

Steroids can beat severe Covid, but don't use them without doc's advice



In the first wave of Covid, steroids were found to be an effective treatment for critically ill Covid patients and proved to be a life-saving medication in many cases. In the second wave, doctors are using steroids based on specific case presentations and advise people not to take them without consulting with their local physician.

Dr Vivek Nangia (left), principal director and head of pulmonology, and **Dr Rommel Tickoo**, director of internal medicine, at Max Super Speciality Hospital in Saket, Delhi, tell **Malini Menon** when steroids should be given to patients, and how they work



Why are steroids used to treat coronavirus?

Corticosteroids or 'steroids' are drugs that closely resemble cortisol, a hormone made by our adrenal glands. They are powerful anti-inflammatory drugs that can prevent or lessen the inflammation that occurs in severe Covid-19. If left unchecked, such inflammation can damage critical organs like the lungs.

Steroid use for serious Covid cases became common after last year's 'Recovery Trial' in the UK showed they reduce mortality in patients on supplemental oxygen or a ventilator.

However, it's important to note patients not requiring oxygen support did not benefit from steroids. So, they should not be used in patients with non-severe Covid, unless they are taking steroids for another condition.

The first week of Covid mainly involves the infection caused by the virus. In the second week, the body mounts an immune response, which is when steroids have a role to play. If a patient is given steroids in the first week, it can actually worsen infection spread or cause secondary infections.

Are patients in home isolation given steroids?

Patients in home isolation with mild symptoms, oxygen saturation above 94% and no pneumonia, don't need steroids. However, a short course of 3-5 days may be considered under strict medical supervision if they have high-grade fever and worsening cough more than 7 days after the onset of illness. Inhaled corticosteroids (budesonide) may be given if fever and/or cough persist beyond five days of disease onset.

A study published by Oxford University in the Lancet Respiratory Medicine says two puffs of budesonide daily for 14 days could reduce



the risk of hospitalisation in mild to moderately ill Covid patients by 91%, especially if they start taking it as soon as symptoms such as sore throat and cough start.

A SHOT OF HOPE

TOI Covid Guide

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Are steroids safe for pregnant women, lactating mothers and children?

Steroids like betamethasone and dexamethasone are routinely given to pregnant women with threatened pre-term delivery. Given its potential benefits and safety, dexamethasone is recommended for pregnant women who are mechanically ventilated or require supplemental oxygen.

However, the safety and effectiveness of steroids in children with Covid has not been established fully. Their use should be decided case by case.

What are the side effects of steroid use?

As the treatment is short, even at high doses corticosteroids are not associated with serious side effects. However, a short course of steroids may cause temporary effects like higher blood sugar and blood pressure, loss of sleep, psychological effects, increased appetite, weight gain and secondary infections.

That said, prolonged use (for more than two weeks) may be associated

Looking after yourself in home isolation

- ▶ Take paracetamol to control fever, fluids to maintain hydration, and cough suppressants for relief from cough
- ▶ Regularly monitor temperature, respiratory rate and oxygen saturation, and promptly seek medical help if they are out of range
- ▶ Patients above 60 years of age, and those who have diabetes, obesity, hypertension and CAD, or are immunocompromised because of chronic lung/kidney/liver disease need very careful monitoring

with adverse events such as glaucoma, cataract, fluid retention, hypertension, psychological effects (mood swings, memory issues, confusion or irritation), weight gain, increased risk of infections and osteoporosis.

Steroid use in diabetics with severe Covid can cause sugar levels to shoot up necessitating a higher dose of both anti-diabetic drugs as well as insulin. These patients require frequent blood glucose monitoring and good diabetes control. They should reach out to their doctors immediately if they develop symptoms of diabetes ketoacidosis like increased thirst, nausea, abdominal pain, extreme fatigue and fruity breath.

What is the link between steroids and 'black fungus'?

Unwarranted high doses of steroids, often coupled with unnecessary high-generation antibiotics, create conditions for life-threatening fungal infections.

Mucormycosis or 'black fungus' is a very rare fungal infection that's in the news now. It is linked to the use of steroids in Covid and affects the sinuses, brain and lungs, and can be life-threatening in diabetic or severely immunocompromised individuals such as cancer patients or people with HIV/AIDS.

Warning signs of mucormycosis include blood in sputum, pain and swelling around the eyes, headache, loss of vision and reddish-blue discoloration of the skin overlying the involved sinuses.