

## Inferior Vena Cava Filters

### Consumer Information

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### What is an Inferior Vena Cava Filter?

Inferior Vena Cava Filters (IVCF) are mechanical devices that are designed to stop blood clots moving from the legs or pelvis into the heart or lungs. Small clots do not usually result in any problems. Larger blood clots travelling to the lung can cause chest pain, difficulty breathing, heart attack and long term breathing and heart problems.

The trapped blood clots remain in the filter until the body is able to dissolve them. However, because the device only stops clots moving to the lung or heart and does not treat the clots in the legs or pelvis, or already existing clots in the lungs, you would usually be on blood thinning medication as well as having the filter. Blood thinning medication is used to prevent blood clot formation in people at risk of developing blood clots.

### How do I prepare for an Inferior Vena Cava Filter?

IVCF is a medical procedure performed in a hospital or private radiology practice. Your preparation will vary between different practitioners and hospitals or facilities. You will usually be asked to have only a light breakfast or to fast, that is to go without food or liquid, prior to the procedure. Blood tests are sometimes required to see if you have any kidney or blood related problems.

It is more common that you will already be in hospital because of a blood clot (deep venous (vein) thrombosis) or a clot to the lung (pulmonary embolus). You do not usually need to stop any of your blood thinning medications (anticoagulants) before having the procedure.

### What happens during an Inferior Vena Cava Filter?

IVCF will be performed in the angiography suite or theatre of a hospital or private radiology practice. This is a room specifically set up for this type of procedure. An X-ray machine will take images or pictures showing the area where the ICVF is being inserted, and is then used to guide the procedure. There is also monitoring equipment, trained medical staff and medications to ensure the procedure is performed comfortably and safely. You may be anxious and the staff are well trained and expecting this. You may receive sedative medication at this stage, usually through a drip (a thin plastic tube)

inserted into a vein, to make you a little drowsy and treat any feelings of anxiety.

The procedure of IVCF is relatively quick and simple to perform. The vein in either the groin or neck is used to place the filter into the venous system. The overlying skin is injected with local anaesthetic. This stings for a few seconds then the area goes numb. You should not feel anything for the rest of the procedure as you do not have feeling within your veins.

A catheter (a thin plastic tube) is then guided to the vein (inferior vena cava) where the filter will be placed. You will be given an injection of a liquid dye or contrast medium that will enable the vein to show up clearly on the X-ray images (see [Iodine-containing contrast medium \(ICCM\)](#)).

A picture is then taken of this vein with the X-ray machine to make sure the filter is placed accurately, that the filter and vein size are compatible and that there is no clot at the actual site where the filter is to be placed. The filter is then sited at this position and an X-ray is taken to confirm its position.

The catheter is then removed from the groin or neck. A nurse will put light pressure on the skin site for 2-5 minutes to stop the bleeding. If you receive the procedure in a hospital, you will then be returned to the ward.

### Are there any after effects of an Inferior Vena Cava Filter?

In most cases the IVCF procedure is quick and there are no ill effects. You should be back to how you were prior to the procedure within 30 minutes to 2 hours (depending on whether or not sedation or tranquilizer medication was used during the procedure).

Occasionally you may have some bleeding at the skin site where the procedure was performed. This can be treated with further pressing on the site.

### How long does an Inferior Vena Cava Filter take?

The time taken for the procedure is between 5 and 30 minutes.

### What are the risks of an Inferior Vena Cava Filter?

IVCFs are a relatively safe procedure.

Allergic reactions to the iodine contrast medium are uncommon. (see [Iodine-containing contrast medium \(ICCM\)](#)).

Insertion of the filter from the neck can result in a collapsed lung (pneumothorax) that may require a chest tube and longer hospitalisation. However, with proper X-ray image guidance, this is uncommon (less than 1%).

Other risks include, movement of the filter (0-18%), fracturing or breaking up of the filter (2-10%), infection of the filter (very rare) and parts of the filter penetrating through the wall of the vein (inferior vena cava) (0-41%). Filters may result in blockage of the vein (inferior vena cava) (2-30%) either as a result of the filter having been in there for a very long time or if the filter captures very big clots. Most of the time you would not notice this. Occasionally this may result in higher rates of blood clots in the legs, varicose veins, leg pain or ulceration (a slow healing sore on the skin) (2-15%). These risks continue to exist while the filter is in place.

Certain patients may only need to have an IVCF for a specific period while the risk of blood clots is high. Most of the modern IVCFs can be removed when there is little to no risk of blood clots. This usually occurs within a 1 month to 1 year period. This will be discussed at the time with the radiologist (specialist doctor) who performs the IVCF.

Patients with filters are advised to seek urgent medical attention if they experience severe abdominal pain or shortness of breath.

### What are the benefits of an Inferior Vena Cava Filter?

The benefit of IVCFs is the prevention of blood clots going to the lungs and heart. Blood clots may result in chest pain, difficulty breathing, heart attack and long term breathing and heart problems.

### Who does an Inferior Vena Cava Filter?

This is usually performed by a [radiologist](#) (a specialist doctor) trained to do these procedures, and known as an interventional radiologist.

### Where is an Inferior Vena Cava Filter done?

The procedure will be performed in an angiography suite in a registered hospital or private radiology practice. This is a room specifically set up for this type of procedure with an X-ray machine which shows the area where the IVCF is being inserted. There is also monitoring equipment, trained medical staff and medications to ensure the procedure is performed comfortably and safely.

### When can I expect the results of my Inferior Vena Cava Filter?

The success of the procedure is very high (greater than 95%). This will be discussed with you at the end of the procedure.

#### Please note:

This information is of a general nature only and is not intended as a substitute for medical advice. It is designed to support, not replace, the relationship that exists between a patient and his/her doctor. It is recommended that any specific questions regarding your procedure be discussed with your family doctor or medical specialist

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