



OSTEOPOROSIS & COVID-19

Let's keep patients safe, treated and fracture-free!



In this challenging period when healthcare systems are over-stretched, we must adapt to the situation and do all we can to keep patients safe, informed and well-managed.

HEALTH CARE AIMS INCLUDE:

- That patients with osteoporosis remain free from falls and fractures
- The continuation of patients' **osteoporosis treatment** (including calcium & vitamin D supplements)
- That patients receive appropriate advice and arrangements are made for patients' medical consultation:



Face to face
appointment



Telemedicine
appointment



Delivery of
refilled prescriptions

COVID-19 AND VITAMIN D

Isolation indoors may be preventing many people from getting enough vitamin D, which plays a key role in promoting optimal mineralization of bone and reducing risk of falls and fractures¹.



Check whether patients have 15-30 minutes of **daily sunlight exposure** (with face and arms uncovered, taking care to avoid sunburn).



Recommend vitamin D intake through diet, and supplementation for those unable to be outdoors or at risk of osteoporosis or vitamin D insufficiency.

VITAMIN D RECOMMENDATIONS

800 to 1000 IU/day

IOF Intake recommendation
for Vitamin D (adults aged 60+)

50 nmol/L

Target serum 25-hydroxyvitamin D
level for fall
and fracture prevention

Note: currently, there is no evidence that vitamin D supplementation will help to prevent or treat COVID-19 infection.



OSTEOPOROSIS TREATMENT DURING THE COVID-19 PANDEMIC

For all anti-osteoporosis medications, patients are required to be replete in calcium & vitamin D, remaining appropriately treated according to national guidelines ^{2,3}.

General Recommendations

- **DO NOT discontinue any osteoporosis treatment** (including calcium & vitamin D supplements).
- Patients should have at least a **one-month supply of their current medications** on hand during the time of social distancing and self-quarantine.

Pre-injection Blood Tests

- Not everybody needs to have their pre-injection blood test during the COVID-19 pandemic. This is to reduce the risk of exposure to the virus. A delay or skipping blood tests can be considered for patients meeting the following criteria:
 - Have had two pre-injection blood tests that have come back normal
 - Are taking regular calcium or vitamin D supplements
 - Do not have any pre-existing kidney problems and have not had any kidney problems since their last injection

Dental Health During the Pandemic

- Some patients are finding pre-treatment check-up appointments with dentists may be delayed. Good dental health reduces the risk of any rare dental side effects, and the need for a pre-treatment check should be balanced against the need to commence treatment, particularly where fracture risk is very high.

Medicine-related Recommendations

Oral medications (Bisphosphonates, Oestrogen, Raloxifene)

If patients miss a number of doses over a few weeks, their overall bone health is unlikely to be affected.

Ibandronate IV infusion

A delay of a few months does not increase risk of breaking a bone, and it does not cause the patient's bone density to significantly drop since Ibandronate is a long-lasting drug.

Zoledronate IV infusion

A delay of a few months does not increase the risk of breaking a bone, and it does not cause the patient's bone density to significantly drop. Zoledronate is a long-lasting drug and stays in the body for longer than 12 months, and probably more than 24 months.

Denosumab injection

It is important that the patient's next injection of denosumab is not delayed for more than four weeks, as the benefits wear off quickly. This causes a drop in bone density and increases the risk of spinal fractures.

Patients treated with denosumab can repeat injections up to four weeks early.

Romozosumab injection

The treatment duration for romozosumab is 12 monthly doses. If a dose is missed, it should be administered as soon as it can be rescheduled.

Teriparatide injection

Patients should continue their teriparatide injections as normal during the COVID-19 pandemic. In case patients miss a few doses, it is unlikely to affect their overall bone health, but they should restart the treatment as soon as possible.

COVID-19 VACCINATION AND OSTEOPOROSIS TREATMENT⁴

General Recommendations

- **Osteoporosis does not appear to increase risk** for infection with or complications from COVID-19.
- Any decision to prioritize patients with osteoporosis for **covid vaccination** should be based on indications specific to each country.
- General **bone health measures** (calcium & vitamin D supplementation, exercises, maintenance of a balanced diet) should **not be interrupted** at the time of vaccination or thereafter.

Medicine-related Recommendations

Oral bisphosphonates

Oral bisphosphonates should be continued without interruption/delay in patients receiving COVID-19 vaccination.

- *No evidence of any interactions between oral bisphosphonates and COVID-19 vaccination.*

IV bisphosphonates (Zoledronate and Ibandronate)

One week interval between IV bisphosphonates and COVID-19 vaccination.

Patients who have received previous IV zoledronate may delay subsequent infusions for several months if necessary.

- *This measure allows healthcare practitioners to distinguish between acute phase reactions resulting from either IV bisphosphonates administration or COVID-19 vaccination.*
- *No current data suggest that concurrent administration might alter the side effect profile and/or reduce the efficacy of either agent.*

Denosumab

Denosumab injection should not be delayed more than 7 months after its previous injection

An interval of 4-7 days between treatment with denosumab and COVID-19 vaccination

Denosumab could be administered in the contralateral arm or alternative site (abdomen/ upper thigh) in case of COVID-19 vaccination concomitantly.

- *Current data do not show that denosumab is associated with increased COVID-19 infection risk or respiratory infection in osteoporosis patients, or that it impacts response to vaccination.*

Teriparatide & Abaloparatide

Teriparatide and Abaloparatide should be continued in patients receiving COVID-19 vaccination.

Romosozumab

An interval of 4-7 days between provision of both injections, or consideration for injection in the abdomen (except for a two-inch area around the navel) or thigh if administered concomitantly.

Raloxifene

Raloxifene should be continued in patients receiving COVID-19 vaccination.



COVID 19 AND FRACTURE LIAISON SERVICES (FLS)

Under the current challenging situation, in many cases, healthcare professionals have been redeployed to take care of COVID patients and the general FLS pathways are still disrupted.

IOF Recommendations for FLS Simplified Procedures

- **Establish an automated order** in trauma/orthopaedic center to initiate appropriate osteoporosis therapy within 48 hours post-surgery and before discharge from the orthopaedic ward to eligible patients aged over 60.
- **Keep a list of those patients with fragility fractures** for further evaluation and treatment once services start going back to normal (ideally within 6 months after the fracture).

REFERENCES

1. American Society for Bone and Mineral Research (ASBMR), American Association of Clinical Endocrinology (AACE), Endocrine Society, European Calcified Tissue Society (ECTS), International Osteoporosis Foundation (IOF), National Osteoporosis Foundation (NOF) Joint Guidance on vitamin D in the era of COVID-19, 2020
2. Royal Osteoporosis Society Coronavirus and osteoporosis, 2020
3. Osteoporosis Canada Osteoporosis drug treatments & medication during COVID-19, 2020
4. American Society for Bone and Mineral Research (ASBMR), American Association of Clinical Endocrinology (AACE), Endocrine Society, European Calcified Tissue Society (ECTS), International Osteoporosis Foundation (IOF), National Osteoporosis Foundation (NOF) Joint Guidance on COVID-19 Vaccination and Osteoporosis Management, 2021

MORE INFORMATION:

<https://www.osteoporosis.foundation/osteoporosis-and-covid19>