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Preventing steroid-induced osteoporosis

One of the side-effects of taking a steroid medicine in the long term is that it can increase your risk of developing 'thinning' of the bones (osteoporosis). This leaflet explores measures that can be taken to stop this occurring.

What is steroid-induced osteoporosis?

If osteoporosis is thought to be due in part to taking [a steroid medicine](#), it is known as steroid-induced osteoporosis. The use of steroid medicines is one of the leading causes of osteoporosis. Between 3 and 5 in 10 people who take steroid medicines in the long term will develop a fragility fracture because of osteoporosis if nothing is done to prevent this. [To learn more about osteoporosis in general, see the separate leaflet called Osteoporosis.](#)

In general, when we are talking about steroid medicines that can cause steroid-induced osteoporosis, we are talking about long-term treatment. Long-term means taking it every day for three months or more, or having shorter courses very frequently. It also mainly refers to being treated with steroid tablets such as [prednisolone](#). You would be considered to be at risk of steroid-induced osteoporosis if you have been taking prednisolone tablets at a dose of 7.5 mg per day or more, for three months or more.

Long-term treatment with [steroid creams](#) does not carry the same risks of steroid-induced osteoporosis. However, long-term use of high doses of [inhaled steroids](#) may possibly also increase your risk of developing steroid-induced osteoporosis. Lower doses of inhaled steroids do not seem to increase the risk in the same way.

Further studies are being done to get more information about this. For this reason, the dose of steroid in an inhaler is usually kept to a minimum so that it is just high enough to keep your asthma or other respiratory problem under control.

How to prevent steroid-induced osteoporosis?

There are a number of things that can be done to reduce your risk of developing steroid-induced 'thinning' of the bones (osteoporosis) if you are taking steroid tablets for three months or more. These may be things that you can change yourself in terms of your lifestyle, as well as treatment with medicines or other measures that your doctor may suggest.

Lifestyle changes

See the separate leaflet called [Osteoporosis for full details on lifestyle factors which can further increase the risk](#). However, briefly the following help to reduce risk:

- [Stopping smoking](#).
- [Limiting alcohol intake](#).
- Taking more [exercise](#) (particularly weight-bearing exercise).
- Having an adequate calcium and vitamin D intake, and considering supplements if you are not getting enough calcium and/or vitamin D. See the separate leaflets called [Calcium-rich Diet](#), and [Vitamin D Deficiency](#) to read more about these specific aspects.

Take the minimum dose of steroids possible for the shortest period of time

In general, the higher the dose of steroid tablets taken in the long term, the higher your risk of developing a fracture due to osteoporosis (a fragility fracture). However, saying that, there is not really a safe dose of steroid tablets because even low doses can increase your fracture risk.

Talk to your doctor about the dose of steroid tablets that you are taking. Could the amount of steroid be reduced? Is there another way that the steroid medication may be taken rather than as tablets by mouth? For example, steroids applied to the skin or inhaled into the lungs may be an option to treat some conditions. Taking the steroid medication in another way may help to reduce the effect of the steroids on your bones.

How long a course of steroid tablets do you need?

You should also discuss this with your doctor. The course of treatment should be as short as possible. However, as mentioned already above, there is often a balance between the risk of side-effects from taking steroid tablets and the symptoms and damage that may result from some diseases if they are not treated with steroids. It may be that it is more risky not to take the steroids. If this is the case, you may be given treatment to protect your bones from the effects of the steroids.

Treatment with medicines may be needed for some people

If you have had a previous fragility fracture, you will usually be offered treatment with medicines to prevent steroid-induced osteoporosis if you are prescribed long-term steroid tablets. This is regardless of your age. If you are an older person, you will also usually be offered preventative treatment with medicines even if you have not had a previous fragility fracture.

The medicines usually used to prevent steroid-induced osteoporosis are called bisphosphonates. [For more information about these medicines, see the separate leaflet called Bisphosphonates.](#) There are several different types of bisphosphonate medicines including tablets and injections. There is evidence that these medicines can improve bone strength and reduce the risk of some fractures for people taking steroid medicines.

Otherwise, whether or not preventative treatment with medicines will be suggested will depend on how high the doctor feels your risk is. You may have a [DEXA scan to assess your bone density](#). The decision may depend on this result and any other risk factors for osteoporosis that you may have. Your doctor will be able to advise for your particular case.

Further reading

- [Osteoporosis: assessing the risk of fragility fracture](#); NICE Clinical Guideline (August 2012, updated February 2017)
- [Management of osteoporosis and the prevention of fragility fractures - A national clinical guideline](#); Scottish Intercollegiate Guidelines Network (SIGN - January 2021)

- [Avenell A, Mak JC, O'Connell D](#); Vitamin D and vitamin D analogues for preventing fractures in post-menopausal women and older men. Cochrane Database Syst Rev. 2014 Apr 14;4:CD000227. doi: 10.1002/14651858.CD000227.pub4.
- [Allen CS, Yeung JH, Vandermeer B, et al](#); Bisphosphonates for steroid-induced osteoporosis. Cochrane Database Syst Rev. 2016 Oct 5;10:CD001347. doi: 10.1002/14651858.CD001347.pub2.
- [Chee C, Sellahewa L, Pappachan JM](#); Inhaled corticosteroids and bone health. Open Respir Med J. 2014 Jan 31;8:85-92. doi: 10.2174/1874306401408010085. eCollection 2014.
- [Sutter SA, Stein EM](#); The Skeletal Effects of Inhaled Glucocorticoids. Curr Osteoporos Rep. 2016 Jun;14(3):106-13. doi: 10.1007/s11914-016-0308-1.
- [Clinical guideline for the prevention and treatment of osteoporosis](#); National Osteoporosis Guideline Group (updated September 2021)
- [Prevention of Fragility Fractures](#); NICE CKS, July 2021 (UK access only)

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