



The American Orthopaedic  
Society for Sports Medicine

## SPORTS TIP

# Cortisone Injections

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### What is cortisone?

Injectable corticosteroid medications, commonly called “cortisone,” have been used by orthopaedic professionals since the early 1950s for a variety of conditions, including tendonitis, arthritis, tennis elbow, and carpal tunnel syndrome. Cortisone is naturally produced in the body through the adrenal gland and released when the body is under stress. Injectable cortisone is synthetically produced and is similar to the body’s own product. By minimizing inflammation, injectable cortisone can provide significant pain relief and allow for an earlier return to activity, whether to complete a weekend home repair effort or to win a football game. Cortisone injections are completely legal and different from the illegal anabolic steroids used to increase athletic strength and speed.

### How does cortisone work?

Cortisone is not a pain-relieving medication, but rather works by minimizing the body’s reaction to inflammation. When the inflammation is lessened, the pain is also. By injecting the medicine directly into the inflamed area, such as a wrist or shoulder joint, high concentrations of cortisone can be administered with minimal side effects. Discomfort usually improves within a few days and lasts for several weeks or permanently. If cortisone injections are used, they must be combined with the appropriate rest period and rehabilitation to gain the best results. Medical professionals are often hesitant to use these injections routinely for injury

treatment as they may turn off the body’s “alarm system,” ultimately leading to a more significant injury later on.

### Who shouldn’t have a cortisone injection?

There are very few contraindications in the use of cortisone injections. However, the following conditions should be fully discussed with an orthopaedic professional before seeking a cortisone injection:

- Infection of a joint (septic arthritis)
- Skin infection at the site of the injection
- Allergic reaction to previous cortisone injections
- Usage of blood thinners, such as Coumadin®
- Acute injury (head trauma, broken bones)

Finally, athletes should not receive cortisone injections into a joint or bursa sac immediately before competition, as the athletic activity may cause the injury to resurface, resulting in pain, swelling, and stiffness.

### What are the side effects of cortisone injections?

As with nearly any procedure where medications are injected into the body, adverse reactions may occur. The so-called “cortisone flare” reaction has been reported to occur in approximately two percent of patients. This occurs when the injected cortisone crystallizes and causes pain worse than before the shot. Fortunately, these “flares” usually

do not last long and resolve with icing after 12 to 48 hours.

Whitening of the skin around the injection site is also a common side effect in dark-skinned individuals. This discoloration is not harmful.

Additional side effects include softening of cartilage and weakening of tendons at the injection site. This usually occurs in patients who receive shots on a weekly-to-monthly basis, during a period of months to years. Most surgeons currently recommend having injections at least three months apart and avoiding repeat injections within a short-time period.

Diabetic patients may experience a temporary, but significant, elevation in blood sugar due to absorption of the cortisone into the bloodstream. Diabetic patients should therefore carefully monitor blood sugar levels for 24 to 48 hours following an injection.

Although rare, infection at the injection site is another side effect. This can be avoided with proper skin sterilization using iodine and/or alcohol.