



## Joint Aspiration

### What is done during a joint aspiration/injection?

Joint injections or aspirations (taking fluid out of a joint) usually are performed with a cold spray or other local anesthesia in the office or hospital setting. After the skin surface is thoroughly cleaned, the joint is entered with a needle attached to a syringe. At this point, either joint fluid can be obtained (aspirated) and used for appropriate laboratory testing or medications can be injected into the joint space. This technique also applies to injections into a bursa or tendon sheath to treat bursitis and tendonitis, respectively.

### What benefit is derived from a joint aspiration?

Joint aspiration usually is done for help with diagnosis or treatment. Fluid obtained from a joint aspiration can be examined by the physician or sent for laboratory analysis, which may include a cell count (the number of white or red blood cells), crystal analysis (to confirm the presence of gout or pseudogout), and/or culture (to determine if an infection is present inside the joint). Drainage of a large joint effusion can provide pain relief and improved mobility. Injection of a drug into the joint may yield complete or short-term relief of symptoms.

### What benefit is derived from a joint injection?

Joint injections may decrease the accumulation of fluid and cells in the joint and may temporarily decrease pain and stiffness. They may be given to treat inflammatory joint conditions, such as rheumatoid arthritis, psoriatic arthritis, gout, tendonitis, bursitis and, occasionally, osteoarthritis.

### What usually is injected into the joint space?

Corticosteroids (such as methylprednisolone and triamcinolone formulated to stay primarily in the joint) frequently are used. They are anti-inflammatory agents that slow down the accumulation of cells responsible for producing inflammation and pain within the joint space. Although corticosteroids may also be successfully used in osteoarthritis, their mode of action is less clear. Hyaluronic acid (*Hyalgan*<sup>®</sup>, *Synvisc*<sup>®</sup>, *Orthovisc*<sup>®</sup>) is a viscous lubricating substance that may relieve the symptoms of osteoarthritis of the knee for periods up to 6–12 months. Mode of action is not clear.



### Which joints are commonly injected?

Commonly injected joints include the knee, shoulder, ankle, elbow, wrist, base of the thumb and small joints of the hands and feet. Hip joint injection may require the aid of an ultrasound or X-ray called fluoroscopy for guidance. Some small joints may be more easily aspirated or injected with aid of ultrasound.

### What are the risks of joint injections and aspirations?

Occasional side effects include allergic reactions to the medicines injected into joints, to tape or the betadine used to clean the skin. Infections are extremely rare complications of joint injections and occur less than 1 time per 15,000 corticosteroid injections. Another uncommon complication is post-injection flare—joint swelling and pain several hours after the corticosteroid or hyaluronic acid injection—which occurs in approximately 1 out of 50 patients and usually subsides within several days. It is not known if joint damage may be related to too-frequent corticosteroid injections. Generally, repeated and numerous injections into the same joint/site should be discouraged. Other complications, though infrequent, include depigmentation (a whitening of the skin), local fat atrophy (thinning of the skin) at the injection site and rupture of a tendon located in the path of the injection.

### Are there situations where a joint injection should not be given?

Yes. The most common reasons for not performing a joint injection are the presence of an infection in or around a joint and if someone has a serious allergy to one or more of the medications that are injected into a joint. If an infection is suspected, aspiration of joint fluid for cultures is essential.

### To find a rheumatologist

For a listing of rheumatologists in your area, [click here](#).

Learn more about [rheumatologists](#) and [rheumatology health professionals](#).

### Reviewed February 2012

Written by Lan X. Chen and H. Ralph Schumacher, MD, and reviewed by the American College of Rheumatology Communications and Marketing Committee.

*This patient fact sheet is provided for general education only. Individuals should consult a qualified health care provider for professional medical advice, diagnosis and treatment of a medical or health condition.*

© 2012 American College of Rheumatology