

Alendronate prevents osteoporotic fractures in at risk postmenopausal women

Clinical question	How effective is alendronate in the primary and secondary prevention of osteoporotic fractures in postmenopausal women?
Bottom line	At an alendronate dose of 10 mg per day, both clinically important and statistically significant reductions in vertebral (NNT*16), non-vertebral (NNT 50), hip (NNT 100) and wrist (NNT 50) fractures were observed for secondary prevention but there were no significant reductions in fractures for primary prevention except vertebral fracture (NNT 50). The secondary prevention population was defined as having a bone density of at least 2 standard deviation values below peak bone mass and/or one or more vertebral compression fractures. *NNT= number needed to treat to benefit one individual.
Caveat	No increased incidence of adverse effects was detected with alendronate, but outside of randomised controlled trials, concerns exist regarding the potential risk of upper gastrointestinal events, and, less commonly, osteonecrosis of the jaw.
Context	The relative risk of death following osteoporotic hip and vertebral fractures is six- to nine-fold greater in postmenopausal women aged 55 to 81 years with low bone mineral density. ¹ Fifty per cent of women who sustain a hip fracture do not return to their usual daily activities, while 33% will require long-term care. ²
Cochrane Systematic Review	Wells GA et al. Alendronate for the primary and secondary prevention of osteoporotic fractures in postmenopausal women. Cochrane Reviews 2008, Issue 1. Art No : CD001155. DOI : 10.1002/14651858.CD001155.pub2. This review contains 11 trials involving 12,068 participants.
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