



Patient Information Sheet

INDIAN ASSOCIATION OF DERMATOLOGISTS, VENEREOLOGISTS AND LEPROLOGISTS

USE OF ORAL STEROIDS

- ▶ What are steroids and how do they act?
- ▶ What are the different types of steroids?
- ▶ For what conditions oral steroids are prescribed?
- ▶ How oral steroids are available?
- ▶ How are steroids administered?
- ▶ When do I take steroids?
- ▶ What dose of steroid is given? How long can steroids be given?
- ▶ How long steroids take to act?
- ▶ What special dietary instructions should I follow?
- ▶ Why is it necessary to reduce the dose gradually before stopping steroids?
- ▶ Do steroids cause any side-effects?
- ▶ What are the side effects?
- ▶ Who cannot take oral steroids?
- ▶ Can other medicines be taken while taking steroids?
- ▶ Medicines which can interact with steroids
- ▶ How to monitor while on steroids
- ▶ Can steroids be given during pregnancy?
- ▶ Can steroids be given during breastfeeding?
- ▶ Use of steroids in children and adolescents
- ▶ Steroid treatment in the elderly

16. How to monitor while on steroids

- ▶ Weight and blood pressure have to be monitored, as weight gain and high blood pressure are side effects of steroids.
- ▶ Bone density has to be monitored, as steroids cause thinning of the bones.
- ▶ Eyes need to be monitored for cataracts.

17. Can steroids be given during pregnancy?

Steroids are safe for men and women wanting to conceive. Taking steroids during pregnancy is a low risk to the baby. Although small amounts of steroids may cross the placenta, up to 40mg prednisolone daily is considered safe for the baby. There is increased risk of intrauterine growth retardation (baby grows more slowly in the womb) if mother is on high dose of steroids, is taking steroids long-term or repeatedly during pregnancy, There may be a doubtful small risk of cleft lip and palate in babies born to mothers taking steroids during the first three months of pregnancy. If steroids are required during pregnancy the lowest possible dose for the shortest possible time should be used.

18. Can steroids be given during breastfeeding?

Very small amount of steroid may pass to the baby through milk so it is usually safe to breastfeed while taking steroids.

19. Use of steroids in children and adolescents

The use of steroids can slow down normal growth of children and adolescents, so dose adjustment or treatment stoppage may be done.

20. Steroid treatment in the elderly

In elderly patients, some of the steroid side effects can be more serious e.g brittle bones, diabetes, high blood pressure, infections and thinning of the skin. Caution should be exercised.

- ▶ Having diabetes.
- ▶ Having epilepsy.
- ▶ Are pregnant. (If steroids are taken in the first 12 weeks of pregnancy, there is a doubtful risk of the baby being born with a cleft lip and/or palate. A long course of steroids can affect baby's growth).
- ▶ Are breast-feeding. (Breast-feeding should be done after four hours of taking steroids. If high doses of steroids are being taken during breast feeding, baby may need monitoring).
- ▶ Having severe depression.
- ▶ Having allergy to steroid or any of its ingredients.

14. Can other medicines be taken while taking steroids?

Many other medicines can "interact" with steroids; i.e the steroid could affect how they work, either resulting in the other medicine being ineffective, or have more side effects than usual. At times the other medicine could affect the steroid. Hence doses may have to be adjusted accordingly so that both medicines can be taken together.

15. Medicines which can interact with steroids

- ▶ Warfarin (a blood-thinning medicine to prevent blood clots).
- ▶ Non-steroidal anti-inflammatory drugs (NSAIDs), like ibuprofen, diclofenac etc. These drugs when taken with steroids can cause stomach ulcers.
- ▶ Live vaccines - They are not usually given for three months after high-dose steroid.
- ▶ Epilepsy drugs like carbamazepine, phenytoin, phenobarbital.
- ▶ Diabetes drugs.
- ▶ Bronchodilators (such as salbutamol).
- ▶ Digoxin.
- ▶ Diuretics.
- ▶ HIV drugs.
- ▶ Antifungal drugs.
- ▶ Some antibiotics.

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1. What are steroids and how do they act?

Steroids are chemicals (hormones) that occur naturally in the body and help to maintain health and well-being. Steroid medicines are man-made but are similar to these natural hormones. They decrease inflammation (when given in doses higher than that normally made by the body), suppress the body's immune system, block DNA from being made and block a chemical known as histamine which is released during an allergic reaction. They are different than the anabolic steroids which are used by athletes and bodybuilders.

2. What are the different types of steroids?

Glucocorticoids	Mineralocorticoids	Intravenous Steroids
This is the most commonly used group of steroids and includes <ul style="list-style-type: none">▶ Prednisolone▶ Betamethasone▶ Dexamethasone▶ Hydrocortisone▶ Methylprednisolone▶ Deflazacort	This group is usually used for replacing steroids body is not producing itself. The common one used is fludrocortisone, which is available as tablets, dispersible tablets or solutions.	They are given directly into a vein usually in hospital and include hydrocortisone and methylprednisolone.

3. For what conditions oral steroids are prescribed?

Oral steroids are used to treat a wide range of inflammatory and auto-immune conditions

- ▶ Autoimmune diseases (e.g systemic lupus erythematosus, pemphigus).
- ▶ Allergies, including severe allergic reactions.
- ▶ Joint and muscle diseases (e.g rheumatoid arthritis).
- ▶ To prevent organ rejection after a transplant.
- ▶ Asthma.
- ▶ Inflammation affecting blood vessels, heart, bowel or kidneys.
- ▶ Inflammatory bowel diseases (e.g Crohn's disease, ulcerative colitis).
- ▶ Some cancers, including leukemia, lymphoma and myeloma.

4. How oral steroids are available?

Steroids are available as tablets, soluble tablets and liquids (solutions)

5. How are steroids administered?

- ▶ By mouth (oral)-It is the usual route.
- ▶ By injection into muscle (intramuscular).
- ▶ By injection into veins (IV infusion).
- ▶ By injection directly into a swollen joint (intraarticular).

6. When do I take steroids?

Steroids should be taken first thing in the morning with milk on empty stomach.

7. What dose of steroid is given? How long can steroids be given?

The dose will vary with individual steroids and the disease (dose may vary between 5 and 60 mg) for which they are prescribed. For short courses, usually a high dose, to control symptoms, is given daily, for a few days/weeks and then stopped abruptly at the end of the course. If the steroid is required for more than three weeks, the dose has to be tapered off gradually and once the condition improves, the treatment is gradually stopped. Sometimes steroids are needed lifelong as symptoms return if they are stopped. In some cases steroids are to be taken every other day.

8. How long steroids take to act?

With oral steroids, within a week one feels better, but it could take up to a month. With intravenous steroids, it can take up to 10 days to feel better after starting treatment. Few people do not respond to steroid treatment, which is known as being steroid refractory.

9. What special dietary instructions should I follow?

A low-salt, high potassium, or high calcium diet is advisable. Supplemental Calcium (1200 - 1500 mg) and Vitamin D (400- 800 IU) is usually prescribed with steroids.

10. Why is it necessary to reduce the dose gradually before stopping steroids?

Human body normally produces steroids by itself which is required to maintain good health. When steroids are taken for a few weeks or more, the body may reduce or stop making its own steroids. Hence if steroids are stopped suddenly, body does not have any steroids, which can lead to various withdrawal symptoms that occur until the body resumes making natural steroids. The withdrawal symptoms can be serious/life-threatening and include:

- ▶ Weakness.
- ▶ Tiredness.
- ▶ Feeling sick (nausea).
- ▶ Being sick (vomiting).
- ▶ Diarrhoea.
- ▶ Abdominal pain.
- ▶ Low blood sugar (hypoglycaemia).
- ▶ Low blood pressure (hypotension) which can cause dizziness, fainting or collapse

The body gradually resumes its natural production of steroids if the dose is reduced gradually, and the withdrawal symptoms do not occur.

11. Do steroids cause any side-effects?

Side-effects do not occur with short course of steroids. Side effects are more likely if long course of steroids (more than 2-3 months) are taken or, short courses are taken repeatedly. The higher the dose, the greater is the risk of side-effects. Hence lowest possible dose which controls symptoms is aimed for when steroids are needed long-term. A common treatment plan is to start with a high dose to control symptoms and then the dose is slowly reduced to a lower daily dose that keeps symptoms away. The length of treatment can vary depending on the disease.

12. What are the side effects?

- ▶ Elevated eye pressure (glaucoma), that if not diagnosed can result in lower vision.
- ▶ Fluid retention leading to swelling in the lower legs.
- ▶ High blood pressure (hypertension).
- ▶ Mood swings.
- ▶ Weight gain, especially on the face, neck and abdomen.
- ▶ Cataracts - Clouding of lens in one or both eyes.
- ▶ High blood sugar (diabetes).

- ▶ Increased risk of infections (eg chicken pox, reactivation of tuberculosis).

- ▶ Osteoporosis (thinning of bones) and fractures.

- ▶ Poor healing after injuries, thinning of skin, easy bruising and stretch marks.

- ▶ Difficulty in sleep (insomnia).

- ▶ Muscle weakness (especially of thigh muscles causing difficulty in getting up).

- ▶ Duodenal and stomach ulcers causing indigestion or abdominal pains.

- ▶ Thrush in mouth (fungal infection).

- ▶ Indigestion and/or heart burn.

- ▶ Mood and behavioral changes.

- ▶ Weight gain.

- ▶ Hip or shoulder avascular necrosis.

- ▶ Pain or infection in the joint occurs if steroids are injected into the joint.

13. Who cannot take oral steroids?

Steroids cannot be given to some patients e.g. in people who have serious infections, as steroids suppress immune system.

Steroids should be used with caution in the following individuals

- ▶ In whom liver is not functioning well.
- ▶ Having history of mental health problems.
- ▶ Having open wounds (steroids can interfere with wound healing).
- ▶ Having a history of stomach/duodenal ulcers.
- ▶ Having 'thinning' of the bones.
- ▶ Having cataracts.
- ▶ Having certain heart conditions like heart attack, heart failure or high blood pressure.