UNDERSTANDING STROKE DUE TO INTRACEREBRAL HAEMORRHAGE

Chest Heart & Stroke Scotland

This factsheet provides information for people who have had a stroke due to an intracerebral haemorrhage (bleed in the brain) and for their families and carers. It briefly describes what an intracerebral haemorrhage is, what causes it and how it is diagnosed. It explains the treatments that are available and what can be done to reduce the risk of having another bleed.

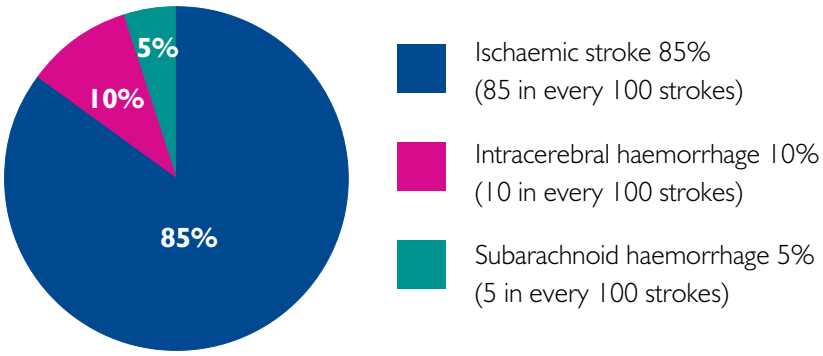
There are two kinds of stroke:

Ischaemic stroke – most strokes in the UK are ischaemic (about 85 out of every 100). This is when a blockage (usually a blood clot) in an artery leading to the brain prevents blood supply to the brain. People who have had an ischaemic stroke may receive clot-busting treatment (thrombolysis).

Haemorrhagic stroke – about 15 out of every 100 strokes in the UK are haemorrhagic. This is when a blood vessel in or around the brain bursts causing bleeding directly into the brain or into the fluid that surrounds the brain.

- Intracerebral haemorrhage (ICH): bleeding occurs within the brain
- Subarachnoid haemorrhage (SAH): bleeding occurs into the fluid that surrounds the brain

FREQUENCY OF EACH TYPE OF STROKE



This factsheet provides information about intracerebral haemorrhage.

For information about ischaemic stroke, see the CHSS booklet *Stroke: A guide to recovery in hospital* (www.chss.org.uk).

For information about subarachnoid haemorrhage, see the Brain & Spine Foundation's booklet *Subarachnoid Haemorrhage* (www.brainandspine.org.uk).

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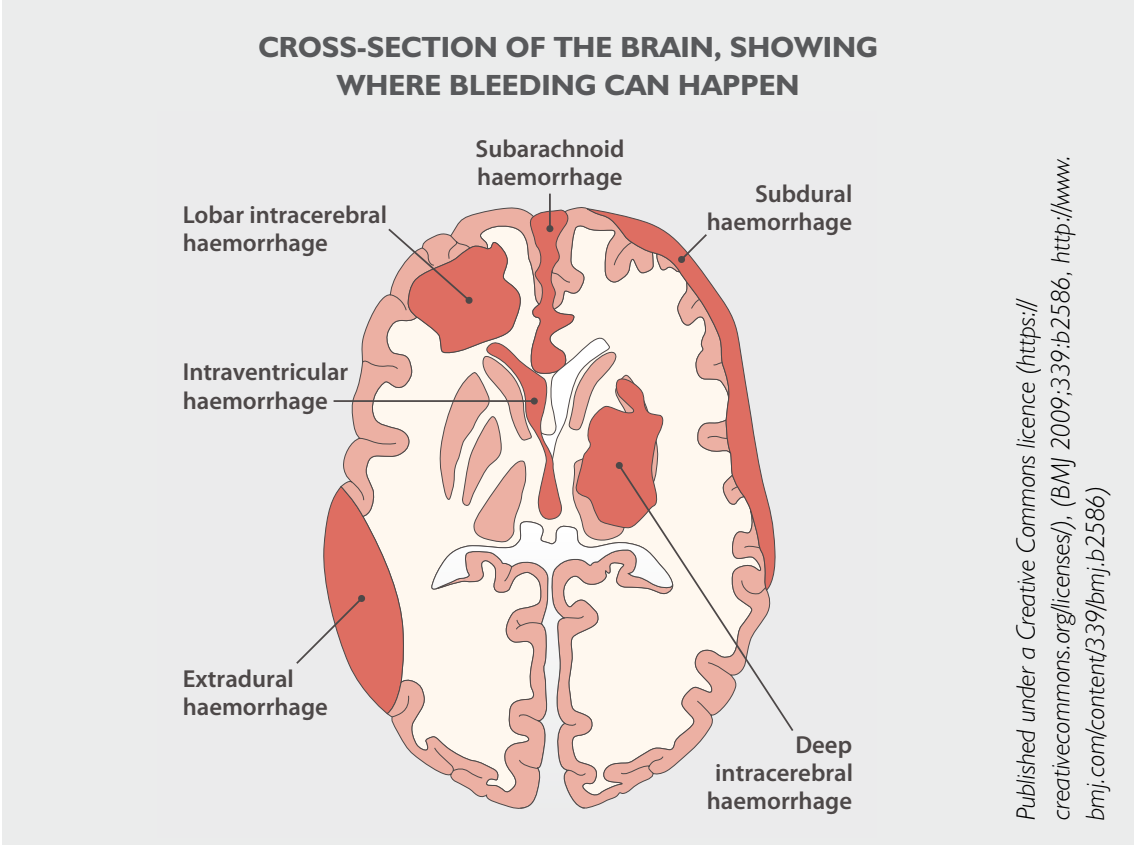
INTRACEREBRAL HAEMORRHAGE (bleeding in the brain)



How common is intracerebral haemorrhage (ICH)?

About 15 out of every 100,000 people have an ICH each year. In Scotland, this represents about 800 people per year.

What causes ICH?

The two main causes of ICH are:

- Age – the risk of having an ICH increases as you get older
- High blood pressure

Less common causes of ICH include:

- Brain aneurysm
- Vascular malformation
- Cerebral amyloid angiopathy
- Coagulopathy (also called clotting disorder or bleeding disorder)
- Drug and alcohol use, including amphetamines and cocaine
- Brain tumours

See the glossary on the back page for full descriptions of these conditions

What are the symptoms of ICH?

The symptoms of stroke due to an ICH will vary, depending where the bleed is within the brain. Usually symptoms include:

- Weakness, numbness, pins and needles on one side of the body
- Difficulty speaking or understanding
- Dizziness
- Blurred vision
- Seizures
- Loss of consciousness
- Occasionally: sudden, severe headache, vomiting, stiff neck

What tests will be done to confirm the diagnosis?

Anyone with a suspected stroke should be admitted to hospital immediately. In hospital you should have a brain scan (a CT or MRI scan) as soon as possible to confirm whether your stroke has been caused by a blockage or a bleed. This is important to make sure you get the right immediate treatment.

What treatment will I receive?

Care

- If you have been diagnosed with an ICH, you should be managed on an acute stroke unit. Under certain circumstances, you may be treated in a neurosurgical or critical care unit.

Medical treatment

- If you were taking an anticoagulant medicine (such as warfarin) at the time of your haemorrhage, this will be stopped and you may be given treatment to counter the effect of the anticoagulant and help stop the bleeding.
- If you were taking an antiplatelet medicine (such as aspirin) to reduce your risk of a heart attack or an ischaemic stroke, this will be stopped because it may increase the risk of further bleeding.
- If your blood pressure is high, you may be given medicine(s) to lower it.
- If you have a seizure after your stroke, you may be given medicine(s) to stop further seizures.

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Surgical procedures

- An operation may be necessary to remove any blood that is causing pressure to build up in your brain.
- Blood from the haemorrhage can block the normal flow of the fluid that surrounds the brain. This can cause the fluid to build up, increasing the pressure on the brain. Surgery may be needed to drain the excess fluid.
- If your stroke was caused by a burst aneurysm or vascular malformation, you may need surgery (clipping) or an endovascular procedure (coiling) to stop it bleeding again. *See the glossary for a description of these procedures*.

Intermittent pneumatic compression

- If you are not very mobile after your ICH, intermittent pneumatic compression should be used to reduce your risk of a deep vein thrombosis (a blood clot that can develop in a vein deep in the calf or thigh).

Rehabilitation

- After your initial recovery, you may need rehabilitation to help you regain function that was lost due to your stroke.

For more information on recovery and rehabilitation after stroke, see the CHSS booklets *Stroke: A guide to recovery in hospital* and *Stroke: A guide to recovery at home* (www.chss.org.uk).

FACTSHEET

FACTSHEET

What can I do to prevent another stroke?

- If you have been prescribed blood pressure lowering medicines, take them as instructed and ensure that your blood pressure is checked regularly. Aim for a blood pressure at or below the target recommended by your doctor - the lower the better.
- If you smoke, stop smoking.
- Maintain a healthy weight.
- Exercise regularly.
- Eat a healthy varied diet, and drink alcohol sensibly.
- If you were taking an anticoagulant or antiplatelet medicine before your ICH, it may be restarted after your stroke or it may be permanently discontinued. Your doctor should discuss the options with you.

See the CHSS booklet *Reducing the risk of stroke* for more information (www.chss.org.uk).

What is the likely outcome?

- About half of all people who have an intracerebral haemorrhage will survive beyond one year. Outcome depends on many things, especially your age, your level of consciousness, and the size and location of the haemorrhage.
- Everyone's recovery following a stroke is different. Some people will make a full recovery within days, weeks or months. Others take much longer, and some will never make a full recovery.
- Communication, mobility, memory, bladder and bowel control can all be affected, and extreme tiredness is common after a stroke, but there is help available both whilst you are in hospital and when you go back home.

Why might I be asked to participate in research?

This factsheet describes the current level of knowledge about managing ICH. However, more research needs to be done to improve the understanding, outcome, treatment and care of people with ICH. Therefore you might be asked to participate in further research.

FACTSHEET

Glossary

Anticoagulant: a medicine that reduces the risk of blood clots forming.

Brain aneurysm: a blood-filled bulge in an artery caused by weakness in the vessel wall, which can burst causing bleeding into the brain.

Coagulopathy: the ability of the blood to clot is reduced, which can cause prolonged or excessive bleeding. Excessive bleeding can also be caused by anticoagulant medicines such as warfarin.

Coiling: a catheter (fine tube) is inserted into an artery in the arm or leg and guided up to the aneurysm or vascular malformation. A coil at the end of the catheter is then released, and blood clots around the coil to try to seal off the aneurysm or malformation.

Cerebral amyloid angiopathy: a condition where a protein (amyloid) builds up in the blood vessels in the brain, which damages and weakens the arteries making them more likely to tear.

Clipping: a surgical process in which the skull is opened and a metal clip is put around the base of the aneurysm so that no more blood can escape.

Deep vein thrombosis (DVT): a blood clot in the veins deep in the calf or thigh, which may be associated with pain, swelling, redness and tenderness. If a piece of the clot breaks off, it can be carried in the blood stream to the heart or lungs. This is called a pulmonary embolus (PE) and can be serious.

Intermittent pneumatic compression: a device used after a stroke to help prevent deep vein thrombosis in people who are not very mobile. Inflatable sleeves are wrapped around the legs and are pumped with air at intervals, to improve the flow of blood in the deep veins of the legs.

Vascular malformation: abnormal development of blood vessels in the brain, which can burst causing bleeding into the brain. The most common types are arteriovenous and cavernous malformations.