

Patient information

Insertion/ Removal of Inferior Vena Cava IVC Filter

Interventional Radiology Department

Your doctor has advised you to have an IVC filter

This leaflet tells you about having an inferior vena cava (IVC) filter inserted. It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such discussions. If you have any questions about the procedure please ask the doctor who has referred you or the department which is going to perform it.

What is an IVC filter?

An IVC filter is a small metal device usually placed in a large vein called the inferior vena cava (IVC) which drains blood from the legs and lower part of the abdomen. The IVC filter allows blood to flow through normally but traps any large blood clots, stopping them from getting to your lungs.

What are the benefits of having an IVC filter?

Benefits

If you are unable to receive blood thinning medications, if these medications have not worked for you in the past, or you are inactive because of a surgery or trauma an IVC filter may be the only method to prevent clots that form in the lower part of your body from traveling to your lungs.

Both the placement and retrieval of an IVC filter is a minimally invasive procedure which requires a very short recovery period (approximately two hours).

If you receive a retrievable filter it can be easily removed or left in place and serve as a permanent filter.

IVC filters can be effective in preventing pulmonary emboli (PE) which are blood clots which move through the blood vessels to the lungs.

What are the risks of having an IVC Filter

IVC filter insertion and removal are very safe procedures, but there are some risks.

There may occasionally be a small bruise, called a haematoma, around the site where the needle has been inserted.

Occasionally, patients do have lumps in the lung despite the presence of an IVC filter.

Although IVC filters provide protection from clots reaching the lungs they increase the risk of clots forming in the leg veins.

Very rarely, some damage can be caused to the vein by the catheter.

There is a possibility that over time the filter will block the inferior vena cava, usually this does not cause symptoms but can occasionally lead to swelling of the legs.

Despite these possible complications, the procedures are normally very safe, and carried out with no significant side effects at all.

If you need a magnetic resonance (MRI) scan in the future, you should tell the person doing the scan that you have a filter.

Are there any alternative treatments available?

The usual treatment for DVT and PE is drug treatment to thin the blood. This is usually with warfarin.

In a few patients, warfarin does not prevent further PEs, in others thinning the blood is too risky.

When this happens, patients are considered for treatment by inserting an IVC filter.

What will happen if I decide not to have treatment?

It is your absolute right to refuse any treatment and this will not affect your medical management. If you decide not to have an IVC filter then we will inform the clinical team that referred you and they will discuss alternative therapies.

What sort of anaesthetic will be given to me?

You will be given a local anaesthetic.

Local anaesthetic is drug-induced numbness: it may be provided by an anaesthetist, surgeon or other healthcare professional, depending on the technique used. Like all medicines, local anaesthetics may sometimes cause side effects, as well as the effects that are needed. You may experience dizziness, blurred vision, drowsiness and occasionally loss of consciousness.

Serious side effects are rare, and include fits, low blood pressure, slowed breathing and changes in heartbeat, which may be life-threatening. If you have any concerns about any of these effects, you should discuss them with your doctor

The risks of anaesthetic and surgery are lower for those who are undergoing minor surgery, and who are young, fit, active and well. For more information, please ask for a copy of the Royal College of Anaesthetists Patient Information "You and Your Anaesthetic".

You will be given an opportunity to discuss anaesthetic options and risks before your procedure.

If you are worried about any of these risks, please speak to your Consultant or a member of their team.

Getting ready for your operation

- You will usually be seen in the pre-operative clinic before you are admitted to hospital.
- Here you will have blood tests, and sometimes a heart trace or a chest X-ray. You may be assessed to see if you are fit for the anaesthetic.
- The staff will ask routine questions about your health, the medicine you take at the moment and any allergies you may have.
- You will be given instructions on eating and drinking before your procedure.
- You may be able to discuss the procedure with a doctor. You will be asked to sign a consent form to say that you understand the procedure, and what the operation involves.
- Please leave all cash and valuables at home. If you need to bring valuables into hospital, these can be sent to General Office for safekeeping. General Office is open between 08.30 and 4.30 Monday to Friday. Therefore, if you are discharged outside these times we will not be able to return your property until General Office is open. The Trust does not accept responsibility for items not handed in for safekeeping.

The day of your procedure

Are you required to make any special preparations?

Insertion of an IVC filter is usually carried out as a day case procedure under local anaesthetic.

You may be asked **not to eat for four hours before the procedure**, although you may still drink clear fluids such as water.

If you have any allergies or have previously had a reaction to the dye (contrast agent), you **must** tell the radiology staff before you have the test.

Who will you see?

A specially trained team led by an Interventional radiologist within the Interventional Radiology Theatres. Interventional radiologists have special expertise in reading the images and using imaging to guide catheters and wires to aid diagnosis and treatment.

Where will the procedure take place?

In interventional theatre; this is usually located within the Interventional Radiology Theatres located within the Main Theatre complex. This is similar to an operating theatre into which specialised X-ray equipment has been installed.

What happens during the insertion?

The interventional radiologist will explain the procedure and ask you to sign a consent form. Please feel free to ask any questions you may have and, remember that even at this stage, you can decide against going ahead with the procedure if you so wish.

You will be asked to get undressed and put on a hospital gown.

A small cannula (thin tube) may be placed into a vein in your arm so a sedative or painkillers can be given if required.

You will lie on the X-ray table, generally flat on your back. You will have monitoring devices attached to your chest and finger and may be given oxygen.

The procedure is performed under sterile conditions and the interventional radiologist and radiology nurse will wear sterile gowns and gloves to carry out the procedure.

The skin near the point of insertion, usually the neck but occasionally the groin, will be swabbed with antiseptic and you will be covered with sterile drapes. The skin and deeper tissues over the vein will be numbed with local anaesthetic.

A fine tube (catheter) will be inserted and guided, using the X-ray equipment into the correct position.

Small amounts of dye (contrast agent) are used to check the position of the catheter. The filter is passed through the catheter and placed in the vein

Removal of an IVC filter

It is possible to remove IVC filters if they are no longer required.

If it has been decided that your filter is to be removed you will be given a further appointment for it to be removed (usually this is after planned surgery is finished and you have restarted anticoagulant drugs).

The preparation, location of procedure, timing and arrangements are the same as for insertion.

The procedure is similar to insertion except it can only be done from the neck. It can take a little longer. Sometimes, for technical reasons (either the filter has become stuck to the inferior vena cava wall or is full of clotted blood) it is not possible to remove it.

If it is not possible to remove it then it is usually left in place as open surgery is difficult and can be risky. Filters that can't be removed usually don't give symptoms but occasionally can lead to swollen legs or deep vein thrombosis.

What should I expect after my procedure?

- After your procedure you will be kept in the theatre recovery area until you are fit for discharge usually two hours or before being transferred to the ward.
- A nurse will check your pulse, blood pressure, puncture site and breathing rate regularly.

Discharge Information

- You should not drive home yourself but make arrangements for a responsible adult to collect you from Interventional Theatres.
- The rest of the day should be spent resting.

- You should have a responsible adult with you overnight.
- Easy access to a telephone is essential.
- A small amount of bruising around puncture site is normal.
- If you notice any bleeding or swelling around the site where the tube was placed into the neck or groin lie down and press firmly on the area. If this has little or no effect you must return immediately to the A&E department.

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

If you have any queries or problems between 9.00am -5.00 pm

Monday – Friday please ring us on

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