



**Interventional radiologists** are board-certified physicians who deliver minimally invasive treatments with less risk, less pain and less recovery time than surgery. Most interventional radiology (IR) procedures are delivered via catheters through a tiny nick in the skin and use different types of radiology imaging guidance, including x-ray, CT scanning and ultrasound, to deliver precise treatment. For many of the therapies, patients receive medicine in their veins through an IV that helps them relax (sedation) or, in some cases, patients receive anesthesia. Many treatments are performed on an outpatient basis or with a short hospital stay. Learn more or find an interventional radiologist near you at [sirweb.org](http://sirweb.org).

### Recovery

Due to the minimally invasive nature of the treatments performed by interventional radiologists, the recovery time is often brief but varies with the individual patient's needs. You can usually walk around 2-3 hours after varicocele treatment. You should be able to go home the same day and resume normal activities, with the exception of heavy lifting or strenuous exercise, which may be resumed after about a week.

### Follow-up

Your interventional radiologist is part of your clinical care team and will work closely with the other members of your health care team to ensure that you receive the best possible care. This includes follow-up during your hospital stay and after you are discharged. During your follow-up appointment, your interventional radiologist will evaluate your progress and address any remaining issues or symptoms that you may have.

FIND US ON  
[sirweb.org](http://sirweb.org)



For more information on how interventional radiology can help you, the Society of Interventional Radiology's website, [sirweb.org](http://sirweb.org), provides easy-to-use tools to find a local interventional radiologist. He or she will be able to answer any additional questions you may have.

## Varicoceles

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## What are some of the most common venous diseases?

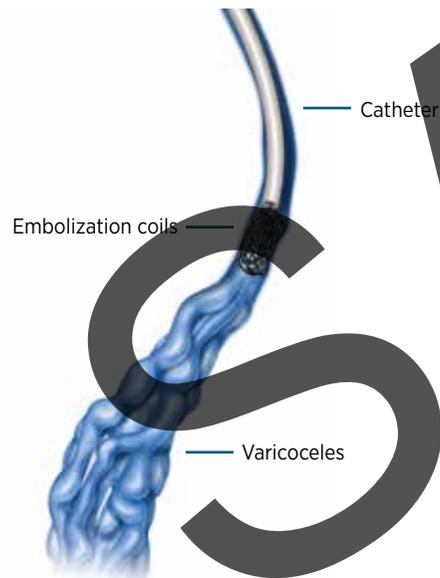
Blood vessels—veins and arteries—are rivers of blood within the human body. Veins are the “return flights,” where blood returns to the heart after nourishing your body. Veins have one way-valves, preventing blood from traveling back toward the feet and away from heart. When those valves are not functioning correctly, the vein becomes enlarged due to backfilling blood. This enlargement can cause a number of common diseases, depending on the location of the vein.

## What are varicoceles?

Varicoceles are an abnormal enlargement of veins in the scrotum resulting from pooling blood. Pooling of warm blood increases temperature and pressure resulting in:

- Dull and aching pain in the scrotum
- Pain that increases when standing and decreases when laying down
- Testicles that may have shrunk in size
- Scrotum that feels like a bag of worms

Varicoceles are more common on the left side but can occur on both sides. Varicoceles may also potentially damage the testicles and decrease fertility. An interventional radiologist can diagnose varicoceles by physical examination as well as ultrasound examination.



**During varicocele embolization, the interventional radiologist injects tiny coils to prevent blood flow to the varicoceles, reducing the pressure in the veins.**



## IR treatment

Many patients with varicoceles are simply observed without treatment. When deemed necessary to relieve discomfort or as a tool in an effort to overcome infertility, interventional radiologists treat varicoceles by varicocele embolization.

During varicocele embolization, a tiny incision is made in the groin to access the femoral vein, typically on the right side. Using imaging guidance, the interventional radiologist directs a thin catheter and wire into the affected vein. If the doctor confirms the presence of varicocele, he or she injects tiny metal coils or glues (sclerosants) to prevent blood flow to the abnormal veins and cause them to shrink. This reduces pressure in the abnormal veins without the need for surgery.

Varicocele embolization is a safe, effective option for those who wish to avoid surgery or those who wish to have a faster recovery time.

## What can you expect during and after treatment?

In an outpatient office, the interventional radiologist may offer you “conscious sedation” to help calm you during the procedure and to prevent discomfort.

Conscious sedation is achieved through the injection of painkiller and relaxation medication. If you are concerned about pain or discomfort during the procedure, ask your doctor if you are a candidate for conscious sedation. During conscious sedation, some people may fall asleep while others stay awake. Most people are able to respond to verbal instructions or alert their doctors if they experience pain or distress.

You will then rest on a table equipped with an X-ray camera. When you are ready, the interventional radiologist will insert a small needle into your groin, through which he or she performs the treatment. Movement of the embolization wire is not painful. Patients are generally discharged on the same day and have a shorter recovery period compared to surgery.