Patient information leaflet on Chronic Subdural Haematoma (CSDH)

What will this information leaflet tell you?

- What a chronic subdural haematoma is
- Who suffers with this condition and the symptoms
- What the current treatment options are
- What the recovery and long-term prognosis is like for this condition

What is a CSDH?

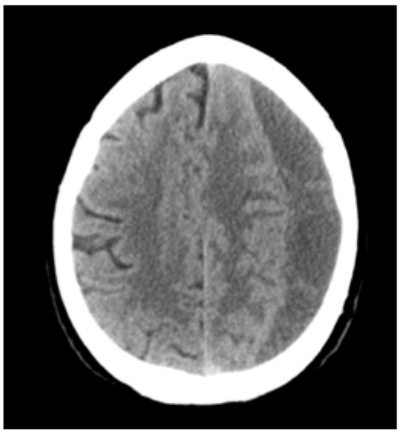
A Chronic Subdural Haematoma (CSDH) is essentially a collection of old and sometimes new blood spread over the surface of the brain but not inside it.

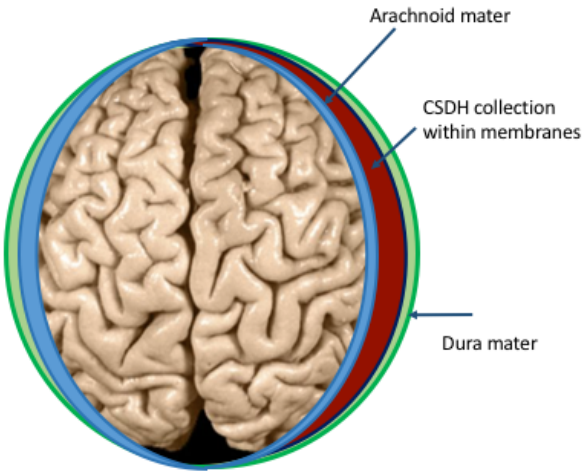
It can be initiated by trauma such as a knock to the head or fall. However, there may be no bleeding to start with and even if you had a head scan at this time it may have been normal.

In some patients, the trauma is so minor they don't remember it happening, or very occasionally there is no trauma but the bleed starts because you are taking a blood thinning medication (such as warfarin).

Over the following 6-12 weeks there is a gradual build-up of blood and fluid on the surface of the brain, this is your body's reaction to the trauma or bleeding, and the collection will continue to get larger.

The picture below on the left shows a typical CT scan of a patient with CSDH (with a dark grey/black collection of blood and fluid on one side of the brain). On the right is a diagram of this, with blood overlying the surface of the brain, contained within a membrane.





Who suffers from this condition and how do I know if I have one?

CSDH most commonly affects older people, with an average age of around 73 years old. The reason for this is that as we age, our brain shrinks slightly, leaving more space around the surface for the collection to form. However, it can happen to anyone from childhood onwards, especially if they have a nasty knock to the head or are on medications that make bleeding more common.

The symptoms usually start once the collection gets big enough to put some pressure on the surface of the brain. They can build up over days to weeks before they become more severe and vary a great deal. They include those listed below.

- Headaches that don't go away
- Feeling nauseous/vomiting
- Clumsiness and tripping-over or falling more frequently
- Confusion and disorientation
- "stroke" like symptoms - with difficulty finding words and/or weakness down one side of the body

Eventually if the collection progresses unnoticed it will result in drowsiness followed by coma. At this stage it obviously requires emergency neurosurgical treatment.

Patient case example

Albert is an 83-year-old man who was admitted with a CSDH he tells his story

"I am normally very fit and healthy and live an independent life. I was admitted to hospital a few days ago after I had an awful turn at the bus-stop where my legs seemed to stop working and I felt like I was going to collapse. I had noticed I was stumbling more and dragging my left leg in the few days before then, which wasn't quite right. I phoned my GP who advised going straight to the emergency department for a scan of my head.

After the scan the doctor told me I had a chronic subdural haematoma, and it is probably related to an accident I had 6 weeks ago when I fell off my bike and hit my head. I didn't seek any medical help at the time of the bicycle accident as I felt fine but it was a nasty bump.

Yesterday I had an operation to drain the chronic subdural and have a small tube with a drain attached to my head which I am told is being removed tomorrow. Although I am just recovering from my operation, my walking is already improved and I no longer feel weak and unsteady. I am currently taking a medication to try and prevent this from coming back again in the future and am very grateful to the team looking after me as I am making a good recovery."

3 months has passed since Albert had his operation and he is back to cycling his bicycle around Cambridge!

What are the treatment options for CSDH?

1. Conservative

This basically means watching and waiting. Some CSDH's are very small and can resolve on their own without any treatment. If it is found on a scan but you have no symptoms your doctor may not recommend doing anything further. If symptoms increase or they consider you to be higher-risk (such as patients taking blood thinners) then they will arrange another follow-up scan to check things are getting better.

2. Surgery

This is the main treatment that has been used for CSDHs causing symptoms, in this case these collections will only get bigger over time and eventually become life-threating without treatment.

As the collection of blood is on the surface of the brain it is easy to reach by drilling one or two small holes in the overlying skull. You will have a small patch of hair shaved but it will grow back normally afterwards.

Usually two small windows (you might hear these called "burr holes") are made and the collection of blood is washed out. Often a drain is left sitting in one hole for a couple of days to help drain more fluid. Because these holes are small, they do not need a plate or any other material to cover them, but will close-up naturally with scar tissue. Some people notice a small depression left under the skin where the holes were made, this is normally and doesn't cause any long-term problems. You may also find that the skin around where the cut was made remains numb or tingly after the operation.

Sometimes a larger window of bone is opened-up (you might hear this called a small or mini "craniotomy"). In this case, the piece of bone is replaced and secured with some metal plates and screws which are usually left in place forever.

What are the risks of surgery?

This is a very common operation which is performed several times a week in most neurosurgical centres and the success rate is very high. However, it is still an operation on your brain and therefore does carry risks. Your surgeon will talk to you about these and ask you or your family to sign a consent form.

The overall risk of the operation depends on your age, how fit you are and how unwell you are when you come into hospital. Two common things that the surgeon may warn you about are

- **Recurrence** - this means the CSDH coming back again in the future and requiring a further operation. This is the most common complication and happens in 10-15% of patients. It is impossible to predict who this will happen to but if it does happen it is normally in the first 6-8 weeks after the operation. Most surgeons won't book a routine follow-up scan but will ask you to come back to your GP/hospital if your symptoms return.

- **Infection and wound problems** - any cut that is made in the skin can get infected and antibiotics are used routinely during the operation to prevent this. However, there is always a small chance of the wound getting infected or not healing properly. When you are discharged home, you will be given advice to see your local GP or practice nurse to remove sutures or clips. This is usually about 7 days after the operation and they will check the wound for you.

Other **rare but serious** complications from this operation can include bleeding, injury to the brain causing disability, seizures and risk from the general anaesthetic including death.

3. Drug treatment

More recently it has come to light that CSDH's can also be treated with a type of drug called steroids. The steroids can help the body to reabsorb the collection of blood on the surface of the brain and allow a complete recovery. Steroids are used for many other conditions, but are still under investigation for how well they work in this condition. Therefore, to have this treatment you will be invited to take part in a study, which randomises patients to steroid medication or placebo medication.

In some cases, where the collection is large, surgery may still be recommended first and the medication to be given after the operation to try and prevent the collection from coming back again in the future. Alternatively, your doctor may suggest starting the course of medication first to see if the CSDH resolves without surgery.

Please ask your doctor for more information about this study.

What is the recovery and long-term prognosis for CSDH?

The large majority of patients who have a CSDH return to their normal way of living within 3 months of treatment. Every patient is different and their recovery happens at a different rate depending on how fit and active they were before, how well they are when they come into hospital and if any other complications occur.

The average stay in hospital for this condition is **7 days**. Some patients are home within 2-3 days if they are active and make a quick recovery and others need a couple of weeks in hospital for recovery and rehabilitation.

In a few cases, particularly very elderly patients or those with lots of other health problems and complications, having a CSDH can be a life-changing event. This may mean living with some permanent symptoms or disability or even in some cases not surviving this condition. In these severe cases your doctor will discuss the reasons for this in more depth with you or your family.

What can I do when I get home?

It is important to take it easy in the first few weeks after this condition, particularly if you have had an operation. You should not do any strenuous activity or heavy lifting, but light exercise such as walking is good for you.

It is normal to feel very tired in the first few weeks whilst your brain is still recovering from the injury. This should gradually improve over time as your concentration and energy levels recover. It takes longer for some than others, so can be several months before you are feeling normal again.

What about driving?

If you never had a seizure then the DVLA does not need to know that you had a CSDH. However, **you must not drive until approved by a doctor**. The DVLA advice is that you can return to driving once you are **fully recovered and approved by a doctor** - your GP can do this for you if you go and see them once you feel you have recovered. This is normally from around 6 weeks after any treatment for this condition.

If you had a **seizure** at any time point then you must inform the DVLA and **cannot drive until they give you permission**. They will discuss your case with the neurosurgeon who treated you to decide exactly when this should be.

What about my blood-thinning medications?

If you were on any blood-thinning drugs (including warfarin, aspirin, clopidogrel and others) then these will probably have been stopped when you were in hospital. It depends on why you take this drug as to whether you should re-start it and how quickly.

Some patients will be advised to stop taking these medications for good after this condition, whilst others will just need a break before going back on them. The important thing is to **ask before you leave hospital or follow-up with your GP within 4 weeks** to check whether you need to re-start these medications.