



Vena cava filter

This leaflet tells you about the procedure for inserting a vena cava filter. It explains what will happen before, during and after the procedure and what the possible risks are.

What is a vena cava filter?

A vena cava filter is a small metallic device that is inserted into the main vein (the vena cava) carrying blood back to the heart from the abdomen, pelvis, and legs. This filter is designed to trap blood clots and prevent them reaching the lungs, heart or brain, where they could cause serious problems.

Patients who have previously been treated for a deep vein thrombosis (DVT or blood clot) may be considered at risk of developing further clots that could affect other organs, such as the lungs (pulmonary embolus). While this would normally be treated with anticoagulant drugs (drugs which thin the blood and help prevent clots forming), not all patients are suited to this treatment. In these cases, a vena cava filter may be fitted instead.

What will happen before the procedure?

Most patients having this procedure will be in hospital having treatment for complications relating to blood clots. **If you are not already in hospital, you will be admitted to a ward.** You will be asked not to have anything to eat or drink before the procedure. You will need to change into a hospital gown.

What will happen during the procedure?

The radiologist (specialist X-ray doctor), who will carry out the procedure, will explain what they are going to do and you will have the opportunity to ask any questions you may have. A nurse will look after you throughout the procedure. There will also be a radiographer present, who will operate the X-ray equipment.

You will be asked to lie on your back on the X-ray couch. You will have a monitoring device attached to your chest and finger and your blood pressure will be checked regularly during the procedure. It is important that everything remains sterile so your body will be draped with sterile towels. The radiologist will wear a sterile gown and gloves. You will be awake throughout the procedure.

The filter will be inserted either through a vein in your groin or your neck. The radiologist will decide which is most suitable in your case. This area will be cleaned and then numbed with local anaesthetic. You may feel a stinging sensation as this is injected, but, once the area is numb, you should not feel any pain. A guide wire will be passed into the vein and moved to the site where the filter will be placed. The X-ray machine will be used to guide this and will move close to your chest. A catheter (fine plastic tube) will be passed over this wire, the wire will be removed and the metal filter will be moved into position through the catheter. The catheter will then be removed and the radiologist will press firmly over the area it was inserted to prevent any bleeding.

The procedure will usually take around 30 minutes, but this can vary.

What happens afterwards?

You will be taken back to the ward on a trolley. You will need to lie flat for around 2 hours. Nurses on the ward will check your pulse and blood pressure regularly. They will look at the skin entry point to make sure that there is no bleeding from it. You will normally stay in bed for a few hours, until you have recovered. You may need to stay in hospital overnight if you have been admitted for the procedure. The decision to send you home will be taken by the medical team looking after you and will depend on what other treatment you are receiving.

Vena cava filter (continued)

Are there any risks or complications?

The insertion of a vena cava filter is intended to prevent much more serious complications occurring as a result of a blood clot.

However, as with any medical procedure, some complications can occur, although these are rare. You may develop a small bruise where the catheter was inserted. If this develops into a larger bruise, there is a risk that this could become infected. This would then need treating with antibiotics.

All X-ray procedures involve exposure to ionising radiation in varying amounts. The use of radiation is strictly controlled and is kept to the minimum required. For this examination, the extra radiation is equivalent to what you would receive from the atmosphere (background radiation) over a period of around 6 months.

During the procedure, a contrast agent (X-ray 'dye') may be injected through the catheter to show your blood vessels more clearly. There is a small risk of a reaction to this contrast. This could include a skin rash or nausea (feeling sick), or a more serious allergic reaction, which may require medical treatment.

As with any procedure, unforeseen complications can occur, although this is rare. Despite these risks, it is important to remember that the risk to your health of not having the procedure could be much greater.

Who should I contact if I have any questions?

If you have any questions about the information in this leaflet or about the procedure itself, please ask the nurse that is looking after you. If you are an outpatient, you can contact us on the number given on your appointment letter.

We will do our best to make your visit to Medical Imaging as pleasant as possible.