

Specialty guides for patient management during the coronavirus pandemic

# Clinical guide for the management of patients with musculoskeletal and rheumatic conditions on corticosteroids during the coronavirus pandemic

25 March 2020, Version 1

“...and there are no more surgeons, urologists, orthopaedists, we are only doctors who suddenly become part of a single team to face this tsunami that has overwhelmed us...”

Dr Daniele Macchine, Bergamo, Italy, 9 March 2020

As healthcare professionals we all have general responsibilities in relation to coronavirus and for these we should seek and act on national and local guidelines. We also have a specific responsibility to ensure that essential musculoskeletal (MSK) and rheumatology care continues with the minimum burden on the NHS. We must engage with management and clinical teams planning the local response in our hospitals. We may also need to work outside our specific areas of training and expertise and the General Medical Council (GMC) has already indicated its support for this in the exceptional circumstances we may face: [www.gmc-uk.org/news/news-archive/how-we-will-continue-to-regulate-in-light-of-novel-coronavirus](http://www.gmc-uk.org/news/news-archive/how-we-will-continue-to-regulate-in-light-of-novel-coronavirus). Similar guidance has been issued by the Health and Care Professions Council (HCPC) (<https://www.hcpc-uk.org/covid-19/adapting-how-we-regulate/>) and the Royal College of Nursing (RCN) (<https://www.rcn.org.uk/covid-19/rcn-position>).

Orthopaedic and rheumatology services may not seem to be in the frontline with coronavirus but we do have a key role to play and this must be planned. In response to pressures on the NHS, the elective component of our work may be curtailed. However, these services will need to continue to deliver care. We should seek the best local solutions to continue the proper management of our patients while protecting resources for the response to

coronavirus. In addition, we need to consider the possibility that the facility for patients may be compromised due to a combination of factors including staff sickness and supply chain shortages.

This guidance is to help all healthcare professionals.

**It aligns with the Faculty of Pain Medicine guidance on the use of injected steroids:**

<https://fpm.ac.uk/sites/fpm/files/documents/2020-03/FPM-coronavirus-Steroid-Statement-2020.pdf>

**It is supported by the Chartered Society of Physiotherapy (CSP), British Association of Orthopaedics (BOA), British Association of Spinal Surgeons (BASS) and the British Society for Rheumatology (BSR).**

## Summary

Steroids – oral and injected – can be an important and effective treatment for some MSK conditions, particularly rheumatic conditions, some types of arthritis and joint pain. Sometimes these can be lifesaving. Stopping steroids suddenly can be dangerous, and patients should only do so under clinical supervision.

There is concern that steroids can increase risk from the novel coronavirus (COVID-19). Because of this, we should consider alternatives to steroids where possible. If steroids are needed, use the lowest possible dose for the shortest possible time. If people are already taking steroids, see if their dose can be safely reduced. And only give steroid injections for severe symptoms, and where there are no other options.

- Don't stop current steroids but taper their dose if possible and clinically safe to do so.
- Think before starting steroids in the current pandemic.
- Use the lowest possible dose of oral steroids.
- Only give steroid injections if patient has significant disease activity and there are no alternatives.

## Background

The current WHO guidance<sup>1</sup> for the management of severe acute respiratory infection in patients with coronavirus is to avoid giving systemic corticosteroids. We therefore need to be cautious when using steroids for other indications during the pandemic.

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<sup>1</sup> World Health Organization *Clinical management of severe acute respiratory infection when novel coronavirus (nCoV) infection is suspected*, 2020. <https://www.who.int/docs/default-source/coronaviruse/clinical-management-of-novel-cov.pdf>

Steroids have been associated with an increased risk of mortality in patients with influenza and delayed viral clearance and in patients with Middle East respiratory syndrome coronavirus (MERS-CoV) infection. Although steroids were widely used in management of severe acute respiratory syndrome (SARS), there was no good evidence for benefit but there was persuasive evidence of adverse short- and long-term harm.<sup>2</sup> A recent study of patients with coronavirus from China reports that corticosteroids have no effect on mortality, but do delay viral clearance.<sup>3</sup>

Long-acting, usually insoluble steroid formulations are frequently used in rheumatic diseases. To put this into context, triamcinolone acetonide 40mg is equivalent to 10 times normal daily physiological steroid production. Injected steroids have been shown to cause a variable degree of adrenal suppression for at least some weeks.<sup>4</sup> The potential impact of this immunological suppression in a patient incubating coronavirus at the time or in future is unknown.

Although children and young adults are thought to be at lower risk from coronavirus, this guidance also applies to them as well as adults.

## **Steroid route and indications**

### **Oral prednisolone**

Patients on long-term steroids should not stop their treatment.

If starting steroids during the pandemic, use the lowest possible dose and taper corticosteroid therapy as fast as possible in the clinical context:

- maximum 15mg (0.5mg/kg) daily or equivalent for new polyarthritis (including juvenile onset) or polymyalgia rheumatica
- maximum 40mg (0.75mg/kg) daily for giant cell arteritis (GCA)
- maximum 60mg (1mg/kg) daily for GCA with ocular involvement, large vessel involvement or vasculitis
- maximum 30mg daily for 1 week for gout or pseudogout flares where oral NSAIDs or colchicine are contraindicated and intra-articular joint injection is not possible.
- higher doses of oral prednisolone should only be used on specialist advice

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<sup>2</sup> Russell CD, Millar JE, Baillie JK. Clinical evidence does not support corticosteroid treatment for 2019-nCoV lung injury. *Lancet* 2020; 395:473.

<sup>3</sup> Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 2020; 395(10223):497-506.

<sup>4</sup> Friedly J, Comstock BA, Heagerty PJ, et al. Systemic effects of epidural steroid injections for spinal stenosis, *Pain* 2018; 159(5):876-83.

- high dose steroids may be required to manage an acute flare of severe autoimmune connective tissue disease or vasculitis and specialist advice should be sought.

### **Intramuscular injections**

Only use to control significant disease flare that is compromising a patient's ability to function, and consider using low doses (maximum recommended 120mg methylprednisolone).

### **Intra-articular injections for inflammation**

Only use for inflammatory joints where there is active synovitis ± effusion, and consider using lowest clinically effective doses (maximum 40mg methylprednisolone/triamcinolone acetonide for large joints; 20mg for smaller joints). For children and young people with juvenile idiopathic arthritis, consider using triamcinolone acetonide rather than hexacetonide, particularly if multiple joints to be injected.

### **Intra-articular, peri-articular and soft tissue injections for non-inflammatory musculoskeletal pain**

For example, osteoarthritis, shoulder pain, lateral hip pain, carpal tunnel syndrome and de Quervains.

Recommend simple analgesia, activity modification, splinting where appropriate and exercise as first line and in most patients.

Only consider steroids if patient has high levels of pain and disability, has failed first-line measures and continuation of those symptoms will have a significant negative effect on their health and wellbeing. They must be supported with guidance about activity modification and exercise therapy.

### **Injections for spinal conditions**

Generally avoid for spinal pain and instead recommend simple analgesia, activity modification and exercise. Consider referral for epidural or nerve root block for severe radicular pain.<sup>5</sup>

### **Intravenous methyl prednisolone**

Should be reserved for those with clinically active disease and given on specialist advice only.

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<sup>5</sup> [https://mcusercontent.com/de6171e0ef375ef2e0bc53902/files/a0e8feb1-6117-41e1-a6b7-ecb37debe292/200319\\_BASS\\_Steroid\\_Injections\\_and\\_NSAIDs\\_coronavirus\\_19\\_.pdf](https://mcusercontent.com/de6171e0ef375ef2e0bc53902/files/a0e8feb1-6117-41e1-a6b7-ecb37debe292/200319_BASS_Steroid_Injections_and_NSAIDs_coronavirus_19_.pdf)

## Should I still be injecting corticosteroids during the current coronavirus pandemic?

**As is current practice, individuals with active infections must not be injected with steroids. There is also the potential that such injections could harm those who may be incubating or are later infected with coronavirus.**

Steroid injections are common in MSK management to ease pain, increase mobility and improve quality of life. Their duration of effect is variable but they can provide benefit for several months. However, at this time clinicians need to give extra consideration as to whether the benefits outweigh the risks. The quarantine period for coronavirus is long; an average of 14 days. This means that giving a steroid injection to an asymptomatic patient who is carrying the virus could potentially put them at increased risk of an adverse outcome from the virus. This potential risk needs particular consideration in vulnerable patient groups: patients over the age of 70, and those with diabetes, ischaemic heart disease, chronic respiratory disease and hypertension.<sup>6</sup>

You need to assess an individual's risk analysis on a case-by-case basis.

1. You must telephone triage patients prior to attendance for symptoms that may indicate the presence of coronavirus, and recent close personal contact with a patient with suspected or confirmed coronavirus. These patients should not attend clinics and must NOT be offered steroid injection therapy. You must screen patients who do attend to ensure you understand a person's full medical and drug history as is normal practice.
2. You must exercise your usual clinical judgement and decision-making with each individual case, including by factoring in their health, age, clinical risk and presence of co-morbidities.
3. Consider whether the injection is needed now to keep a person mobile and/or independent, or if it can be delayed until the coronavirus infection risk decreases?
4. Consider if another treatment option presents less risk at this time but can give similar benefit?

If you are a non-prescribing clinician injecting under a patient group directive, then you must follow local guidelines.

If you do decide to undertake injection therapy you **must**:

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<sup>6</sup> <https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19>

1. Adhere strictly to your local infection control policies, including cleaning and use of personal protective equipment (PPE) as required.
2. Consider if you can reduce the maximum dose of the steroid or choose an alternative medicine to minimise the systemic effects of corticosteroid (eg injecting bilateral joints at separate times)?
3. Ensure patients are fully aware of the potential increased risk and the lack of clear evidence related to risk during the coronavirus pandemic. They must be engaged in decision-making.
4. Obtain and document informed consent to proceed with injection therapy.