

Taking oral glucocorticoids for 3 months or longer? Beware of osteoporosis!

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Millions of people around the world are prescribed glucocorticoids for a wide variety of inflammatory conditions, including, rheumatoid arthritis, asthma and inflammatory bowel diseases. Although they are effective and widely used, one of the potentially serious side effects of these medications is glucocorticoid-induced osteoporosis.

Osteoporosis is a serious condition in which bones become thinner and more fragile, making them more likely to break (fracture).

Glucocorticoids can cause rapid bone loss in the first three to six months of treatment, leading to an increased risk of fracture. The greatest risk is seen for [vertebral fractures](#).

In their newly issued joint guidance paper for health professionals worldwide*, the International Osteoporosis Foundation (IOF) and the European Calcified Tissue Society (ECTS) have warned that specific precautions to help reduce the risk of bone loss and fracture must be taken for individuals on longer-term oral glucocorticoid therapy.

Professor Cyrus Cooper, chair of the IOF Committee of Scientific Advisors, commented, "Patients who are taking [prednisolone](#), [cortisone](#) or other glucocorticoids for three months or longer, should be advised to take appropriate measures to help reduce the accompanying bone loss. While osteoporosis itself is painless, [fractures](#) resulting from osteoporosis can cause significant pain and lead to [immobility](#), [long-term disability](#) and even higher risk of death."

WHO IS MOST AT RISK?

Generally, the higher the dose and the longer the glucocorticoid treatment continues, the higher the risk of fracture. People who take glucocorticoids orally or intravenously are at greater risk than those who inhale glucocorticoids for asthma, or apply lotions to the skin. However, using a high-dose steroid inhaler in the long term may also increase the risk of fracture. Injections of glucocorticoids into joints are not thought to affect the skeleton.

In terms of age, men and women over 70, and postmenopausal women and men over 50 who have had a previous fracture or take high doses of glucocorticoid, are at greater risk than younger men and women. Nevertheless, even younger people on glucocorticoids are advised to take precautions to help reduce bone loss. Dr. Tobie de Villiers, president of the International Menopause Society (IMS), commented, "Bone loss is a concern for all women around the age of menopause, and especially for the almost 5% of [postmenopausal women](#) worldwide who take oral glucocorticoid therapy. The IMS encourages women to be aware of this potentially dangerous side-effect of therapy and to discuss what precautions can be taken with their doctors."

HOW TO PROTECT AGAINST GLUCOCORTICOID-INDUCED OSTEOPOROSIS

In their guidance paper*, the IOF and ECTS outline strategies and best practices for the management of bone health in patients on glucocorticoids.

As bone loss occurs rapidly in the first three to six months of treatment, patients should be taking preventive action from the start: they must ensure adequate amounts of calcium and protein in their diet, get enough

vitamin D through safe exposure to sunlight and do regular weight-bearing exercise to keep bones and muscles active. It is also important that they stop smoking, and reduce alcohol intake. Supplement tablets, especially of vitamin D, may be prescribed as it is often difficult to ensure adequate levels through diet and sunlight.

Based on a clinical check-up and the results of bone mineral density (BMD) testing and a FRAX assessment (<http://www.shef.ac.uk/FRAX/>), the doctor may decide to minimize the dose of glucocorticoids or use alternative medications. Some high risk patients may also be prescribed special bone protective therapy to reduce fracture risk. Patients on long-term glucocorticoid therapy should be monitored at appropriate intervals. This may include BMD testing, annual height measurements to check for possible height loss due to vertebral fractures, and, in patients receiving bone protective therapy, assessment to ensure compliance with therapy.

Professor Bente L. Langdahl, president of the European Calcified Tissue Society, stated, "It is important to note that no one should ever stop or reduce glucocorticoid treatment unless directed to by their doctor. At the same time, we advise that all patients and doctors be acutely aware of the need to monitor and take preventive action against [bone loss](#) as soon as glucocorticoid therapy begins."

More information: *A framework for the development of guidelines for the management of glucocorticoid-induced osteoporosis. S. Lekawasam, J. D. Adachi, D. Agnusdei, et al. for the Joint IOF-ECTS GIO Guidelines Working Group. Osteoporos Int [DOI 10.1007/s00198-012-1958-1](#)

The paper is freely accessible until June 26, 2012 at [www.springerlink.com/content/w ... 8602122/fulltext.pdf](http://www.springerlink.com/content/w...8602122/fulltext.pdf)

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