

Radiology Department

Inserting or removing an inferior vena cava filter

Information for patients



This information leaflet gives you further information that will add to the discussion you have with your doctor about the procedure called Inferior Vena Cava Filter Insertion (or removal). It is important that you have sufficient information before you sign the consent form.

What is an inferior vena cava filter?

The inferior vena cava is the large vein in the abdomen that takes the blood from your lower body back to the heart. Sometimes small blood clots can develop and sit in blood vessels in your legs or pelvis. These blood clots are a critical risk to you because a bit of the blood clot may break off (an embolus) and travel to blood vessels in the lungs and cause potential life-threatening breathlessness.

Once the doctors recognise that you have a problematic clot they will either start you on blood thinning medication and / or ask the radiology doctor to put a filter into your inferior vena cava to catch any future life-threatening embolus. The filter itself looks rather like the spokes of an umbrella and is made of stainless steel. The shape of the filter allows it to catch or break up any possible clot.

Sometimes your doctors decide to leave the filter in for life. Sometimes your doctor will ask the radiology doctor to remove the filter when they feel the danger to you from a pulmonary embolus is over. Occasionally the doctors are unable to remove the filter, but they are designed for temporary or permanent placement. If the filter remains in place for life you will just need an annual abdominal x-ray to confirm it is still in the correct position.

What are the risks associated with this procedure?

This is a safe procedure and complications are rare. Possible complications include:

- Bruising in the neck or groin
- Clots either around the filter or travelling to the lungs despite placement of the filter
- Vessel damage to the vena cava
- Infection

Alternatives

The main reason to place the filter is when conventional treatment for blood clots with blood-thinning medication is not possible due to a high-risk of bleeding elsewhere in the body or when there have been clots on the lungs despite blood thinning medication.

What happens before the procedure?

You will change into a hospital gown and a cannula will be placed in one of the blood vessels in your arm. You will not be allowed to eat or drink anything for 4 hours before the procedure. You may be started on a blood thinning medication called warfarin. A nurse will be with you and can give you sedation to help you to relax if you feel anxious about the procedure.

What happens during filter insertion?

This is a sterile procedure done in the X-ray department by radiology doctors. You will be asked to lie flat on the X-ray table. The filter can be put in place through the blood vessel at the top of your leg or through the vessel on the right of your neck. The area is painted with antiseptic, you are draped in sterile towelling, and local anaesthetic is injected around the entry site – this may sting. A small tube is then placed into the blood vessel through which the filter is to be placed. A clear liquid called contrast media, which shows up on X-ray, is injected through the tube into your blood vessels, while a continuous X-ray is being taken. This may cause a brief hot sensation within your body, which may feel slightly odd but it is not dangerous. The injection may also make you feel as though you have passed urine, but this is not the case.

Once the x-ray pictures are complete and the vena cava is free of clot to allow safe filter insertion, then the filter is placed in this position through a further small tube. Then the tube is removed and the filter left in place.

How long does the procedure take?

The procedure takes on average between 30-45 minutes to perform

Removing a filter

The filter can be removed from the neck vessel in the same manner described above. Although the filter may have been placed from the groin, it can only be removed from the neck. The chances of successfully removing the filter are highest within the first 2-4 weeks after placement, and reduce the longer the filter is left in place. Removal may not be possible even shortly after the filter has been inserted.

After the procedure

You will return to your ward where the nursing staff will monitor your blood pressure, heart rate and entry site. You may eat and drink after an hour or so. You should be able to get up and about after 2-3 hours (if you were up and about before hand).

Remember – your doctor has recommended this procedure because s(he) believes that the benefits to you outweigh the risks.

What to do if the site bleeds

Someone needs to press on the site for a few minutes. This is not dangerous.

How to contact us

If you have any questions or queries please contact us on the number at the top of your appointment letter.

Further information

www.rcr.ac.uk – Royal College of Radiologists

www.cirse.org.uk – Cardiovascular and Interventional Radiology Society of Europe

www.bsir.org – British Society of Interventional Radiology

If you need an interpreter or need a document in another language, large print, Braille or audio version, please call **01865 221473** or email **PALSJR@orh.nhs.uk**

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