

Arthrogram

Consumer Information

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What is an Arthrogram?

An Arthrogram is a diagnostic test which examines the inside of a joint (e.g. shoulder, knee, wrist, ankle) to assess an injury or a symptom you may be experiencing.

The test is done by first injecting contrast medium (or "dye" as it is sometimes called) which outlines the soft tissue structures in the joint (e.g. ligaments and cartilage) and makes them clearer to see on the images or pictures that will be taken of the joint. This is usually done using fluoroscopy. Fluoroscopy uses X-rays to transmit moving images onto a screen to guide the placement of the needle containing the contrast medium. This may also be done using [computed tomography](#) (CT) or ultrasound for guidance.

The exact technique will vary from doctor to doctor and also depend on the joint being injected.

This is then followed by a [magnetic resonance imaging](#) (MRI) or (CT) scan.

While an MRI or CT scan without the use of contrast medium can provide information on the soft tissue structures, using contrast medium with MRI or CT (an Arthrogram) may provide more information about what is wrong with the joint.

How do I prepare for an Arthrogram?

Generally no specific preparation is required.

Normally you should have already had at least a plain X-ray of the joint and often an ultrasound, CT scan or MRI to assess any pain or other symptom you may be experiencing. If so you should bring these scans with you to your Arthrogram appointment.

It may be best to wear comfortable clothing with easy access to the joint being examined.

What happens during an Arthrogram?

Generally you will be asked to lie down and the skin over the joint being examined will be cleaned with an antiseptic solution. Following this a local anaesthetic may be injected into the skin to numb the area where the contrast medium will be injected. You may feel a slight stinging sensation.

Then using X-ray, ultrasound, MRI or CT for guidance, a needle will be placed into the joint and

after ensuring the needle is in the right place the contrast medium will be injected into the joint.

The injection may be accompanied by a feeling of fullness in the joint but should not be painful.

The contrast medium used depends on the exact nature of the Arthrogram and the specialist doctor performing the Arthrogram. This is generally [iodinated contrast medium](#).

If you are having an MRI Arthrogram, this will be followed by a very dilute mixture of MRI contrast ([gadolinium](#) chelates) together with sterile saline (mildly salty water). If you are having a CT Arthrogram, occasionally air is injected either on its own, or with a small amount of X-ray contrast prior to the scan.

Following the injections you will be taken to either the MRI suite (for an MRI Arthrogram), or the CT suite (for a CT Arthrogram), where the scan of the joint will be performed.

Are there any after effects of an Arthrogram?

Many people have a sore joint as the reason for the examination. Most patients feel some mild to moderate increase in soreness in the joint for 24-48 hours following the injection. The joint will then return to feeling the way it was before the examination.

How long does an Arthrogram take?

The Arthrogram itself usually takes about 15 minutes. You may then have to wait a short time before having the scan performed. A subsequent MRI scan may take 30-45 minutes and a CT scan may take 15 minutes, depending on the joint and the number of scans that have to be done. You should allow approximately 2 hours from arrival at the radiology department.

What are the risks of Arthrography?

Arthrography is a very safe procedure and complications are unusual.

The most serious complication is an infection of the joint. This is usually caused by organisms from the patient's skin being transferred into the joint and for this reason the procedure should not be carried out if there is broken or infected skin overlying the joint.

The risk of infection is not precisely known but the best available information suggests that it is in the order of 1 in 40,000 people having the test.

Occasionally people may be allergic to the contrast medium that is injected, and this most commonly results in a rash but may be more serious. The risk of minor reaction (e.g. hives) has been reported in 1 in 2,000 having the test. More serious reactions appear to be very rare.

Complications of gadolinium contrast medium used in an MRI have not been reported in the very small amounts used in arthrography.

What are the benefits of an Arthrogram?

The injection of contrast medium into the joint makes the subsequent scan more sensitive in detecting damage to the internal structure of the joint.

Some common reasons for an Arthrogram in addition to the scan are:

- In the shoulder – where the joint is unstable or if an ultrasound or plain MRI has not shown a suspected tendon tear
- In the hip – to show any tear of the cartilage labrum (or rim of the joint)
- In the wrist – to show any tear of the small ligaments of the wrist

There are many other individual situations where your referring doctor may feel that the additional information obtained by an Arthrogram may help to determine the best course of treatment.

Who does the Arthrogram?

A **radiologist** (specialist doctor) will perform the Arthrogram, injecting the contrast medium into the joint. The radiologist is also responsible for ensuring that the appropriate scans are performed following the injection and for analysing the scans and preparing a formal report of the findings, which is sent to the doctor who referred you for the test.

Either a nurse or a **radiographer** may assist the radiologist in the Arthrogram. The radiographer is responsible for taking the pictures in the Arthrogram and the subsequent scan under the radiologist's direction.

Where is an Arthrogram done?

An Arthrogram is performed in the diagnostic imaging department of most public and private hospitals and at private radiology practices.

When can I expect the results of my Arthrogram?

The time that it takes your doctor to receive a written report on the test or procedure you have had will vary, depending on:

- The urgency with which the result is needed
- The complexity of the examination
- Whether more information is needed from your doctor before the examination can be interpreted by the radiologist
- Whether you have had previous X-rays or other medical imaging that needs to be compared with this new test or procedure (this is commonly the case if you have a disease or condition that is being followed to assess your progress)
- How the report is conveyed from the practice or hospital to your doctor (in other words, email, fax or mail)

Please feel free to ask the private practice, clinic, or hospital where you are having your test or procedure when your doctor is likely to have the written report.

It is important that you discuss the results with the doctor who referred you, either in person or on the telephone, so that they can explain what the results mean for you.

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

The QUDI Program is managed by the Royal Australian and New Zealand College of Radiologists and funded by the Australian Commonwealth Department of Health and Ageing.

Publication Date: May 1st 2009

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