

WEB intracranial aneurysm device for treating cerebral aneurysms

Information for patients

This booklet explains how the WEB device is used to treat cerebral (brain) aneurysms, and the benefits and risks of the procedure.

If you have any questions about the device, or would like more information about cerebral aneurysms, please do not hesitate to contact a member of the team caring for you. They will be happy to answer any questions you may have.

Confirming your identity

Before you have a treatment or procedure, our staff will ask you your **name and date of birth** and check your **ID band**. If you don't have an ID band we will also ask you to confirm your address.

If we don't ask these questions, then please ask us to check.
Ensuring your safety is our primary concern.

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1. What is a WEB device?

It is a basket made of very fine wire mesh. It acts as a plug inside the aneurysm, reducing the blood flow inside it and preventing any further bleeding (see Figure 1).

Coils are usually used to pack an aneurysm. Some aneurysms are difficult to treat because of their shape, so we sometimes also use stents (wire tubes which line the blood vessel wall) either alone or with additional coils inside the aneurysm. This method requires the patient to take medication to thin their blood for a period of time and also leaves the stent in the blood vessel. The WEB device allows the aneurysm to clot off without using coils or stents.

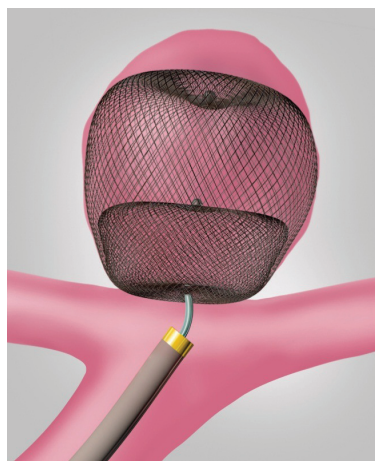


Figure 1:

The WEB device in position in an aneurysm.

2. How does the WEB device work?

The WEB device prevents blood from entering the aneurysm and so prevents the risk of it bleeding.

3. What are the benefits of the WEB device?

It allows us to successfully treat large, wide-necked aneurysms which may be difficult to treat with coiling, stenting and/or surgery alone.

As the device is still quite new, we do not yet know how it will perform in the long term. But more and more patients are being treated with the WEB device every day.

4. What are the risks of the WEB device?

All treatments and procedures carry risks. These are different for every person, so we will try to estimate your personal risk and explain this when we discuss the procedure with you.

You will have the procedure to place the WEB device in the aneurysm under a general anaesthetic. Your anaesthetist will discuss the risks of general anaesthesia with you. It is important to tell your doctor if there is a possibility you may be pregnant.

Risks of this procedure include:

- Exposure to x-rays: Because x-rays are used during the procedure you have a very small risk of hair loss or a very rare risk of developing a tumour elsewhere in your body. Our state-of-the-art imaging equipment ensures the radiation dose is as low as possible and minimises the risk.
- Adverse reaction to contrast dye: A contrast dye is a drug which is injected into your arteries during the procedure. It allows the radiologist to see your blood vessels when an x-ray is taken. There is a small risk of an allergic reaction to the dye or damage to your kidneys.
- Bleeding: You may need to take tablets to make your blood thinner and less likely to clot in the days leading up to the procedure and for many months afterwards. These tablets can increase the risk of bleeding in other areas of your body and can irritate your stomach. It is important to tell your consultant if you have a stomach ulcer or have had one in the past.
- Stroke: Like all procedures involving the blood vessels of the brain, the placement of this type of device carries a small risk of stroke. This can range from a minor problem which gets better to a severe disability which affects movement, balance, speech or vision, or may even be a threat to life. Using current evidence, we estimate that between three and seven people in 100 will have these problems.

Any problem is usually apparent during or immediately after the procedure, or during the next few days while you are still in hospital.

- Haematoma, bruising or vessel damage: Usually a stitch or plug is placed in the femoral artery in your groin after the thin plastic tube (catheter) used to place the WEB device has been removed. Often there is bruising and sometimes bleeding in your groin. It is rarely serious but can go on for a few hours. Very occasionally there is damage to the blood vessel in your leg requiring more surgery. You will need to be monitored carefully in hospital for the first few days to control your blood pressure and blood clotting.
- Headaches: These are quite common after aneurysm treatments, probably due to clotting inside the aneurysm as part of the healing process. They may go on for some time.

Our experience of using other similar devices such as stents suggests delayed problems are unusual.

5. What will happen if I choose not to have WEB device treatment?

Your case will have been discussed by a team of neuroradiologists, neurosurgeons and neurologists. The treatment you are being offered is based on the agreement of the team as to the best course of action. It is important that you fully understand the procedure, what it means for you and any alternative treatments available. You are under no obligation to follow the advice they give you. If you are unhappy about the treatment being offered, we can arrange a full discussion with members of the team. It is entirely reasonable for you to seek a second opinion if you still have concerns.

Whatever decision you reach will not affect the standard of care you receive. We will continue to offer you the best care possible, based on the best current evidence available.

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6. Are there any alternatives?

There are several options for the treatment of an aneurysm. Which treatment is the safest depends on where it is, its size and its shape. It is likely that these other treatments will be considered as higher risk than the WEB device. Your consultant or a senior member of their team will talk through all your options with you.

Alternative treatments for cerebral aneurysms include:

- Conservative treatment: Sometimes treatment consists of clinical follow-up and Magnetic Resonance Imaging (MRI) or Computerised Tomography (CT) scans. Blood pressure is also controlled and advice given on appropriate lifestyle changes, such as giving up smoking. This option carries a risk of the aneurysm bleeding or causing other problems in the future.
- Surgical treatment: Some aneurysms can be treated surgically by placing a metal clip across the neck (narrow part) of the aneurysm. This is called clipping. The procedure is performed under a general anaesthetic and involves opening the skull to reach the aneurysm.
- Other radiological methods: More commonly, aneurysms are treated by passing a catheter (fine plastic tube) through the blood vessels and 'packing' the aneurysm from the inside with very fine metal coils (coiling). This may be difficult due to the size of the aneurysm or its neck.

7. Consent

We must by law obtain your written consent to any operation and some other procedures beforehand. Staff will explain the risks, benefits and alternatives before they ask you to sign a consent form. If you are unsure of any aspect of the treatment proposed, please do not hesitate to speak with a senior member of the staff again.

8. How do I prepare for WEB device treatment?

Take all your medications as normal.

You will be brought into hospital the day before or on the morning of your procedure. You have the procedure under a general anaesthetic so you will be unconscious or 'asleep' throughout. Your anaesthetist will talk to you about the anaesthetic, pain relief and what you can expect when having a general anaesthetic.

You need to fast for some hours before your procedure. Your anaesthetist will confirm with you what time you must stop eating and drinking. You should still take all of your medications with a sip of water at the normal times throughout this period.

A member of staff, usually the nurse caring for you, will take you to the neuroradiology department for your treatment.

9. What happens during the treatment?

The procedure is performed by a neuroradiologist in an operating theatre in the neuroradiology department. A team of neuroradiologists, radiographers, anaesthetists and nurses will monitor you closely during the procedure.

Once you have had the anaesthetic, the neuroradiologist uses x-ray camera guidance to place a thin, flexible plastic tube (catheter) into your femoral artery, the large artery in your groin. The catheter passes through the main artery in your body –the aorta – and finally into an artery supplying your brain.

A second, smaller catheter is put inside the first. This catheter goes into the aneurysm. The WEB device is then pushed through the second catheter and into the aneurysm.

This usually immediately reduces the amount of blood getting into the aneurysm. Sometimes, if the aneurysm is very large, it is necessary place more than one WEB device or additional coils to get the best results.

Once the neuroradiologists are satisfied with the result, the catheters are removed and the blood vessel in your groin is closed with a stitch or plug.

10. How long does the treatment take?

It usually takes between one and three hours.

11. What happens after the treatment?

You will spend some time in the high dependency unit (HDU) before being transferred back to your ward. This unit provides a high level of monitoring.

You can expect to stay in hospital for at least one day after the procedure, until you are walking around and feeling back to normal. You should plan to take at least a week off work and arrange to have someone to stay with when you return home. Everyone is different and recovers from this procedure at different rates.

It is common to have headaches in the days or weeks after the procedure. This is related to the aneurysm shrinking. You will be given painkillers to help.

If this headache becomes severe or you have nausea, vomiting, drowsiness or severe stiffness in your neck, go immediately to your nearest Emergency Department (A & E/casualty) for a CT scan.

12. Who can I contact with queries and concerns?

If you have any questions or concerns before your procedure, please contact:

Dr Thomas Booth, Consultant Interventional Neuroradiologist
00 44 (0)20 3299 4980

Dr Jonathan Hart, Consultant Interventional Neuroradiologist
00 44 (0)20 3299 4980

Dr Naga Kandasamy, Consultant Interventional Neuroradiologist
00 44 (0)20 3299 4980

Mr Christos Talias, Consultant Neurosurgeon
00 44 (0)20 3299 3283

Mr Daniel Walsh, Consultant Neurosurgeon
00 44 (0)20 3299 3283

For any non-urgent questions or concerns after your procedure, please contact the
Neuroradiology Nurse Specialists.
00 44 (0)20 3299 4980

13. What should I do if I cannot come to my appointment?

Tina Bonacci: 020 3299 4874 Email: tina.bonacci@nhs.net
Vicki Groombridge: 020 3299 4828 Email: vicki.groombridge@nhs.net
Appointment clerks: 020 3299 1796
kch-tr.NeuroradiologyAppointments@nhs.net

14. Where can I get more information?

Brain and Spine Foundation: www.brainandspine.org.uk/helpline/

15. References

Klisch, J., Sychra., Vojtech, S., Strasilla, C., Liebig, T., & Fiorella, D. (2011). The Woven endobridge cerebral aneurysm embolization Device (WEB II): Initial clinical experience. Neuroradiol, 53, 599-607.

Ding Y, Lewis DA, Kadirvel R, Dai D, Kallmes DF. The Woven EndoBridge: a new aneurysm occlusion device. Am J Neuroradiol. 2011, 32:607-11.

Your notes and questions

Care provided by students

We provide clinical training where our students get practical experience by treating patients. Please tell your doctor or nurse if you do not want students to be involved in your care. Your treatment will not be affected by your decision.

PALS

The Patient Advice and Liaison Service (PALS) is a service that offers support, information and assistance to patients, relatives and visitors. They can also provide help and advice if you have a concern or complaint that staff have not been able to resolve for you. The PALS office is located on the ground floor of the Hambleton Wing, near the main entrance on Bessemer Road - staff will be happy to direct you.

PALS at King's College Hospital, Denmark Hill, London SE5 9RS:

Tel: 020 3299 3601

Email: kch-tr.pals@nhs.net

You can also contact us by using our online form at www.kch.nhs.uk/contact/pals

If you would like the information in this leaflet in a different language or format, please contact PALS on 020 3299 1844.

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