Steroid injection for joint pain

Overview

A steroid injection is a minimally invasive procedure that can temporarily relieve pain caused by an inflamed joint. The cause of joint pain (arthritis, injury, degeneration) is not well understood. The procedure has two purposes. First, it can be used as a diagnostic test to see if the pain is actually coming from the joint. Second, it can be used as a treatment to relieve inflammation and pain caused by various conditions.

What is a steroid joint injection?

A steroid injection includes both a corticosteroid (e.g., triamcinolone, methylprednisolone, dexamethasone) and an anesthetic numbing agent (e.g., lidocaine or bupivacaine). The drugs are delivered to the painful joint, inside the joint capsule.

Corticosteroid injections can reduce inflammation and can be effective when delivered directly into the painful area. The pain relief can last from days to years, allowing your condition to improve with physical therapy and an exercise program.

Injections can be made in the following areas:

- **facet joints of the spine**
- **sacroiliac joint and coccyx**
- **hip joint**
- **shoulder, elbow, and hand**
- **knee, ankle and foot**

Who is a candidate?

If you have pain stemming from joint inflammation, then you may benefit from a steroid injection. Typically, a joint injection is recommended for those who do not respond to other conservative treatments, such as oral anti-inflammatory medication, rest or physical therapy.

Steroid joint injections done using fluoroscopic (x-ray) guidance should NOT be performed on people who have an infection, are pregnant, or have

bleeding problems. The injection may slightly elevate blood sugar levels in patients with diabetes. It may also temporarily elevate blood pressure or eye pressure for patients with glaucoma. You should discuss this with your physician.

Who performs the procedure?

The types of physicians who administer joint injections include physiatrists (PM&R), radiologists, anesthesiologists, neurologists, and surgeons.

What happens before treatment?

The doctor who will perform the procedure reviews your medical history and previous imaging studies to plan the best location for the injections. Be prepared to ask any questions you may have at this appointment.

Patients who take aspirin or a blood thinning medication may need to stop taking it several days before the procedure. Discuss any medications with your doctors, including the one who prescribed the medication and the doctor who will perform the injection.

The procedure is usually performed in an outpatient special procedure suite that has access to fluoroscopy. Make arrangements to have someone drive you to and from the office or outpatient center the day of the injection.

What happens during treatment?

At the time of the procedure, you will be asked to sign consent forms, list medications you are presently taking, and if you have any allergies to medication. The procedure may last 15-45 minutes, followed by a recovery period.

Step 1: prepare the patient

The patient lies on an x-ray table. Local anesthetic is used to numb the treatment area so discomfort is minimal throughout the procedure. The patient remains awake and aware during the procedure to provide feedback to the physician. A low dose sedative, such as Valium or Versed, is usually the only medication given for this procedure.

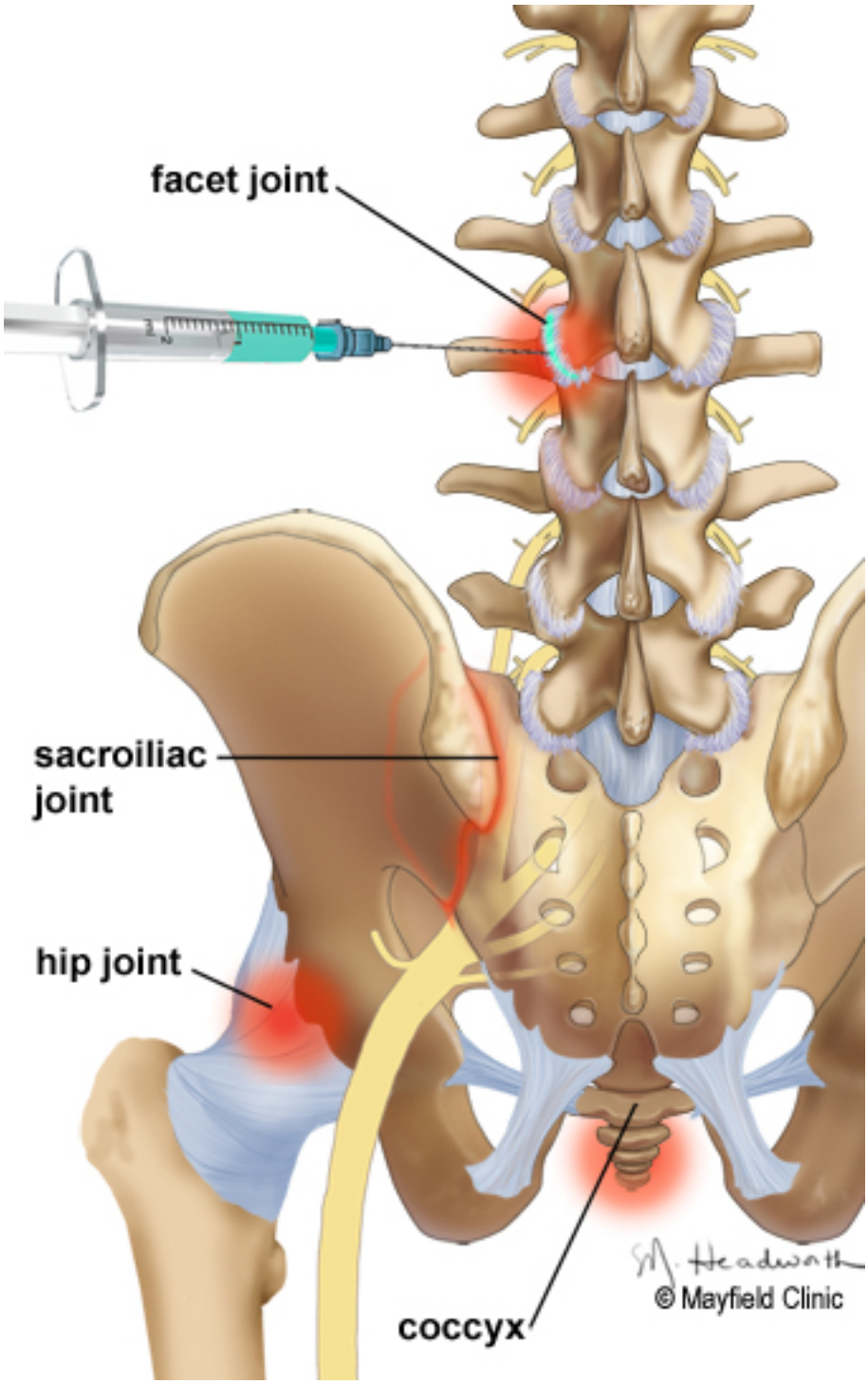

Figure 1. Anesthetic and corticosteroid mixture (green) is injected into the inflamed joint to relieve pain.

Step 2: insert the needle

With the aid of a fluoroscope (a special X-ray), the doctor directs a hollow needle through the skin and into the region responsible for pain. Fluoroscopy

allows the doctor to watch the needle in real-time on the fluoroscope monitor to ensure that the needle goes to the desired location (Fig. 1). Contrast may be injected to confirm correct needle location. Some discomfort occurs, but patients more commonly feel pressure than pain.

Step 3: inject the medication

When the needle is correctly positioned, the anesthetic and corticosteroid medications are injected into the joint capsule. The needle is then removed. One or several joints may be injected depending on the location of the pain.

What happens after treatment?

Most patients can walk around immediately after the procedure. After being monitored for a short time, you can usually leave the office or suite. Someone must drive you home.

Patients typically resume full activity the next day. Soreness around the injection site may be relieved by using ice and taking a mild analgesic (Tylenol).

You may want to record your levels of pain during the next couple of weeks in a diary. You may notice a slight increase in pain as the numbing medicine wears off and before the corticosteroid starts to take effect.

What are the results?

If the joint that was treated is the source of pain, you may notice pain relief starting two to seven days after the injection. Pain may be relieved for several days to several months, allowing you to participate in physical therapy. If injections were helpful and you experience a later recurrence of pain, the procedure can be repeated. If you don't experience any pain relief, other treatment options may be available.

What are the risks?

With few risks, steroid joint injections are considered an appropriate nonsurgical treatment for some patients. The potential risks associated with inserting the needle include bleeding, infection, allergic reaction, headache, and nerve damage (rare). Corticosteroid side effects may cause temporary weight gain, water retention, flushing (hot flashes), mood swings or insomnia,

and elevated blood sugar levels in diabetics. These effects usually disappear within 7-10 days. Patients who are being treated for chronic conditions (e.g. heart disease, diabetes, rheumatoid arthritis, glaucoma, uncontrolled blood pressure) or those who cannot temporarily discontinue anti-clotting medication should consult their personal physician for a risk assessment.

If you have more questions, please contact the Mayfield Brain & Spine at 800-325-7787 or 513-221-1100.

Glossary

anesthetic: an agent that causes loss of sensation with or without the loss of consciousness.

corticosteroid: a hormone produced by the adrenal gland or synthetically. Regulates salt and water balance and has an anti-inflammatory effect.

fluoroscopy: an imaging device that uses x-ray or other radiation to view structures in the body in real time, or "live." Also called a C-arm.

joint capsule: a sac surrounding a synovial joint.