrocephalus can develop. This can be rectified by artificially draining the CSF externally and this is known as an external ventricular drain.



What happens when you have a subarachnoid haemorrhage?

Typically, patients' symptoms include a very severe headache, feeling sick and being photophobic (sensitive to light). If the haemorrhage is severe, it can cause individuals to collapse. There are five grades of bleed, 1 being least severe to 5 where the patient is unconscious and will require intensive care.



Which investigations are needed?

- Computerised tomography – a CT scan will be needed to confirm diagnosis and observe for blood around the brain.
- Cerebral angiography – this involves inserting a flexible catheter into an artery in the groin to allow dye to be injected to follow the blood flow around vessels in the brain. This informs the doctor about the size, location and shape of the aneurysm, which can be treated, to prevent further bleeding.
- Lumbar Puncture – this is performed to establish if there is blood in the CSF, but it is not always needed if the CT scan provides the necessary information. The doctor pushes a special introducer through the skin and tissues between two vertebrae into the space around the spinal cord that is filled with CSF. Because the skin is numbed with local anaesthetic, most people do not feel pain. You may feel pressure as the needle is pushed in.



How is an aneurysm treated?

Your doctor will explain that there are two methods of treatment and the choice depends on the size, shape and area the aneurysm is located within the brain. In most cases, repair is carried out by endovascular coiling in the neuroradiology department. If this is not possible then the aneurysm is treated surgically using a clip.

Endovascular coiling

This is a non-surgical process performed under general anaesthetic in the angiography room by a Neuroradiologist.



This procedure will often follow straight on from the angiography scan. They use a catheter in the same way as the angiography procedure used to diagnose the aneurysm. Platinum wire coils are fed through the catheter and, when released into the aneurysm, cause the blood flow into the area to clot - sealing the vessel. When the procedure is finished, the catheter is removed and a special device known as an angioseal is placed in the puncture site around the groin to plug off the access site.

After the endovascular coiling

The groin site

There may be bruising around the puncture site in the groin after the procedure.

Often the puncture site is sealed with a device known as an **angioseal**. You will be given a card on discharge to carry if this is the case. If you are admitted into hospital again within 90 days, you should say that you have this.

Can coils become dislodged?

It is unusual for this to happen, but this is why we carry out a follow up check MRI scan or angiogram in 6 months time. We check to see if the aneurysm remains satisfactorily treated.

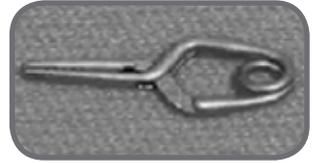
Risks

There is a risk of developing a condition called vasospasm where the cerebral arteries in the brain become narrowed. This can affect the blood flow around the brain and the aim of treatment is to prevent a stroke. This may begin 3 days after the subarachnoid haemorrhage and can take effect for up to 21 days.

Nimodipine tablets are given to help prevent the arteries narrowing for this period.

You will be advised you need to drink three litres of fluid a day during this time.

It is necessary to monitor your neurological state and blood pressure closely and it may be necessary to be cared for within the hospital's High Dependency Unit.



Surgical clipping

This may be necessary if it is not possible to treat the aneurysm by endovascular coiling. Your consultant will discuss these options with you. The operation is done via a surgical opening to the skull known as a craniotomy. A permanent metal clip is placed around the neck of the aneurysm to prevent blood flowing into it. This is carried out under general anaesthetic.

How long will I stay in hospital?

Usually, we need to monitor you in hospital for 2 weeks following haemorrhage, but the length of stay will depend on the severity of the bleed, any complications and recovery. Some patients may require further rehabilitation for physical disabilities.

Follow up appointments

If you have had a Subarachnoid Haemorrhage as a result of an aneurysm you will be followed up in 4 - 6 weeks in clinic. The nurse practitioner that you will meet during your hospital stay will contact you. Please ensure we have your correct telephone number and let us know if you do not wish to be contacted.

If you had surgical clipping of your aneurysm you may be asked to visit the outpatients department for a check up in six to eight weeks time.

At six months after your haemorrhage, if you were treated by endovascular coiling, you will receive an appointment for a Magnetic Resonance Scan (MRI) check up. Occasionally, it may be necessary for you to have an angiogram check up. This procedure may involve an overnight stay in hospital. You do not need a general anaesthetic. The Neuroradiologist will

use local anaesthetic in your groin. You will be advised if this is required prior to discharge.

You will be informed of the results of your follow up scan or angiogram and if further follow up is required.

Who can I speak to about concerns?

You can contact the **Neurovascular Nurse Practitioner team** after discharge if you have any concerns. This may be an answerphone. If you leave your number you will hear back as soon as is possible. If your call is urgent please contact your GP, out of hours GP, or the emergency services where appropriate.

It often helps to talk through anxieties or concerns with people who understand your condition. There are telephone numbers of advice lines given at the end of this booklet.

Information to help with your recovery

You are advised to take plenty of rest and you may find yourself getting tired easily. You may suffer from headaches, but this should settle down with time. Your short term memory may be affected but most people find this improves during recovery. Some people also find their concentration is effected so it is advisable to not to over exert yourself. It is a good idea to recognise when your body feels tired. You will have days where you are able to do more than others.

Frequently asked questions

When can I return to work?

This depends on your recovery and the job you did previously, but we recommend that you take 3 months to recover. You may need to phase your return to work. This can be discussed when the nurse phones you after discharge from hospital.

Will I be entitled to any benefits?

If you need advice, it is best to contact a social worker in your local area. The nurse practitioner can advice and identify if

support is required and from which services you may benefit.

Could I have prevented it?

There is a higher incidence of subarachnoid haemorrhage in people who have high blood pressure and those that smoke. It could happen after physical effort but it can occur spontaneously.

Could close relatives be at risk?

Some families appear to have relatives who develop aneurysms, but this is not common. These are families identified to have two or more first degree relatives (parent, child or sibling) who have had proven subarachnoid haemorrhage. If you are concerned, we can discuss this with you.

Can I fly?

After endovascular coiling treatment there are no restrictions to flying. If you have had surgery, you should discuss this with your consultant.

Can I wash my hair after my operation?

After your craniotomy surgery for clipping of the aneurysm, you may wash your hair once the wound has healed. This may take 10–14 days.

Is it safe to resume sexual activity?

This is up to you, when you feel able. People are often anxious about physical exertion, especially if this is when the bleed occurred. You may find your sex drive is reduced during the early part of your recovery.

If you are planning pregnancy, it is worth talking to your doctor, but it is safe to become pregnant.

Testing your vision

If you feel you have had difficulties since your haemorrhage you should wait 6-8 weeks before visiting the optician, to allow recovery to take place.

When can I drive again?

You do need to inform the DVLA that you have had a subarachnoid haemorrhage. They will advise you. Driving obviously depends on your physical recovery. After endovascular coiling treatment, there are fewer restrictions than if you have had brain surgery. If you have had surgery, you will usually not be allowed to drive for 1 year. The DVLA website is www.dft.gov.uk/dvla or you can phone 0300 790 6806.

Hobbies and sports

You should gradually build up to your previous level of activities as you feel able. For most people, there does not have to be any restriction on your future activities. Exercise is encouraged, but you should build up slowly as you feel able. Doing too much too soon will result in severe tiredness and may make you feel very unwell. This is not dangerous, but may slow down your recovery.

Can I drink alcohol?

This depends on medications you are taking. It is best to ask your GP for advice once you have begun your recovery. Alcohol will affect you more easily than before. You should moderate your intake.

Symptoms you may experience during your recovery

Tiredness

Tiredness is very common. You will need to pace yourself day to day. It may take up to 3 months to resume previous activities, but it may be longer.

Memory problems

Not everyone remembers their time in hospital. You may find your short term memory has been affected but this should improve with recovery. In the early stages you may need to concentrate more to perform straightforward tasks. Writing things down so you can refer back often helps.

Headaches

Headaches usually reduce in time, but sometimes can be worse if you are tired. You will be discharged with painkillers. If these do not offer relief you should contact your GP.

Anxiety

You may find yourself more emotional or low in mood. You may lack self confidence, but this should effect you less with time.

How can my family help?

You will need more practical support in the early stages, but recovery should focus on resuming independence where possible.

Sources of further information

A.C.A.S

Help and information regarding employment issues.

Tel: 01252 811868

Website: www.acas.org.uk

B.A.S.I.C Brain and Spinal Injury Charity

The Neurocare Centre, 554 Eccles New Rd, Salford, M5 1AL

Helpline: 0870 750 0000

e-mail: enquires@basiccharity.org.uk

Website: www.basiccharity.org.uk

behind the gray

Subarachnoid haemorrhage and stroke support group

Website: www.behindthegray.net

Department of Work and Pensions

Government agency responsible for benefits. Public enquires

Office: 020 7712 2171 For local offices see telephone book

Website: www.dwp.gov.uk

British Brain and Spine Foundation

Charity Organisation providing information and a helpline.

Helpline: 0808 808 1000

Website: www.brainandspine.org.uk

British Epilepsy Association Charity

Organisation providing information and support about epilepsy.

Helpline: 0808 800 5050

e-mail: helpline@epilepsy.org.uk

Website: www.epilepsy.org.uk

Carers UK

Information and support for people who are caring at home.

Tel. 020 7490 8818

e-mail: info@ukcarers.org

Website: www.carersuk.org/Home

NHS Constitution. Information on your rights and responsibilities. Available at www.nhs.uk/aboutnhs/constitution

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www.nbt.nhs.uk

If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.

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