

# Inferior vena cava (IVC) filter placement

## Radiology Department Patient Information Leaflet

### Introduction

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) that 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 is it used for?**

Blood clots (thrombosis) sometimes form in the veins of the legs and pelvis. They are known as a deep vein thrombosis (DVT). The clot can sometimes break free and enter with the blood flow into the lungs and make you very sick. This is called pulmonary embolism (PE). They can be fatal. An IVC filter prevents a large PE by trapping a clot before it reaches the lungs.

## **Who should have an IVC filter?**

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, and in others, thinning the blood is too risky. When this happens, patients are considered for treatment by inserting an IVC filter.

Very occasionally, a patient is advised to have an IVC filter inserted even though they do not have a DVT or PE at that time. Your doctors will explain the reasons why they think you should have an IVC filter.

## **Are there any risks involved?**

IVC filter insertion is a very safe procedure. Serious complications are very rare. There may be a small bruise at the needle site, and very rarely, there may be damage to the vein or blockage of the inferior vena cava. Extremely rarely, the filter can migrate, which may require a further procedure to reposition the IVC filter.

Sometimes, a filter that we aim to remove several months later may be difficult to remove and may need to remain in place permanently. If you need a magnetic resonance imaging (MRI) scan in the future, you should tell the person doing the scan that you have a filter.

## **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 procedure.

## Who will you see?

You will be seen by a specially trained team led by an interventional radiologist within the radiology department. 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?

The procedure will take place in the angiography suite or theatre. This is usually located within the radiology department. This is similar to an operating theatre, into which specialised X-ray equipment has been installed.

## What happens during the procedure?

The interventional radiologist will explain the procedure and ask you to sign a consent form. Please feel free to ask any questions that 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. You will lie on the X-ray table, generally flat on your back. You may have monitoring devices attached to your chest and finger, and you 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 or 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 tube to the exact site and released. Small hooks grip the wall of the vein and stop it moving away.

## How long will it take?

Every patient is different, and it is not always easy to predict. However, expect to be in the radiology department for about an hour.

## What happens afterwards?

You will be taken back to your ward. Nursing staff will carry out routine observations including your pulse and blood pressure, and they will also check the treatment site. You will generally stay in bed for a couple of hours, and then you will be able to go home. Take it easy for the rest of the day, but you can resume normal activities the next day.

## How long will the filter stay in?

Modern IVC filters can be left in permanently. However, it is becoming more common for these devices to be a temporary solution and removed when they are no longer required. This is often at three months, but may occasionally be longer.

## X-ray precautions

The procedure uses X-rays, and these use a small amount of radiation which may add slightly to the normal risk of cancer. Your doctor thinks that the benefit of the examination outweighs the risks. However, if you are concerned about these possible risks, please discuss these with this doctor.

For more information, visit:

<https://www.gov.uk/government/publications/medical-radiation-patient-doses/patient-dose-information-guidance>

**If you are a female patient, you must tell us if you are or might be pregnant before you attend for your scan.**

## Finally

Some of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure.

## Contact

The British Society of Interventional Radiology

[www.bsir.org](http://www.bsir.org)

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If you have any questions, or if there is anything you do not understand about this leaflet, please contact:

The Radiology Department

Russells Hall Hospital switchboard number: 01384 456111

**This leaflet can be downloaded or printed from:**

<http://dgft.nhs.uk/services-and-wards/radiology>

If you have any feedback on this patient information leaflet, please email [dgft.patient.information@nhs.net](mailto:dgft.patient.information@nhs.net)

**This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.**

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