



# Embolisation for trauma

This information sheet explains the procedure of embolisation in trauma. It describes what the procedure involves, the risks, and what to expect when you come to the Interventional Radiology department for treatment.

This information may be being given to you after an embolisation procedure has happened. This is because the procedure was required as an emergency and it was not possible to delay the procedure to give this to you in advance.

Please note that this leaflet is not meant to replace discussion between you and your doctor. You should raise any questions you may have with the doctor who has referred you for, or is performing, the procedure.

## What is an embolisation?

Embolisation is an interventional radiology (IR) procedure used to treat bleeding resulting from trauma. It consists of an intentional and controlled blockage of bleeding blood vessels under real-time X-ray guidance. The aim is to stop the bleeding in the least invasive way, avoid surgery if possible and improve the recovery.

The most common procedures include management of bleeding from abdominal organs (spleen, kidneys and liver), pelvic blood vessels and bleeding from limb injury.

## Why do I need an embolisation?

Following admission to the hospital, you will usually undergo imaging, typically a computed tomography (CT) with dye (contrast). Embolisation is done where this scan shows an area that is continuing to bleed or an abnormal blood vessel that is likely to bleed further. The decision whether to proceed with embolisation or surgery is made after discussion between the members of the trauma team, which includes doctors from different specialities. Sometimes both procedures are required.

## How do I prepare for an embolisation?

Depending on your injury, the doctors looking after you will inform you of possible treatment options and will advise the most beneficial management. They will explain what the procedure entails to you, along with possible complications and additional investigations and procedures you may subsequently require, and alternative treatment options. You will be able to ask questions. If you decide to undergo embolisation, you will then need to sign the consent form.

Prior to embolisation, you need to inform the doctors about:

- current and previous health conditions, surgeries or endovascular interventions, any implanted medical devices, tubes or mesh in your vessels or groins
- current medications
- allergies, especially allergy to iodine-based contrast agents, that are used during the procedure.

Before the procedure, the doctor will take blood samples for standard tests and to assess your blood group in case a blood transfusion is required. If you do not wish to have a blood transfusion, please inform your doctor.

If you need an emergency embolisation, you should not eat or drink.

A doctor will insert a Foley catheter (a silicon or plastic tube) in your bladder if your condition is very severe or if you sustained a fracture of the pelvis. This is because a full bladder will prevent doctors from seeing the source of bleeding.



### How is embolisation performed?

After cleaning the skin and putting on drapes to keep the area sterile, the IR will do an ultrasound (USS) of your groin or wrist and pass a needle into the artery there under local anaesthetic. You may be awake for the procedure and this is tolerated well by patients.

They will then insert a small tube to work through and use various wires and other specialist kit under X-ray guidance to navigate to the area of bleeding. Contrast will be injected to make sure the correct vessel is identified. The bleeding vessel will then be blocked.

There are different ways of doing this and the choice is determined by the type of injury. Please ask your doctor for more information on the method of embolisation used.

After completion of embolisation, the interventional radiologist will remove the tube from the artery. They may use a device to assist with closing the vessel or press on the artery for at least 10 minutes. Following the procedure, you will need to lie flat if the vessel in the groin was used.

### Who performs the procedure and where?

You will be under the care of experienced, appropriately trained and skilled Interventional Radiologists, nurses and radiographers, who make the team that will perform an embolisation.

Embolisation is usually performed in a specially built operating theatre that allows both interventional radiology and surgical procedures to be performed.

### What are the potential risks/complications of embolisation

Embolisation, like any other procedure or operation, comes with risks and complications.

These include:

- Further bleeding or bleeding/damage at the site of the artery used
- Infection
- Post-embolisation pain and fever
- Non-target injury – this can be a consequence of embolisation, the vessel blocked will have had a role in taking blood to e.g. an organ and part of that organ may now not get enough blood. Alternatively, the embolisation material used can enter other blood vessels unintentional and cause ischaemia (not getting enough blood) in a different area.

Complications can result in further procedures being required. There may be other possible risks specific to the site you require to be embolised. Please ask your doctor to explain these to you.

### What happens afterwards?

The post-procedure care will depend on your injuries. From the embolisation, the team will monitor the site used to perform the procedure and your vital signs (heart rate and blood pressure) to look out for potential complications, such as further bleeding. You will usually be under the care of the trauma team.



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