

PATIENT INFORMATION ON CORTICOSTEROIDS (CORTISONE / STEROIDS)

What are Corticosteroids? Steroids are the name given to a group of hormones, which are produced naturally in the body. They are essential for normal functioning of the body. Man-made Corticosteroids, also called steroids for short, are similar to the naturally occurring steroid, cortisol. They include Prednisolone or Prednisone brand names Panafcortelone[®], Solone[®]). Corticosteroids are used to treat inflammatory diseases such as rheumatoid arthritis, systemic lupus erythematosus (SLE/lupus) and other inflammatory disease.

They have a strong anti-inflammatory effect and thus reduce the swelling and pain in joints and other organs. They do not cure the disease. They should not be confused with male or female steroid hormones, which are known for their misuse amongst athletes.

What benefit can you expect from your treatment? Corticosteroids work very quickly and a benefit is usually noticed within a few days.

How are Corticosteroids given? Corticosteroids can be taken by mouth in the form of tablets or liquid. They can also be given by injection into joints, soft tissues and muscles. Injection into a vein (intravenous) may be used for more serious conditions. Prednisolone is the type most commonly prescribed. It is taken by mouth, usually as a tablet, once a day. Occasionally it is taken every second day. It is usually taken in the morning, with or immediately after food. There are three different strengths of Prednisolone tablets: 1mg, 5mg and 25mg. This means the dosage can be adjusted to suit your needs without you having to take large numbers of tablets. It is always important to check the strength of the tablets, as they look very similar.

What dose is required? The dose required depends on the severity of the disease. A high dose may be used initially and then reduced as symptoms improve. To minimise the risk of side effects, the smallest dose possible will be used.

You should not stop your treatment or change the dose unless your doctor tells you to.

Sometimes your doctor may increase the dose temporarily in situations where your body is under stress, for example during a surgical procedure or if you have a severe illness with an infection. Even after you have stopped Corticosteroids, your doctor may prescribe them again for a short period in certain situations as described above. Corticosteroids may be used with other arthritis medicines including:

- other DMARDs such as Methotrexate;
- biological DMARDs; and/or
- simple pain killers such as paracetamol.

Are there any side effects?

Low dose Corticosteroids given for a few days or even a few weeks do not normally cause any unwanted side effects. If Corticosteroids are taken in high doses or for a long time, certain predictable side effects can occur. Some of these resolve after Corticosteroids are stopped. Many can be minimised by giving the lowest effective dose over the shortest possible period of time. The effects may also be minimised by giving the medicine by injection into the joints or into a muscle.

Most common side effects:

- **Weight gain:** The most common side effects are rounding of the face and weight gain around the stomach. These occur due to altered metabolism, increased appetite and salt retention.
- **Osteoporosis (thinning of the bones):** While very low doses of Corticosteroids (less than 5 mg/day) have a much less risk of thinning of the bones, moderate and high doses usually cause this problem. To reduce the risk, it is recommended that you:
 - have a calcium intake of 1000mg each day (e.g. 3 serves of dairy);
 - take 30 minutes of weight bearing exercise each day (e.g walking);
 - avoid smoking and excess alcohol; and
 - get sunlight exposure to maintain Vitamin D levels. You should wear sunscreen as usual to protect your skin from sun damage. As well as sun exposure, a Vitamin D supplement may be recommended if Vitamin D levels are low.
- **Skin:** The skin, especially on the arms and legs, can become thin, easily bruised and slow to heal. This occurs particularly after long term use, on higher doses and in older patients with skin problems related to aging. In younger patients, acne may be a problem.
- **Diabetes:** Corticosteroids can cause a rise in blood sugar in diabetic patients. This may require a change in their diabetes medicine. It can also cause the onset of diabetic symptoms in those people who are at risk of diabetes but did not have it previously.
- **Blood pressure:** Corticosteroids may cause an increase in blood pressure. If you already have high blood pressure they may also make it more difficult to control. This can be monitored and changes can be made to your blood pressure medicine if required.
- **Psychological effects:** Corticosteroids can cause euphoria (feeling high), other mood or personality changes such as irritability, agitation or depression. While psychological effects are quite common, they rarely cause significant problems.
- **Trouble sleeping** may also occur but can be minimised by taking Corticosteroids in the morning.
- **Infections:** There may be an increased risk of some infections, including mouth infections (such as thrush), shingles and lung infections. Pre-existing infections such as tuberculosis (TB) may become active again. It is important to tell your doctor if you have a chronic infection or have been exposed to TB earlier in your life.
- **Indigestion** or heartburn can be a problem. Taking Corticosteroids with food can reduce this.
- **Ulcers:** If taken with nonsteroidal anti-inflammatory medicines (NSAIDs), Corticosteroids can further increase the risk of stomach or duodenal ulcers.

Less common or rare side effects:

- **Eyes:** With long term high dose treatment Corticosteroids may increase development of cataracts.
- **Other:** Facial flushes, constipation and avascular necrosis (a painful bone condition usually seen in the hip or knee) can occur very rarely.

What precautions are necessary?

Many of the above side effects can be managed or prevented by close medical supervision and by following your doctor's recommendations.

The dose of Corticosteroids you have been prescribed should not be exceeded.

You should not cease your treatment suddenly or change the dose unless your doctor tells you to (see section on adrenal insufficiency, below).

Bone Density Tests

- Your doctor will tell you if a bone density (BMD) test is needed to check your risk of osteoporosis.

Blood Tests

- Since sugar and cholesterol levels can be increased by Corticosteroids, you will need to have blood tests to check these levels. Your doctor will tell you when the blood tests are required.
- Your general practitioner will be informed about the tests you need to have. It is important to see your general practitioner if you have been asked to do so as they have an important role to play in monitoring your condition.

Pregnancy and breastfeeding:

- Corticosteroids therapy may be used safely in pregnancy and breastfeeding. It is important to tell your doctor if you are, or intend to become pregnant or if you are breastfeeding.

Other medicines:

- Corticosteroids can interact with other medicines. You should tell your doctor about all medicines you are taking or plan to take. This includes over the counter or herbal/naturopathic medicines.
- You should also mention your treatment when you see other health professionals, even if you have stopped taking Corticosteroids within the last 12 months.
- If you are going to have an operation, it is important to tell the anaesthetist if you are taking or have been taking Corticosteroids in the last year. A steroid boost may be required at the time of surgery.
- Most vaccines can be given safely but live vaccines, such as measles vaccine, should not be given while you are taking high dose Corticosteroids.

Adrenal Insufficiency:

- Your adrenal glands, which are just above the kidneys, normally make Corticosteroids in small amounts. These are important for many normal body functions. If prescribed Corticosteroids are taken, the body begins to make much less than usual or even stops completely.

If the medicine is then **suddenly** stopped there may be a problem, as the adrenal glands won't have had time to make the Corticosteroids needed. This problem is called "adrenal insufficiency." Signs of adrenal insufficiency include weakness, fatigue, fever, weight loss, vomiting, diarrhoea and abdominal pain. If you experience any of these problems, seek medical help.

Corticosteroid tablets should not be stopped unless your doctor tells you to.

All patients taking Corticosteroids should be seen regularly by a rheumatologist to optimise treatment and to minimise any potential side effects.

If you have any questions or concerns write them down and discuss them with your doctor.

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REMEMBER – Keep all medicines out of reach of children

The information in this sheet has been obtained from various sources and has been reviewed by the Australian Rheumatology Association. It is intended as an educational aid and does not cover all possible uses, actions, precautions, side effects, or interactions of the medicines mentioned. This information is not intended as medical advice for individual problems nor for making an individual assessment of the risks and benefits of taking a particular medicine. It can be reproduced in its entirety but cannot be altered without permission from the ARA.