

## Arthrography (Joint X-ray)

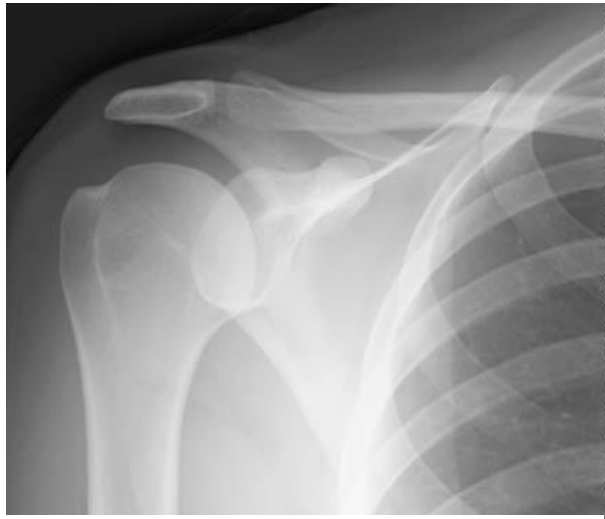
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### *What is Arthrography?*

Arthrography is the radiographic examination of a joint after the injection of a dye-like contrast material and/or air to outline the soft tissue and joint structures on the images.

### *What are some common uses of Arthrography?*

Arthrography is done most often to identify abnormalities associated with the shoulder, wrist, hip, knee and ankle. Patients who undergo this procedure usually have complained of persistent, unexplained joint pain or discomfort. Arthrographic images may allow identification of problems with a joint's function or indicate a need for a joint replacement.



*An x-ray of the right shoulder prior to injection of contrast material.*

### *How should I prepare for my Arthrography?*

No special preparation is necessary before arthrography. Food and fluid intake do not need to be restricted.

A nurse or radiologic technologist may ask you to change into a gown with no metal fasteners that can show up on the images. If necessary, you may also have to remove some of your jewelry if it will interfere with the procedure.

### *How does the Arthrography procedure work?*

Joint fluid is removed and replaced with injected contrast material or air—sometimes both. A series of radiographs, sometimes called "arthrograms," are obtained before the joint tissue absorbs the contrast material. Occasionally, the examiner will take additional x-rays as he or she pushes and pulls on your joint.

### *How is Arthrography performed?*

In the examination room, you are positioned on a table to examine the affected joint. Simple x-ray images of your joint are obtained to compare with the arthrograms.

Next, the skin around your joint is cleansed with antiseptic and a local anesthetic may be injected into the area around the joint. A needle with an aspiration syringe is then inserted into the joint space. The radiologist will use the syringe to drain the joint fluid, which may be sent to a laboratory for analysis. Next, the aspirating syringe is replaced with one containing contrast material. If the fluoroscopic examination shows correct needle placement, the contrast material and air are injected into the joint space. After the injection, the needle is removed and the site is rubbed with a sterile sponge and may be sealed with collodion to prevent air from escaping. You will be asked to move the affected joint to more evenly distribute the contrast material. Still images are then obtained with the joint in various positions.

The examination is usually completed within 45 to 60 minutes.

### *What will I experience during my Arthrography procedure?*

To many patients, the thought of having needles plunged into their joints seems particularly gruesome. But just as major dental work is done only after the administration of an anesthetic to numb the involved area, your joint area may be numbed so you do not feel anything related to the arthrographic procedure. Initially, you may experience a slight pinprick and momentary burning as the anesthesia is injected into the joint area. You may feel a fullness as the joint is filled and you may feel and hear gurgling when the joint is moved.

### *What are the benefits vs. risks of Arthrography?*

#### Benefits

- Arthrography is particularly effective for detecting tears or lesions of the structures and ligaments of the joints, especially the knee, wrist and elbow, as well as rotator cuff tears or damage from a shoulder dislocation.

#### Risks

- Patients who have known allergies to iodine may have an adverse reaction to the contrast material. Because the contrast material is put in a joint and not a vein, allergic reactions are rare, although in some cases, mild nausea to severe cardiovascular complications may result.
- Women should always inform their doctor or x-ray technologist if there is any possibility that they are pregnant.

### *What are the limitations of Arthrography?*

An improper injection technique may result in the contrast material being in the wrong location for optimal visualization of the joint. Also, if the joint fluid is not fully removed, it dilutes the contrast material and diminishes the quality of the image.

After the examination, vigorous exercise is not recommended for 12 hours.

You may experience swelling and discomfort or hear a crackling noise in the joint. You may apply ice to the joint to reduce swelling if it is bothersome. A mild over-the-counter analgesic can be taken for pain. These symptoms usually disappear after 48 hours. Contact your doctor if they persist after two days.