

Other surgical treatments depend on the most appropriate option for the individual patient. This will be discussed with you.

Options to prevent the aneurysm bleeding again include surgical **clipping** and **coiling**.

Clipping involves the placing of a specialised clip round the neck of the aneurysm to stop further re-bleeding. This is done by a surgical operation on the brain.

Coiling involves the placing of specialised coils inside the aneurysm to stop further re-bleeding. This is done by X-ray specialists.

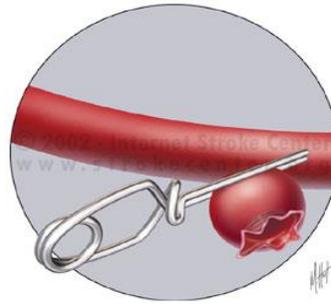
Both of these options have different risks which will be discussed with you.

There are other **complications** that may arise from the effects of subarachnoid haemorrhage. These include re-bleeding (pre-clip or coil), vasospasm and stroke. Any of these may lead to death or disability.

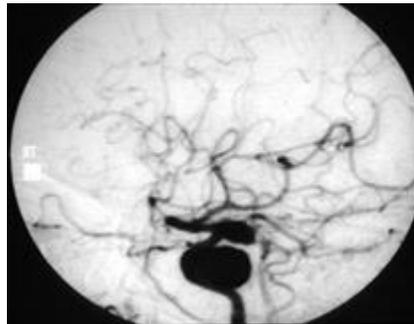
**Vasospasm** occurs in most patients with subarachnoid haemorrhage but its severity varies greatly. It is a very common cause of death and disability. It is related to strokes that occur when the blood vessel goes into such severe spasm that some parts of the brain are damaged by lack of blood supply. Spasm is a potential problem for 14-21 days after the initial bleed. There are various preventative and treatment options for this complication.

Please ask questions

**It is important for you to understand very clearly what is happening.**



*Clipped aneurysm*



*Angiogram showing aneurysm*

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2. Molyneux A et al International Subarachnoid Aneurysm Trial (ISAT) of neurosurgical clipping versus endovascular coiling in 2143 patients with ruptured intracranial aneurysms: a randomised trial. Lancet. 2002; 360: 1267-74.
3. Intracranial Aneurysms Schievink W NEJM, 1997, 336:28-40
4. Controversies in management of aneurysmal subarachnoid hemorrhage Naval et al Crit Care Med 2006, 34, 2, p 511523
5. [http://brainavm.uhnres.utoronto.ca/swf/aneurysm\\_coiling.html](http://brainavm.uhnres.utoronto.ca/swf/aneurysm_coiling.html)

Filename: SAH  
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Classification: ACH/2017/001  
Reviewed: September 2017



## Aneurysmal Subarachnoid Haemorrhage

Information pamphlet for families and whānau

Welcome Haere Mai | Respect Manaaki  
Together Tūhono | Aim High Angamua

## SUBARACHNOID HAEMORRHAGE

A subarachnoid haemorrhage is a type of brain haemorrhage which is a catastrophic event in the life of the person and their family/friends.

A subarachnoid haemorrhage is a serious and life-threatening event. Approximately 40% of people die in the 1<sup>st</sup> month after the haemorrhage.

The **causes of death** are usually related to **re-bleeding** and also due to strokes caused by **spasm** of the brain blood vessels (vasospasm).

### What is a Subarachnoid Haemorrhage?

A subarachnoid haemorrhage occurs when blood leaks from a weakness or ballooning of one of the brain arteries. This weak point is called an **aneurysm**. The blood leaks usually into the space between the layers around the brain where the brain/spinal fluid is located. It can also bleed into the brain tissue itself.

The aneurysm will have been present for months or years but may become weakened to the point where it ruptures and bleeds.

An uncommon cause of a subarachnoid haemorrhage may be due to an AVM (arterio-venous malformation – a group of abnormal blood vessels).

### What happens during a subarachnoid haemorrhage?



When the haemorrhage occurs, the person will usually complain of severe headache.

This is often described as the worst headache they have ever had. Other symptoms may include stiff neck, vomiting, drowsiness, confusion, trouble speaking, limb weakness, seizures, collapse and coma.

Up to 40 % of people will have had a very severe headache in the few days prior to the bleed that causes hospital admission – this usually represents a small “warning” bleed.



CT Scan

### What happens first in hospital?

Initially the main issues are supportive treatment to ensure adequate breathing and circulation followed by medical tests to diagnose the problem. These will usually occur in the first few hours after admission to hospital

Patients will have a CT (computerised tomography) of their brain. This will confirm the diagnosis of subarachnoid haemorrhage. Sometimes the CT will show the actual location of the bleeding point.

Many patients will require an **angiogram**. This is an x-ray procedure where dye is used to outline the arteries of the brain. This is to give detailed information about the location of the aneurysm. This is usually performed as a non-urgent procedure within the 1<sup>st</sup> 24 - 48hrs after admission.

**Supportive treatment** may include assisting breathing by help of the ventilator/life support.

Medications will be given to control blood pressure, treat any seizures, relieve pain and to help prevent vasospasm (blood vessel spasm).

Surgical treatment may initially include the placement of a drainage device through the skull to allow drainage of the brain/spinal fluid. This is to decrease the pressure on the brain.