

RGH Pharmacy E-Bulletin

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A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

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Combination bisphosphonate with calcium and vitamin D

The management of osteoporosis is of increasing significance to health professionals due to its high prevalence and impact. In Australia, 50% of women and 33% of men aged greater than 60 years will have a fracture due to osteoporosis.

The risk of fracture can be reduced with drug therapy including bisphosphonates, strontium ranelate or a selective oestrogen receptor modulators (SERM). Additional calcium and vitamin D supplementation has proven benefits in maximising the effectiveness of anti-resorptive therapy.

Actonel Combi D[®] is a combination product that has recently been listed on the schedule of subsidised pharmaceutical benefits for the Australia Pharmaceutical Benefits Scheme (PBS), for the treatment of osteoporosis. The product contains risedronate 35 mg, calcium carbonate 2500 mg (equivalent to 1000 mg elemental calcium) and cholecalciferol 880 IU. While the risedronate is packaged as a blister strip, the calcium and cholecalciferol are presented combined as sachets of effervescent granules.

Actonel Combi D[®] can be prescribed as a sole PBS-subsidised anti-resorptive agent with authority restrictions. To be eligible for subsidy, the patient must be over 70 years with a BMD T-score of -3.0 or less, or have had a fracture associated with a minimal trauma event.

Suggested benefits of the combination approach include enhanced compliance and an avoidance of the co-administration of bisphosphonates with calcium. This is of importance due to the limited bioavailability of bisphosphonates. The combination product also reduces the need for patients to purchase calcium and vitamin D supplements separately, which some patients may refuse due to cost.

However, although some authorities suggest doses of calcium supplements in excess of 500 mg should be given in divided doses to maximise calcium absorption, the Actonel Combi D[®] sachets contain 1000 mg calcium. The recommended daily intake of elemental calcium for women > 50 years and men > 70 years is 1300 mg, or at least four serves of calcium rich food. With this in mind, ideally Actonel Combi D[®] would therefore need to be used in combination with dietary sources of calcium.

Because they contain calcium carbonate, the sachets of calcium and cholecalciferol are best taken with meals to aid maximal absorption. Drugs affecting the stomach's acidity can also interfere with calcium carbonate absorption. For example, proton-pump inhibitors and H₂-receptor antagonists adversely affect the absorption of calcium carbonate and patients receiving these therapies may require an alternative form of calcium.

Actonel Combi D[®] adds to the drug choices available for fracture risk reduction in osteoporosis. Importantly, irrespective of the selected agent, patients at risk of fracture should receive adequate calcium and vitamin D supplementation, with the aim of achieving a serum 25-hydroxyvitamin D level of at least 75 nmol/L.

Acknowledgment – This E-Bulletin is based on work by Ellise Liew, Pharmacy Intern, RGH

FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
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