

An **arthrogram** is a procedure usually performed under imaging guidance (using equipment such as an X-ray, CT or ultrasound machine) that involves introducing a needle into any joint of the body. It usually also involves the injection of X-ray dye (contrast) to confirm the correct depth and position of the needle.

If used solely as a pain relieving procedure, local anaesthetic and cortisone may be injected, or other healing medications, such as glucose (prolotherapy), *Autologous Blood* or *Platelet Rich Plasma (PRP)*.

An arthrogram may also be of diagnostic use. Pain that disappears following an injection into the joint of local anaesthetic usually confirms that the joint injected is the source of the patient's pain. As groin pain has many causes, this technique is commonly used in deciding whether the hip joint is the cause of a patient's groin pain. Though this may narrow the source of the patient's pain, it does not determine the exact cause. For this, further imaging is usually required, such as an *MRI (Magnetic Resonance Imaging)* or *CT (Computed Tomography)* scan. If these scans are to be performed on the same day as the arthrogram, the fluid and dye injected into the joint not only may relieve the patient's pain, but also distends the joint and makes subtle problems easily detected, such as a cartilage tear.

In specific circumstances, excessive inflammation in a joint may result in the lining and capsule of that joint to contract, causing pain and restriction of motion. This classically occurs in the shoulder and is commonly referred to as a "frozen shoulder", however is also known as adhesive capsulitis, or capsular constriction. This may be treated by the procedure of **hydrodilatation**, whereby an arthrogram of the shoulder is performed followed by stretching of the capsule, often resulting in tearing, by injecting high volumes of water. The effect of this is therefore twofold; pain and inflammation is reduced by the cortisone and local anaesthetic, and range of motion is improved by stretching the capsule.

Preparation

No specific preparation is necessary.

We strongly encourage you to bring someone along who may drive you home. If your diagnosis is as yet unclear, you may need to attend the clinic first for a scan, such as an *ultrasound* or *MRI*.



Procedure

After changing into a gown, you will lie on a table. The joint to be injected is then located using the relevant radiological equipment (such as an X-ray machine, ultrasound or CT scanner). A mark is then placed on your skin that correlates with the path that the needle must take to pass into the joint in a safe and reliable manner. The skin is cleansed and local anaesthetic administered. A needle is then placed into the joint at which time contrast is injected to confirm position. Occasionally, depending on varying patient body sizes, the degree of difficulty of the procedure or the condition affecting the joint, the needle may require re-manipulation.

Once correct position has occurred and depending on the test that has been requested, one of the three following options will take place:

1. For simply pain relieving injections into a joint, a small dose of cortisone and local anaesthetic will be added.
2. For a diagnostic arthrogram before an MRI or CT scan, a dye will be injected prior to your final and definitive scan, with or without cortisone and local anaesthetic.
3. For a hydrodilatation, local anaesthetic and cortisone are first injected as outlined in (1). and then the joint stretched with fluid. In the shoulder, where this procedure is most commonly performed, 20–40mls of normal saline is added.

The arthrogram is now over. The injection site is then covered with a small dressing which may be removed in 24 hours.

- Please ensure that you make a follow up appointment with your referring doctor or health care provider to discuss your results.

Post injection care

Avoid any significant use of the joint that has been injected until the pain starts to resolve. This may take several days. If you hear or feel a gurgling sounds in your joint, this is normal, as air in the needle often enters the joint with the fluid and swirl about. This is normal and will disappear within several days.

If you have had a hydrodilatation, we recommend that you recommence your rehabilitation programme once the discomfort from the procedure has gone, usually 2–5 days. If this has occurred sooner, you may wish to start any self directed exercises that have been prescribed in the past. Remember as a general rule in frozen shoulder, the more movement of the joint, a better result is likely.



Risks & Side Effects

As with any procedure, there are always risks. The most serious risk is causing an infection, as an infection may further damage the joint and require surgery. As a minimum, an infected joint will require at least several weeks of antibiotics, often delivered via an intravenous line. Though serious, the chances of an infection are small, approximately 1 in 30,000.

Side effects are usually associated with the medication used. For example, if cortisone is used and you are diabetic, you may have raised sugar levels for several days. Cortisone may also result in facial flushing, palpitations and restlessness. If cortisone is to be injected, you may download further information from the www.melbournradiology.com.au website, or we will provide you with a fact sheet about cortisone at the time of your visit.

Rarely people may be allergic to the X-ray dye. If this is known, we may use air to confirm position in the joint that is injected.

Results

A radiologist, a medical doctor specialised in interpreting medical images for the purposes of providing a diagnosis, will then provide a formal written report to your referring doctor or health care professional detailing the procedure and providing some recommendation for your after-care. If medically urgent, or you have an appointment immediately after the scan to be seen by your doctor or health care provider, Melbourne Radiology Clinic will instantly have this report ready. Otherwise, the report will be received by your doctor or health care provider within 24 hours of your examination.

REMEMBER ...

- Please bring to the clinic any prior scans (eg. X-rays, ultrasounds, MRI, CT) and reports as these will assist the radiologist in assessing your condition.
- If you have any further queries please call Melbourne Radiology Clinic on **(03) 9667 1667** – we are only too happy to help
- Please note that any referral for a scan is valid at Melbourne Radiology Clinic, even if it has been written on a referral form from another radiology provider.

Whilst every effort is made to keep your appointment time, the special needs of complex cases, elderly and frail patients can cause unexpected delays. Your consideration and patience in these circumstances is appreciated.

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