Introduction
Non-steroidal anti-inflammatory drugs (NSAIDs) and corticosteroids are medications used by sports medicine physicians to treat many musculoskeletal conditions causing pain and/or swelling. Interrupting the body’s creation of substances normally created by injury which lead to inflammation. These medications can be taken by mouth, rubbed into the skin or injected.

NSAIDs
Common over-the-counter NSAIDs include ibuprofen, naproxen, and aspirin, all of which are taken by mouth. Other types of oral NSAIDs require a prescription like meloxicam or diclofenac. They are used to treat acute and chronic musculoskeletal conditions associated with inflammation and pain. Side effects and potential risks of taking NSAIDs, especially long-term, include:

- gastrointestinal irritation potentially leading to conditions like gastrointestinal reflux disease and ulcers
- kidney injury
- cardiovascular problems

You should discuss taking these medicines with your physician, even when taking over-the-counter options. In most cases, they are used as needed for pain, but your physician may recommend taking them on a regular basis for a short amount of time.

Some NSAIDs can be used on the skin (topically) in the form of gels and patches. Studies show these topical forms are effective for treating sprains, strains, overuse injuries and chronic musculoskeletal pain such as knee osteoarthritis. They penetrate through the skin to deeper tissues, such as muscles or joints, to reduce inflammation. Topical NSAIDs have fewer side effects than those taken by mouth because they result in lower drug levels in the blood. This makes them a great option for patients with medical problems that warrant avoidance of oral NSAIDs. There is also an intermuscular form of NSAID that may be used.

Steroids
Corticosteroids (often called steroids or cortisone) are anti-inflammatory drugs used to treat acute and chronic musculoskeletal conditions associated with inflammation. These medications may be given by mouth, injection or iontophoresis (through the skin using an electric current).

Injection into a joint, bursa, or around a tendon is the most common form used by sports medicine physicians. Injections deliver medicine directly to the area of pain, avoiding unwanted side effects seen with oral use. Your sports medicine provider is trained to determine the benefit of steroid injection, as well as how often the injection can be repeated. The biggest risk of steroid injection is an infection, but this is rare, occurring in only about 1 in 50,000 people. There may be a post-injection flare of pain and swelling, which should be discussed with your physician, but this usually resolves within 24 hours.
AMSSM SPORTS MEDICINE TOPICS

NSAIDS AND CORTICOSTEROIDS

The most common oral steroid is prednisone. This is most often used in sports medicine to treat acute back pain and several other acute conditions. Oral steroids require careful consideration due to side effects that may include high blood sugar, high blood pressure, and emotional changes.

Return to Play

Returning to sport or activity while using NSAIDs or corticosteroids depends on the condition being treated. Many athletes use these medicines to decrease pain related to activity. Your physician will advise you regarding your ability to return to activity while using medication. Those taking NSAIDs should stay well hydrated to decrease the risk of kidney damage while exercising. Steroid injection around tendons may increase the risk of tendon tears, and a period of rest and rehabilitation is usually recommended before returning to full activity.

Role of the Sports Medicine Physician

Sports medicine physicians are specially trained to determine whether steroids or NSAIDs, and in which form, would most benefit you in the healing process. Physicians may be able to perform injections with ultrasound guidance to direct the medicine to the affected area. NSAIDs and corticosteroids should rarely be used alone to treat musculoskeletal conditions. These medications serve to reduce pain, while a rehabilitation program is used to restore your pre-injury function.

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References

