

Information for Patients

Treatment with Prednisolone Tablets

Prednisolone is a steroid tablet. It is similar to a hormone that you make in small amounts in your own adrenal gland, but it has powerful effects against inflammations within your body. People who have severe arthritis or asthma commonly use prednisolone, but it is also used to treat a wide variety of other inflammations, including inflammations of the eye and orbit, for example in thyroid eye disease and non-specific orbital inflammatory syndrome ('pseudo-tumour').

Prednisolone suppresses inflammation in the eye, orbit and elsewhere. **It does not 'cure' the inflammation.** Some forms of inflammation only last for a short time (a few weeks or more) and then disappear by themselves. However, in this short time, they may do considerable damage to vision. In these circumstances, prednisolone may be prescribed temporarily to minimise the damage. It may then be stopped once the inflammation has gone.

Some forms of inflammation get 'switched on' by unknown causes, and for some reason the body is not capable of 'switching off' the inflammation. In this way, some inflammations can go on for many years, and during this time progressive damage to vision can occur. In this circumstance, prednisolone may be prescribed to minimise the damage, **but because the inflammation does not go away**, prednisolone needs to be taken for long periods.

Prednisolone tablets have many effects upon the body. It is important that you understand the effects that prednisolone may have on you. The effects vary from person to person and depend on the dose that you are taking and the length of time that **you take it for.**

If prednisolone is prescribed for you, **it is important that you carry a steroid card with you at all times.** Any doctor, dentist or nurse who may need to treat you for any reason will need to know that you are taking a

steroid and what dose you are taking. It is very important that you take exactly the dose prescribed and **do not stop taking the treatment suddenly.**

If prednisolone is prescribed for your orbital inflammation, it will usually be started at a high dose. This is the best way to reduce your severe inflammation quickly. Once it has begun to take effect, the dose of prednisolone will be reduced quite quickly at **first**, then more gradually. Your eyes will be closely observed during this time to judge what dose (if any) of prednisolone will be needed to keep your eyes as healthy as possible.

Some patients need to carry on with quite a high dose of prednisolone in order to minimise damage to their vision. **This will lead to long-term side effects.** Every attempt will be made to minimize the dose of prednisolone, but sometimes it is necessary to combine treatment with other drugs, for example Azathioprine, so that the dose of prednisolone can be reduced further. This is usually only necessary for very severe forms of orbital inflammation. It may be necessary for some patients to see another specialist at the same time, for example an endocrinologist. In such circumstances the best treatment, or combination of treatment, may be decided after liaison between specialists.

If prednisolone is to be prescribed for your eye inflammation, you will need to know about potential problems associated with it. The most important of these are:

- **Psychological changes**

Some people, when starting prednisolone, usually at high doses, notice that their mood changes. This may be moodiness and depression, or elation and a feeling of well being. Sometimes sleep is disturbed. These effects usually reduce and disappear as the dose is reduced.

- **Stomach irritation**

Some people taking prednisolone find that they get a stomach upset. This may be very mild, with a little nausea, a feeling of fullness or mild indigestion. Occasionally there is more discomfort. If this is the case, you may be prescribed an antacid (white medicine) or a different drug to relieve this. It is important to tell the doctor if you have ever had an ulcer in the

past, as there is a risk of ulcers developing in patients taking steroid treatment.

○ **Weight**

Patients taking prednisolone often gain weight, partly by retaining more fluid, and partly because of a bigger appetite. You will be weighed regularly in clinic. **It is very important for you to try and ensure that your weight is kept under control from the very beginning of your treatment.** If you do gain a lot of weight it is often very difficult to lose it later.

○ **Diabetes**

Occasionally patients who are taking prednisolone develop signs of diabetes, or those who are diabetic already may find their diabetes more difficult to control. Your urine will be tested regularly to check for this problem, which affects only a few patients.

○ **High blood pressure**

High blood pressure may occasionally develop in those who are taking prednisolone. Sometimes this needs to be treated. Your blood pressure will be monitored regularly in clinic.

○ **Infection**

Prednisolone affects your body's immune system and affects the way that your body fights infection. For those patients taking only a low dose, this is very unlikely to cause problems. For those needing higher doses, especially those also using other drugs to combat inflammation, there may be as problem with three infections in particular:

1. Chickenpox

If you have definitely already had chickenpox, you are not at risk. If you are not sure, or have not had it before, **it is important that you avoid close contact with people who are known to have either chickenpox or shingles.** If you do accidentally come into close contact with anyone with these conditions, **you must get in touch with your GP immediately,** and they will arrange to give you a protective injection within a few days.

2. Measles

If you have been immunised **against** measles (MMR vaccine), you are not at risk. If you are not sure, or have not been immunised, **it is important that you avoid close contact with people who are known to have measles**. If you do accidentally come into contact with anyone with measles, **you must get in touch with your GP immediately**, and they will arrange to give you a protective injection within a few days.

3. Tuberculosis (TB)

If you come into contact with anyone who has TB, it is important that you contact your GP or eye doctor, who will arrange for you to have a chest X-ray. If you have previously had TB yourself, it is essential that you tell the doctor before you begin to use prednisolone.

○ Osteoporosis

Osteoporosis is a reduction in the density of the bones, which makes them less strong. It is a common problem, especially in women after the menopause. Osteoporosis is a problem because bones are more likely to fracture during an injury, for instance in a fall, and if osteoporosis is severe, it is even possible for bones to fracture without injury.

Steroid treatment, if taken in a sufficient dose for a long enough period of time, causes osteoporosis. If a patient has osteoporosis already, steroids will make it worse. Those at most risk are women after the menopause.

There is no drug treatment which has been proven to prevent fractures in those patients who are taking steroid treatment. However, there are measures that can be taken to increase bone density in order to reduce the potential problem of bone fractures.

Despite taking all the above measures, some patients may still develop significant osteoporosis. As this is more likely for women after the menopause it is now recommended that if you are a woman, and have been through the menopause, the best form of treatment to prevent osteoporosis, or to reduce it if you have already developed it, is to take **Hormone Replacement Treatment (HRT)**. This treatment is prescribed by your GP, who will explain the implications of treatment before it is started.

Some women do not wish to have HRT, or find that it does not agree with them, or have taken it for the maximum recommended period of 5-10 years. For those women and for other men and women who are felt to be at high risk of developing osteoporosis, alternative treatments are available. The

treatment now prescribed in this clinic is **Didronel CMO**, which is a combination of calcium (the mineral that bones are made of) and a drug that helps to reform bone. This drug can be taken for up to 3 years.

- **Adrenal glands**

Prednisolone is like the hormones made by your own adrenal glands. When you take prednisolone for long periods, the amount of hormone made by your adrenal glands is reduced. The adrenal glands are not capable of 'switching on' again suddenly, but the hormones they produce are essential. It is therefore very important that **you never stop taking your prednisolone unless instructed to do so by your doctor**. If it is planned to stop prednisolone, this will always be done in gradual stages to allow your adrenal glands to recover.

- **Changes to your skin, muscle and body shape**

If used in moderate or high doses for long periods, prednisolone changes the way that fat is deposited in your body. This may cause fat to accumulate on hips, stomach and shoulders. Sometimes the face becomes puffy and the cheeks red, more facial hair grows, skin tends to be thinner than normal, and blood vessels become more fragile. There is a greater tendency to become bruised after a minor injury. Occasionally, prednisolone affects muscles and makes them thinner and weaker. These effects are seen, if at all, in patients who have taken large doses for long periods of time.

- **Eye problems**

Prednisolone, no matter why it is being taken, can have side effects on the eyes themselves. There are two potential problems:

1. **Glaucoma**

Prednisolone may cause the pressure inside the eye to rise. This does not cause any discomfort, but if sustained over a long period of time it can cause damage to the vision. This condition is called glaucoma. About 1 in 10 people develop a rise in pressure when using steroid eye drops. Far fewer develop this problem when using prednisolone tablets. Measuring the pressure inside the eye is a regular part of eye examinations in the clinic. If glaucoma does develop, there are various forms of treatment.

2. **Cataract**

Prednisolone may cause cataract, which means that the lens inside the eye (which is normally clear) turns gradually cloudy. An operation is necessary to remove the cataract. Cataract is extremely common in patients taking more than 5 milligrams of prednisolone daily over a period of years.

Every effort is made to reduce the side effects of prednisolone treatment. However, prednisolone is a potent drug. **There is no drug useful for the treatment of orbital inflammation that is entirely free of potential or actual side effects.**

General information about your steroid treatment.

Courses of prednisolone treatment will always be kept as short as possible, in order to make osteoporosis and other side effects less likely. However, some patients will need to take prednisolone for months or years in order to keep their sight. In this case, osteoporosis will occur.

Doses of prednisolone will always be kept as low as possible. However, some patients will need higher doses of prednisolone in order to keep their sight. If the required dose proves to be unacceptable because of actual or potential side effects, then it may be possible to add other treatments to combat the inflammation. If this is possible, the steroid dose can be reduced. There is no absolutely 'safe' dose of prednisolone, below which osteoporosis will not occur. However, in general those who are taking 5 milligrams per day or less, even for long periods, are at a much lower risk.

It is important to take in an adequate supply of **Calcium** to help maintain bone structure. It is not necessary to take Calcium tablets, but it is important to eat enough Calcium-containing foods. Enough Calcium for one day's intake is contained in a pint of milk (with or without cream). Other dairy foods also contain calcium - one pot of yoghurt contains about one third of the daily intake, as does one ounce of cheese (except cottage cheese). Other foods, which are good for calcium intake, include spinach, broccoli, oranges and prawns. **A high salt intake should be avoided.**

Regular exercise, especially involving weight-bearing bones such as the hips and backbone, is known to reduce the problem of osteoporosis and to make fractures less likely. If you are taking prednisolone it is important to take frequent and substantial exercise.

Reducing weight reduces stress on bones. It is very important, if you are taking prednisolone, to keep your weight under control.

Smoking is known to make osteoporosis worse. It is very important, for this and many other health reasons, for you to try to give up smoking if you take prednisolone. Alcohol is also thought to make osteoporosis worse. Again, it is important, for this and other health reasons, to keep your alcohol intake to a low-level if you are taking prednisolone.

Every patient and every eye/orbital inflammation is different. The information in this booklet is intended to give you a general picture of the uses of, and the complications of treatment with prednisolone. Always ask the doctors and nurses in the clinic if you are unsure of, or want more detail on any of the points raised in this booklet in relation to your eye problem or health in general.