



Steroids used for treatment of Rheumatology diseases

Steroids are used to control inflammation rapidly in patients with rheumatoid arthritis and various other rheumatic diseases. This article is meant to give you information on why rheumatologists use steroid tablets or injections. This will also help you understand the various precautions to take or things to understand while taking steroids for rheumatic diseases.

What are steroids used in rheumatology or autoimmune or inflammatory diseases ?

Our body naturally produce some kind of steroids in small amounts. These are necessary to carry out various normal function of the body.

However, we need man-made or external steroids to control the excess inflammation that occurs in rheumatic diseases. Our immune system normally functions to protect us from various infections and internal problems. However, in most rheumatic diseases, the immune system becomes over active. This overactive immune system starts damaging one's own joints or organs. Such diseases are known as autoimmune diseases. Such diseases causes excessive inflammation in various joints or organs. Excess inflammation leads to swelling and can damage to the joints or the organs. Steroids help to control this inflammation rapidly and helps to prevent damage to the joints or the organs.

In which form are steroids used in rheumatology ?

Steroid can be used in either tablet or injection forms.

In the form of tablets.

Prednisolone (commonly known by brand names like *Omnacortil* or *Wysolone*) is the most common man-made steroid used in routine medical practice. Sometimes other oral steroids like methylprednisolone or deflazacort are also used.

Steroids can be used in the form of injections in the three ways :

In very severe rheumatic diseases we might use very high dose of Steroids in the form of an intravenous or iv drip. We call this pulse steroid therapy. This is usually given for 3 to 4 days to control the inflammation very fast if patient has a severe rheumatic disease with severe life or organ threatening issue. We usually use methylprednisolone (succinate) injections for pulse steroids.

We can also give steroids like methylprednisolone and triamcinolone intramuscularly (in the muscles) in small to moderate doses. These very helpful to control active rheumatic disease or arthritis at the start . This can also be given when the patient has flares or increased disease activity.

Steroids like methylprednisolone and triamcinolone can also be given locally in the joints as a joint injection.

This article is mainly meant for patient information on steroid tablets used in rheumatic



diseases. The further discussion will be mostly on steroid tablets. The pulse steroid therapy is usually given in hospital setting and the patient can discuss about the same with doctor during that time. Will have a separate article on intra articular or steroid injections given in joints.

Where do we use steroid tablets in rheumatology diseases ?

Steroid tablets are commonly used to treat many rheumatic diseases, especially at the start. They help to bring the disease under control very fast.

They are commonly used in :

Rheumatoid arthritis
Systemic lupus erythematosus (SLE)
Vasculitis
Myositis
Many other inflammatory rheumatic conditions

Depending on the dose given, the diagnosis of patient and severity of disease, steroids can be effective in giving relief in few hours to days.

When should steroid tablets be taken ?

Steroid tablets are usually take once a day in the morning with light breakfast or tea/milk at around 7:00 to 8:00 a.m. It's best to take steroids in the morning as this may possibly cause less side effects. Sometimes rheumatologists might give them on other times of the day.

The dose of steroid tablets will depend on the exact rheumatic disease one has and how active or severe it is. Once the diseases is controlled and other medications are started the steroid is gradually decreased. Now-a-days, in most rheumatic diseases, we are able to decrease and stop steroids after some time. In some cases we might have to continue smaller doses of steroid for maintenance.

We can give this analogy to patients of rheumatic diseases.

Active rheumatic disease is like a hot iron rod/plate. We have to hit the hot iron rod hard with drugs like steroids so that we can get the desired shape. Once we get the desired shape (disease under reasonable control) we can gradually stop or decrease the doses of steroids. Thereafter we try to just maintain the shape (or maintain the disease under control) with disease modifying anti-rheumatic drugs (DMARDs : methotrexate, leflunomide etc) or with low doses of steroids.

I have heard that steroid are very bad for the body and have many side effects. Why should I take steroid tablets ?

In rheumatology we use steroids very judiciously and only when it is absolutely required.

Steroids can be very helpful and a very cost effective method to control the disease very



rapidly at the starting phase of the disease. They are very helpful to prevent any damage to joints or any major organs.

For example

1. In rheumatoid arthritis we use steroids in very low doses at the start of the disease. This helps to control the disease very fast and gives good pain relief. It has been also shown that giving small doses of steroid in Rheumatoid arthritis can have long lasting good benefits with minimal side effects.
2. Systemic lupus erythematosus (SLE) or Lupus can be an aggressive disease. In this disease the patient can have a major life threatening or organ threatening involvement, eg brain or kidneys etc. We have to use the higher dose of steroids to save life or save the organ. In such patients we might have to carry steroids on a longer-term basis and it might have some side effects. However, these types of patient can have severe problems if we don't you steroids in the right doses.

Today the concept in rheumatology is to you steroids in the lowest possible doses for the lowest possible duration. A Rheumatologist will try to decrease your steroid dose if possible in every visit. Also, a rheumatologist can use some measures or gives advice to prevent or minimise any side effects arising with steroids.

What are the possible risk and side effects with steroid tablets ?

As with any medications, all things can have side effects. You should know about the side effects and can discuss with your doctor about the ways to minimise them.

1) The most common side effect with steroids are

Weight gain and or increasing appetite

Weakening of the bones

Thinning of the skin and easily bruisable skin (mild trauma leads to red patches)

Indigestion or gastric problems

Swelling over the face or a round face

Stretch marks

2) If one is having borderline diabetes or actual diabetes, steroids can also make sugars go higher. It can also increase your blood pressure levels and the doctor should check your sugar and blood pressure at regular intervals while you are on steroids.

3) Steroids can also increase the pressure in eye, specially in patients who have high eye pressure disease known as glaucoma. Use of steroids for more than three to six months in higher doses can also lead to cataract formation.

4) Steroid treatment can also lead to mood changes. People sometimes feel very happy or euphoric on starting steroids and may feel low when the steroids are tapered off. If you are worried please talk to your doctor regarding the same.

5) As we have told before steroids are use do control overactive immunity in patients with



autoimmune rheumatic diseases. The steroids can hence suppress the immune system and can increase risk of infections.

What precautions should I take to avoid my risk of infections with steroids ?

Because there is increased risk of infections while taking steroids, one should take the following precautions to avoid infections.

- Try to avoid coming in contact with people who have active infections which can spread by close contact eg: like flu, tuberculosis etc
- Eat healthy and stay active. That makes you less likely to have infections.
- Keep proper hand hygiene. Always wash your hands regularly, specially before meals and after using washrooms. Try to carry alcohol based hand sanitizer in case you are not able to find a place to wash your hands.
- Try to avoid eating food from sources questionable quality (eg: roadside unhygienic eateries, stale food etc). Even if patient cannot avoid eating outside, they should try to eat things fresh and immediately prepared food. If in doubt try having something hot from the plate as it is likely to be more safe.

One should also inform their specialist doctor if they have one of the following while they are taking steroids

- If you have any symptoms suggestive of infection like fever, cough, cold, diarrhoea, or urinary problems, etc
- One should also tell their doctor if they develop chickenpox or shingles or come in contact with somebody having chicken pox.

How to tackle side effects of the steroids ?

1) Weight gain - Try to eat healthy foods change your lifestyle and be active

2) Weakening of bones : Try to have a good diet with adequate calcium. Doctor might you calcium and vitamin D supplements. In older patients and patients with prior history of fracture we also give some additional tablets to prevent weakening of the bones. Please report any new fracture or any back pain which is sudden in onset (indicating vertebral fracture) to your doctor while you are on steroids.

3) Sugars, diabetes and blood pressure : Regularly monitor of sugars and blood pressure. Your physician should be able to adjust diabetes and blood pressure medications.

4) Infections : Ways to avoid infection mentioned above

As already mentioned, the doctor will try to decrease the steroid and stop it as soon as possible. They will do this when they feel that it is safe to stop the steroids without causing the damage to the organs. Please take the disease modifying drugs (eg : methotrexate, Leflunomide, mycophenolate, biologicals etc) given by doctor properly. Once they start working we can decrease steroid doses easily.



What is stress doses of Steroids and why do I need to know that ?

Our body produces steroid in a very small amount for normal functioning of the body. This is a very essential thing for the body and our body requires the small amount of natural production of steroids. Our body naturally releases a slightly higher amount of steroids during period of body stress eg : during surgery, during some major infection etc. This helps the body to cope up with the stress of additional disease.

In patients who are receiving man-made or external steroid tablets on a regular basis, the natural body response to produce extra steroids is suppressed. The body in such cases fails to produce a boost of steroids required for the body to cope with the stress. So, in such patients, the doctor might actually have to increase the steroid dose during surgery or infections.

Always inform any doctor you are visiting that you are on steroid tablets along with duration you have been on them. They will decide whether you need extra boost of steroids or not.

Vaccinations while taking steroids

There are many vaccines which can be given to adults besides vaccine given to children. Always discuss any vaccine you are taking with your doctor.

- Patients should not take vaccines with live bacteria while they are on steroids. Live bacteria vaccines are safe in general public. However, because immunity of patients on steroids may be low, live vaccine in them may cause infection and hence should be avoided. Eg of live vaccines : Yellow fever vaccine, chicken pox vaccine, Zostavax shingles vaccine, etc.
- It's usually safe to take vaccines not containing live bacteria in patients on steroids.

Your doctor may advise you some vaccines to decrease the risk of some infections. Usually pneumonia bacteria (one time vaccine) and influenza or flu (every year) vaccines are advised or recommended in rheumatic patients on various medications. However, it will vary for each patient and doctor.

Alcohol

Consuming alcohol in moderation is not a problem while one is on steroid drugs.

Fertility pregnancy and breastfeeding

It is safe to take steroid tablets during pregnancy to control the disease. While one is on steroids one should always discuss pregnancy planning with their doctor. It is best to start planning pregnancy when the primary disease is well controlled and doctor feels it is safe to do so.

Steroid drugs doesn't affect fertility or one's chances of getting pregnant.



Very small amount of steroids can pass into breast milk, but it doesn't cause any harm to baby. It is safe to take steroid tablets while breastfeeding.

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