

New review provides insights into the impact of osteoporosis and related medications on fracture healing

April 8 2024



Credit: Unsplash/CC0 Public Domain

A new comprehensive review, authored by the International Osteoporosis Foundation (IOF) Committee of Scientific Advisors

Fracture Working Group on behalf of the IOF and the International Society of Orthopaedic Surgery and Traumatology (SICOT), clarifies the evidence linking fracture healing with osteoporosis and the currently available medications used to treat osteoporosis.

Within clearly outlined chapters, "[Impact of osteoporosis and osteoporosis medications on fracture healing. A narrative review](#)" examines the biology of [fracture healing](#), clinical and radiological evaluation of fracture healing, the impact of osteoporosis on fracture healing, the effect of osteoporosis medications on fracture healing, and important areas for further research. The findings are published in the journal *Osteoporosis International*.

Professor Manju Chandran, first author of the publication, stated, "A recent fracture significantly increases the likelihood of another fracture. Prompt osteoporosis treatment is imperative to reduce this risk. Concerns however linger among medical and surgical professionals about the potential adverse effects of osteoporosis medications on fracture healing.

"Furthermore, when patients undergoing osteoporosis treatment sustain fractures, clinicians may ask themselves whether to halt osteoporosis therapy during the healing process. Our review delves into the available evidence to provide some clarity and practical guidance that will be useful for the many clinicians and surgeons caring for patients with fragility fractures."

The following key points are highlighted:

- The assessment of fracture healing typically should involve a combination of clinical examination and radiographic imaging.
- While animal studies appear to support the view that osteoporosis negatively influences fracture healing, [clinical studies](#) in humans

have yielded conflicting results.

- The effect of osteoporosis medications on fracture healing has been extensively studied, though most of the investigations have been in animal models and therefore may not fully translate to humans.
- Overall, there does not appear to be a negative effect of osteoporosis medications on fracture healing. Bisphosphonates can be safely started early after metaphyseal osteoporotic fractures without adversely affecting clinical outcomes.
- There is a suggestion of benefit for teriparatide in time to fracture healing. Data on the impact romosozumab on fracture healing is scant.
- Other factors such as aging, smoking, poor nutrition, and comorbidities such as diabetes and vitamin D deficiency may confound and contribute to delayed healing of osteoporotic fragility fractures.
- The benefit of treating osteoporosis and the urgent necessity to mitigate imminent fracture risk should take precedence over any theoretical risks of non-union or delayed union.
- More research is needed: new radiological and biological markers of fracture healing must be identified and clinical and basic science methodologies to assess fracture healing should be merged for greater understanding. Data on the impact of antiosteoporosis agents such as teriparatide, romosozumab on fracture healing deserve further attention.

Professor Nicholas Harvey, co-author and Chair of the IOF Committee of Scientific Advisors concluded, "Fortunately there appears to be no deleterious effect of osteoporosis medications on fracture healing. The evidence does not support a delay in the initiation of antiresorptive therapy following acute fragility fractures, nor is there reason for suspension of osteoporosis [medication](#) at the time of fracture if the person is already on treatment."

"Given the serious and potentially life-threatening consequences of secondary fractures, the benefit of treating [osteoporosis](#) and the urgent necessity to reduce imminent refracture risk after a fracture should be given prime consideration."

More information: M. Chandran et al, Impact of osteoporosis and osteoporosis medications on fracture healing: a narrative review, *Osteoporosis International* (2024). [DOI: 10.1007/s00198-024-07059-8](https://doi.org/10.1007/s00198-024-07059-8)

Provided by International Osteoporosis Foundation

Citation: New review provides insights into the impact of osteoporosis and related medications on fracture healing (2024, April 8) retrieved 2 May 2024 from <https://medicalxpress.com/news/2024-04-insights-impact-osteoporosis-medications-fracture.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.