

## Oral Steroids

Many of the symptoms of skin disease result from inflammation in tissues of the body. Cortisone, manufactured naturally by the body's adrenal glands and also made synthetically, has been found to have a marked anti-inflammatory effect. Cortisone and its derivatives are steroids, among the most effective anti-inflammatory drugs known. Their use can substantially reduce the swelling, warmth, tenderness and pain that is associated with inflammation.

While steroid dosage should be kept at the lowest effective level, steroids must not be stopped suddenly if they have been taken for more than four weeks. By this time, some shrinking of the adrenal glands will occur, as their burden of producing cortisone has been relieved. A slow reduction in the dosage of steroids allows the adrenal glands to regain their ability to manufacture natural cortisone.

Steroids may be given as a pill, by intra-muscular (IM) injection or may be injected directly into the skin. In very severe rashes and in cases where excessive cortisone ointment use has caused skin thinning, the skin may be "put to rest" with a single shot (or a short series of usually three shots) of cortisone (triamcinolone) in the hip or thigh. This may disturb menstrual cycles, and can cause elevated blood pressure to rise or diabetic control to worsen. Very rarely this shot or other cortisone use can cause a collapse of the hip joint. If you get pain in your hip or groin call your dermatologist on an emergency basis. These effects are very rare with an occasional shot.

Prednisone is the oral tablet form of steroid most often used. Less than 7.5 mg per day is generally considered a low dose; up to 40 mg daily is a moderate dose; and more than 40-mg daily is a high dose. Occasionally, very large doses of steroids may be given for a short period of time. This treatment referred to as "pulse steroid treatment," involves giving 1000 mg of methyl-prednisone intravenously each day for three days.

Prednisone is an extremely effective drug and may be necessary for control. Although many patients do not need to stay on steroids continuously, those with severe disease may require long-term steroid treatment.

There is usually prompt relief of most symptoms after initiation of treatment with corticosteroids. In addition to prednisone, some other cortisone derivatives include hydrocortisone, methylprednisolone (Medrol) and dexamethasone (Decadron). Again, Prednisone and other steroids should not be stopped suddenly. Patients should discuss the reasons for using steroids and other treatment alternatives which may be available with their physician.

With long term use, some of the more common side effects of steroids include changes in appearance, such as acne, development of a round or moon-shaped face and an increased appetite leading to weight gain. Steroids may also cause a redistribution of fat, leading to a swollen face and abdomen, but thin arms and legs. In some cases, the skin becomes more fragile, which leads to easy bruising. These take weeks to begin appearing.

Psychological side effects of steroids include irritability, agitation, euphoria or depression. Insomnia can also be a side effect. These changes in appearance and mood are often more apparent with high doses of steroids, and may begin within days. Injected Triamcinalone (see above), or oral dexamethasone seem to cause these changes less, but as they stay in the body an undesirably long time, rendering them second choices.

An increase in susceptibility to infections may occur with very high doses of steroids. Prednisone may also aggravate diabetes, glaucoma, and high blood pressure, and often increases cholesterol and triglyceride levels in the blood. In children, steroids can suppress growth. These effects are reversed once the steroids are stopped.

### **Side Effects From Long-Term Use of Steroids**

Side effects that may be caused by the long-term use of steroids include cataracts, muscle weakness, avascular necrosis of bone and osteoporosis. These usually do not occur with less than four weeks of treatment.

Avascular necrosis of bone, usually associated with high doses of prednisone over long periods of time, produces hip pain and an abnormal MRI scan. It occurs most often in the hip, but it can also affect the shoulders, knees and other joints. Caught early, the joint can be saved by “decompression” by an orthopedic surgeon. Once full developed, Avascular necrosis is painful and often requires surgical joint replacement for pain relief.

Steroids reduce calcium absorption through the gastrointestinal tract which may result in osteoporosis, or thinning of the bones. Osteoporosis can lead to bone fractures, especially compression fractures of the vertebrae, causing severe back pain. Calcium, at least 1500 mg of the calcium carbonate form or equivalent, should be taken. There are new medications (Fosamax in particular) that also may help to prevent osteoporosis.

There is also a relationship between steroids and premature arteriosclerosis, which is a narrowing of the blood vessels by fat (cholesterol) deposits. In general, there is a close relationship between the side effects of steroids and the dose and duration of their use. Thus, a high dose of steroids given over a long period of time is more likely to cause side effects than a lower dosage given over a shorter period of time. Corticosteroids are extremely effective anti-inflammatory agents and can be very helpful in treating significant skin disease, despite the side effects. Treatment with steroids should always be kept at the lowest possible effective dose and should never be stopped suddenly. Hopefully, we will soon develop effective alternative therapies that will not be as toxic as steroids.