



# Corticosteroids for COVID-19

**O**n 2 September 2020, the World Health Organisation (WHO) published guidance recommending the use of corticosteroids for patients with severe cases of COVID-19. This is a living guidance document and can be downloaded in full at [www.who.int](http://www.who.int) > Publications > Latest COVID-19 Publications > *Corticosteroids for COVID-19*. In this article I have summarised the main points from the WHO guidance document.

Corticosteroids received attention as a potentially effective treatment for COVID-19 in June 2020 due to the publication of the preliminary report of the RECOVERY trial.

WHO has partnered with the non-profit Magic Evidence Ecosystem Foundation (MAGIC) for methodologic support, to develop and disseminate living guidance for COVID-19 treatments. WHO also partnered with investigators of seven trials on corticosteroids to conduct a prospective meta-analysis of randomised trials for corticosteroid therapy in order to provide additional evidence to build on RECOVERY data.

The guideline panel was composed of 23 individuals, of whom 21 were content experts (clinicians, methodologists, scientists) and two were patients who survived COVID-19.

## Recommendation 1

**WHO recommends systemic corticosteroids rather than no systemic corticosteroids for the treatment of patients with severe and critical COVID-19 (strong recommendation, based on moderate certainty evidence).**

Critical COVID-19 is defined by the criteria for acute respiratory distress syndrome (ARDS), sepsis, septic shock or other conditions that would normally require the provision of life-sustaining therapies, such as mechanical ventilation (invasive or non-invasive) or vasopressor therapy.

Severe COVID-19 is defined by any of the following:

- Oxygen saturation < 90% on room air;
- Respiratory rate > 30 breaths per minute in adults and children > 5 years old; ≥ 60 breaths per minute in children less than 2 months; ≥ 50 breaths per minute in children 2–11 months; and ≥ 40 breaths per minute in children 1–5 years old; or
- Signs of severe respiratory distress (i.e. accessory muscle use, inability to complete full sentences, and in children, very severe chest wall in-drawing, grunting, central cyanosis, or presence of any other general danger signs).

The ease of administration, the relatively short duration of a course of systemic corticosteroid therapy, and the generally benign safety profile of systemic corticosteroids administered for up to 7–10 days led the panel to conclude that the acceptability of this intervention was high.

Ultimately, the panel made its recommendation on the basis of the moderate certainty evidence of a 28-day mortality reduction of 8.7% in the critically ill, and 6.7% in patients with severe COVID-19 who were not critically ill, respectively.

In contrast to other candidate treatments for COVID-19 that generally are expensive, often unlicensed, difficult to obtain, and require advanced medical infrastructure, systemic corticosteroids are low cost, easy to administer, and readily available globally. Dexamethasone and prednisolone are among the most commonly listed medicines in national essential medicines lists, listed by 95% of countries.

## Recommendation 2

**WHO suggests not to use corticosteroids in the treatment of patients with non-severe COVID-19 (conditional recommendation, based on low certainty evidence).**

This recommendation applies to patients with non-severe

disease, regardless of their hospitalisation status. The panel noted that patients with non-severe COVID-19 would not normally require acute care in hospital or respiratory support, but that in some jurisdictions, these patients may be hospitalised for isolation purposes only, in which case they should not be treated with systemic corticosteroids. The panel concluded that systemic corticosteroids should not be stopped for patients with non-severe COVID-19 who are already treated with systemic corticosteroids for other reasons (e.g. patients with chronic obstructive pulmonary disease need not discontinue a course of systemic oral corticosteroids; or other chronic autoimmune diseases). If the clinical condition of patients with non-severe COVID-19 worsens (i.e. increase in respiratory rate, signs of respiratory distress or hypoxaemia) they should receive systemic corticosteroids (see recommendation 1).

The panel made its recommendation on the basis of low certainty evidence suggesting a potential increase of 3.9% in 28-day mortality among patients with COVID-19 who are not severely ill.