



**Orthopaedic and
Hand Surgery Partners**
We Care

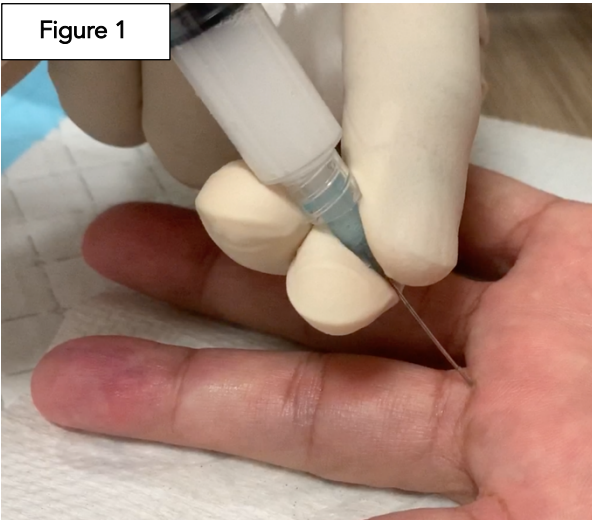
STEROID INJECTIONS

Patient Information Brochure

Why are steroid injections used?

Steroid injections are commonly used to treat a variety of inflammatory conditions. Examples of these include trigger fingers (Fig. 1), deQuervain tendonitis (Fig. 2), carpal tunnel syndrome, thumb arthritis, tennis elbow (lateral epicondylitis), knee arthritis, and rotator cuff tendonitis.

Figure 1



What is in a steroid injection?

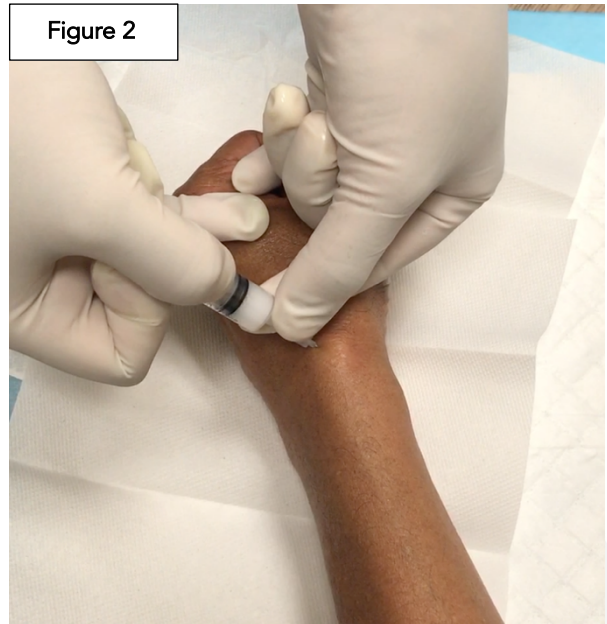
Steroid injections typically contain a mixture of a synthetic cortisone and a local anaesthetic such as lidocaine or bupivacaine. Cortisone is a steroid normally produced by the adrenal gland and is a powerful anti-inflammatory agent.

There are several available synthetic preparations such as triamcinolone, betamethasone, and dexamethasone, and they are also commonly referred to by their trade names. They all have similar mechanisms although they vary in strength and duration of action (short versus long-acting). No single preparation has been found to be superior to others, so the choice of medication is left up to the individual provider. Triamcinolone is used most frequently. These anti-inflammatory steroids are distinctly different from the anabolic steroids that have been abused by some athletes for bodybuilding and performance enhancement. The local anaesthetic dissolves the steroid and anesthetizes the area of the injection, diminishing discomfort during the procedure.

How does it work?

Steroid injections work by decreasing inflammation. Once the inflammation subsides, the associated pain usually improves as well.

Figure 2



How is the procedure performed?

The area to be injected is first cleansed with an antiseptic such as an iodine preparation, alcohol, or other skin disinfectant. The injection is then given with a small needle. Typically, only a small amount of steroid and local anaesthetic is injected. Afterwards, the area is covered with gauze or an adhesive bandage.

When does it take effect and how long does it last?

The injection should take effect within 7-10 days and the benefits can last for many weeks. The exact timing, however, varies from patient to patient. For some conditions, one injection can be sufficient to completely get rid of the inflammation and pain while for more severe cases, several injections may be required. Most patients respond well to injections although a small subset may not experience any relief of symptoms.

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STERIOD INJECTIONS

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What are the alternatives to steroid injections?

- Analgesics and anti-inflammatory medication may be taken to decrease the inflammation and associated swelling and pain.
- Splinting with graduated therapy can help to decrease the degree of inflammation.
- Surgery can help in rapid recovery in certain conditions and if symptoms are persistent despite a trial of conservative treatment measures.

How many injections can one get?

There is no set rule as to how many injections a person can get. Many providers use two injections as a rule of thumb although, in some cases, more frequent injections may be helpful. Your response to the first injection is very important in determining whether to proceed with re-injection: If the first injection does not work or wears off quickly it may not be worthwhile repeating. Many providers limit the number of injections because repeated injections may cause damage to tendons and/or cartilage.

What are side effects?

As with all procedures, steroid injections carries some risks. These include, but are not limited to, the following:

Common (2-5%)

- Local bleeding and bruising. This is also minor and self-limiting. It may become problematic in patients that are on blood thinning medication.
- Steroid flare: This is thought to happen when the steroid crystallizes after being injected. In patients who experience a flare, a brief episode of pain lasting one or two days follows the injection. This pain can be worse than the initial discomfort for which the injection was given. Cortisone flares resolve spontaneously over a few days and can be treated with ice and immobilization.

Uncommon (1-2%)

- Localized skin and subcutaneous fat atrophy (thinning resulting in dimpling). This is more frequent

when the injection is given superficially in the skin.

- Hypopigmentation (whitening of the skin) at the injection site (Fig. 3). This occurs when the injection is given superficially in the skin. It may be more apparent in patients with darker skin tones.

Figure 3



- Mild increase in blood sugar levels in diabetic patients for several days.
- Direct injection into the nerve (median nerve at carpal tunnel) may lead to worsening inflammation of the nerve with increasing pain and tingling.
- Frequent injections at the same site may cause softening of the tendons that may result in tendon rupture and damage the joint cartilage. Generally, repeated and numerous injections at the same site should be discouraged.
- Potential decreased milk production in lactating women.

Rare (<1%)

- Infection is a rare but serious complication. The treatment of infection may require antibiotics, admission, and surgery to drain the infection and may result in stiffness of the involved finger(s).
- Allergy to any of the substances utilised during the procedure, such as triamcinolone, lignocaine, the antiseptic agent or the dressing material. This is usually minor and self-limiting.

When should you call your doctor?

If you have received a steroid injection and the area is bright red, warm to the touch, or you are febrile, you should call your doctor to check for an infection.