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Patient Information for Consent

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What are varicose veins?

Varicose veins are enlarged and twisted veins in your leg. They are common, affecting up to 3 in 10 people.

More women than men ask for treatment, with just over 3 in 10 women being affected aged 35 to 70. Varicose veins tend to run in families and are made worse by pregnancy and if you do a lot of standing.

Your surgeon has recommended endovenous ablation (EVA), an operation to treat the varicose veins. However, it is your decision to go ahead with the operation or not.

This document will give you information about the benefits and risks to help you to make an informed decision. If you have any questions that this document does not answer, it is important that you ask your surgeon or the healthcare team.

Once all your questions have been answered and you feel ready to go ahead with the procedure, you will be asked to sign the informed consent form. This is the final step in the decision-making process. However, you can still change your mind at any point before the procedure.

How do varicose veins happen?

Veins carry blood up your leg and back to your heart. When we stand up, our blood has to be pumped 'uphill' against gravity. Our calf muscles act as a pump and the veins contain many one-way valves to help the upward flow.

Both legs contain a system of deep veins, which are buried within the muscles of your leg, and a system of superficial veins which run just underneath your skin.

Sometimes weaknesses in the walls of the superficial veins cause them to enlarge.

The valves then fail to work properly and blood can flow in the wrong direction.

The result is a build-up of pressure in the veins, which bulge out as varicose veins.

What are the benefits of surgery?

Your symptoms should improve. EVA should help prevent the symptoms and complications that varicose veins cause.

If you have EVA under a local anaesthetic, your surgeon may not be able to remove all the varicose veins (risk: 1 in 3). You may need to have further treatment involving injections or small cuts (avulsions). Avulsions can be performed on the same day as EVA or on another day.

EVA will not remove fine thread veins. If you are having surgery purely for cosmetic reasons, you need to ask your surgeon if EVA will help. This will give you realistic expectations about the final result.



Varicose veins

Are there any alternatives to EVA?

Support stockings can often help the symptoms caused by varicose veins and reduce the risk of complications that varicose veins can cause.

Foam sclerotherapy is a similar technique that uses an injection of chemicals to treat the veins.

Varicose veins surgery involves disconnecting and removing the superficial veins from the deep veins, using a cut on your groin or the back of your knee.

For the following treatments, research is still being carried out and we do not yet know how effective they are in the long term. They are only available only in a few specialist centres or as part of a clinical trial.

- Cyanoacrylate glue occlusion, where a substance is injected into the veins to close them.
- High-intensity focused ultrasound (HIFU), where heat is used to close the vein.

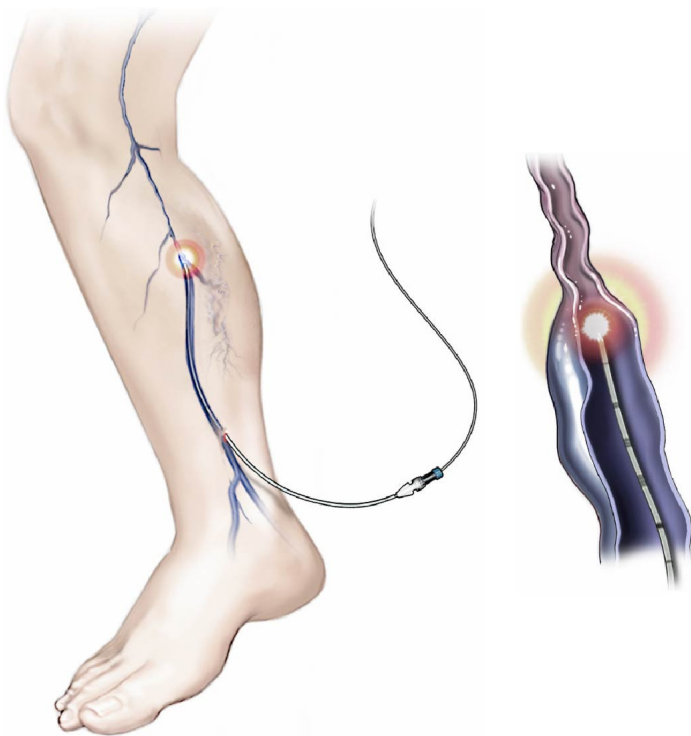
Your surgeon will be able to discuss the options with you.

What will happen if I decide not to have the operation?

The varicose veins are unlikely to get better without treatment. The following problems may arise.

- Unsightly appearance.
- Itching, aching and pain.
- Pigmentation (dark discolouration) of the skin around your ankle.
- Infection in your skin (cellulitis).
- Inflammation (phlebitis).
- Ulcers (or sores), which are unusual but can be caused by some types of varicose veins.
- Bleeding from varicose veins.

Your surgeon may be able to recommend an alternative treatment for you.



An endovenous ablation

What does the operation involve?

Before the operation, your surgeon may need to mark the veins on your leg. You may have a Doppler ultrasound (or Duplex scan) of your legs.

The healthcare team will carry out a number of checks to make sure you have the operation you came in for and on the correct side. You can help by confirming to your surgeon and the healthcare team your name and the operation you are having. The operation is performed under a general anaesthetic, local anaesthetic or spinal anaesthetic. Your surgeon or anaesthetist will discuss the options with you. You may be given antibiotics during the operation to reduce the risk of infection. The operation usually takes about 45 minutes.

The two techniques used are laser ablation or radio-frequency ablation.

Laser ablation

Your surgeon will insert a catheter (tube) into the great or small saphenous vein. The great saphenous vein runs from the inside of your ankle up to your groin, and the small saphenous vein runs up the back of your leg to the bend in your knee. Your surgeon will use an ultrasound scan to guide them as they insert the catheter into the vein. They will pass a laser fibre through the catheter and up to the point where the saphenous and deep veins meet. They will inject a special liquid to numb the area and squash the walls of the vein onto the catheter. Your surgeon will slowly remove the catheter and laser fibre while laser energy pulses are sent down the fibre. The laser energy causes the saphenous vein to close.

Radio-frequency ablation

Your surgeon will insert a radio-frequency ablation catheter into the great or small saphenous vein. They will use an ultrasound scan to guide them as they move the catheter to the point where the saphenous and deep veins meet. They will inject a special liquid to numb the area and squash the walls of the vein onto the catheter.

The catheter has an electrode that heats the walls of the vein using radio-frequency energy. Your surgeon will slowly remove the catheter while radio-frequency energy is sent down the electrode. The radio-frequency energy causes the saphenous vein to close.

Your surgeon may need to remove other varicose veins through small cuts, or close some veins using injections.

If you have EVA under a local anaesthetic, your surgeon may not be able to remove all the varicose veins during the operation.

Your surgeon will remove the catheter and cover any cuts with a dressing. You may be given a compression bandage or stocking to wear.

What should I do about my medication?

Make sure your healthcare team knows about all the medication you take and follow their advice. This includes all blood-thinning medication as well as herbal and complementary remedies, dietary supplements, and medication you can buy over the counter.

What can I do to help make the operation a success?

If you smoke, stopping smoking now may reduce your risk of developing complications and will improve your long-term health.

Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight.

Regular exercise should help to prepare you for the operation, help you to recover and improve your long-term health. Before you start exercising, ask the healthcare team or your GP for advice.

If you are on the oral contraceptive pill or hormone replacement therapy, you should consider stopping the tablets 4 weeks before the operation. This is to reduce the risk of a deep vein thrombosis (DVT). If relevant, you will need to use alternative contraception. Your surgeon can discuss the options with you. If you do not want to stop the tablets then you may need to have injections or tablets for up to a week after surgery, in order to thin the blood and reduce the chance of a DVT.

You can reduce your risk of infection in a surgical wound.

- In the week before the operation, do not shave or wax the area where a cut is likely to be made.
- Try to have a bath or shower either the day before or on the day of the operation.

- Keep warm around the time of the operation. Let the healthcare team know if you feel cold.
- If you are diabetic, keep your blood sugar levels under control around the time of your procedure.

If you have not had the coronavirus (Covid-19) vaccine, you may be at an increased risk of serious illness related to Covid-19 while you recover. Speak to your doctor or healthcare team if you would like to have the vaccine.

What complications can happen?

The healthcare team will try to reduce the risk of complications.

Any numbers which relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you.

Some complications can be serious and can even cause death.

You should ask your doctor if there is anything you do not understand.

Your anaesthetist will be able to discuss with you the possible complications of having an anaesthetic.

General complications of any operation

- Bleeding during or after the operation. It is common for your leg to be bruised. Rarely, you will need a blood transfusion or another operation. You may also feel a lump under your skin. This is caused by bruising and settles within a few weeks.
- Infection of the surgical site (wound) (risk: less than 1 in 100). It is usually safe to shower after 2 days but you should check with the healthcare team. Let the healthcare team know if you get a high temperature, notice pus in your wound, or if your wound becomes red, sore or painful. An infection usually settles with antibiotics but you may need special dressings and your wound may take some time to heal. In some cases another operation might be needed. Do not take antibiotics unless you are told you need them.
- Allergic reaction to the equipment, materials or medication. The healthcare team is trained to detect and treat any reactions that might happen. Let your doctor know if you have any allergies or if you have reacted to any medication or tests in the past.

- Blood clot in your leg (deep-vein thrombosis – DVT) (risk: 1 in 100). This can cause pain, swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. The healthcare team will assess your risk. They will encourage you to get out of bed soon after the operation and may give you injections, medication, or special stockings to wear. Let the healthcare team know straight away if you think you might have a DVT. If you have had a deep-vein thrombosis in one of your legs, let your surgeon know. This sometimes means that surgery should not be performed on that leg.
- Blood clot in your lung (pulmonary embolus), if a blood clot moves through your bloodstream to your lungs. Let the healthcare team know straight away if you become short of breath, feel pain in your chest or upper back, or if you cough up blood. If you are at home, call an ambulance or go immediately to your nearest Emergency department.
- Chest infection. If you have the operation within 6 weeks of catching Covid-19, your risk of a chest infection is increased (see the 'Covid-19' section for more information).

Specific complications of this operation

- Superficial thrombophlebitis, where one of the superficial veins becomes inflamed (risk: up to 3 in 10). This can cause pain, which is usually easily controlled with simple painkillers such as paracetamol.
- Developing a lump under a wound caused by blood collecting (haematoma) (risk: 3 in 100).
- Numbness or a tingling sensation along the line of the vein that has been treated (risk: up to 2 in 10). This usually improves after a few weeks.
- Burns to your skin (risk: less than 1 in 100). This is unusual as your surgeon uses fluid to protect your skin.
- Ablation device cracking or breaking (risk: less than 1 in 1,000). Your surgeon will need to make a cut on your leg to remove the broken device.
- Damage to nerves (risk: less than 1 in 1,000). If the nerve to your foot is damaged (peroneal nerve), you may have difficulty walking. You may also experience numbness or burning in the skin over your shin.

- Damage to arteries (risk: less than 1 in 1,000). You may need another operation.
- Heat-induced thrombosis causing a DVT (risk: 1 to 5 in 100). This can cause pain, swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. Let the healthcare team know straightaway if you think you might have a DVT.
- Continued varicose veins. It is not usually possible to remove every single varicose vein.

Covid-19

A recent Covid-19 infection increases your risk of lung complications or death if you have an operation under general anaesthetic. This risk reduces the longer it is since the infection. After 7 weeks the risk is no higher than someone who has not had Covid-19. However, if you still have symptoms the risk remains high. The risk also depends on your age, overall health and the type of surgery you are having.

You must follow instructions to self-isolate and take a Covid-19 test before your operation. If you have had Covid-19 up to 7 weeks before the operation you should discuss the risks and benefits of delaying it with your surgeon.

Consequences of this procedure

- Pain. The healthcare team will give you medication to control the pain and it is important that you take it as you are told so you can move about as advised.
- Unsightly scarring of your skin. The scarring will be red at first and will gradually fade to a fine white line.

How soon will I recover?

In hospital

After the operation you will be transferred to the recovery area. You should be able to go home the same day. If you do go home the same day, a responsible adult should take you home in a car or taxi and stay with you for at least 24 hours. Be near a telephone in case of an emergency.

If you are worried about anything, in hospital or at home, contact the healthcare team. They should be able to reassure you or identify and treat any complications.

Returning to normal activities

If you had sedation or a general anaesthetic:

- Do not drive, operate machinery or do any potentially dangerous activities (this includes cooking) for at least 24 hours and not until you have fully recovered feeling, movement and co-ordination.
- Do not sign legal documents or drink alcohol for at least 24 hours.

To reduce the risk of a blood clot, make sure you carefully follow the instructions of the healthcare team if you have been given medication or need to wear special stockings.

When you go home you may have bandages on your legs. When the bandages are removed, you may need to wear support stockings. The healthcare team will discuss this with you.

Once at home, be as active as possible. When you are resting, keep your legs raised on a stool.

Try to return to normal activities as soon as possible, unless you are told otherwise.

Ask your healthcare team if you need to do a Covid-19 test when you get home.

Regular exercise should help you to return to normal activities as soon as possible. Before you start exercising, ask the healthcare team or your GP for advice.

Do not drive while you are taking painkillers that make you drowsy. Do not drive until you can control your vehicle, including in an emergency, and always check your insurance policy and with the healthcare team.

The future

Most people make a full recovery. Any aching, swelling or discomfort caused by the operation should gradually improve over the first 6 weeks.

If surgery was performed for ulcers, these should gradually heal.

Skin pigmentation will stay but is less likely to get worse.

You will notice that the varicose veins have gone as soon as the support stockings or bandages are removed.

Varicose veins can come back, either in the same place or in other parts of your leg (risk: 3 in 10 in 5 years).

Summary

Varicose veins are a common problem and can lead to complications if left untreated. Support stockings can help to control symptoms but will not remove the varicose veins.

Surgery is usually safe and effective but complications can happen. You need to know about them to help you to make an informed decision about surgery. Knowing about them will also help to detect and treat any problems early.

Keep this information document. Use it to help you if you need to talk to the healthcare team.

Some information, such as risk and complication statistics, is taken from global studies and/or databases. Please ask your surgeon or doctor for more information about the risks that are specific to you.

This document is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

Acknowledgements

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