

## Invited Speaker Abstract

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### Is there value in Ca/Vitamin D supplementation?

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Calcium plays an essential role in the function of many systems, including muscular, neural and metabolic processes, as well as bone mechanical properties. Vitamin D regulates calcium and phosphate homeostasis, enhances intestinal calcium absorption, promotes bone formation and mineralization and affects bone turnover and remodeling.

Calcium and/or vitamin D deficiencies are frequent in the young and the old and may contribute to osteoporosis and osteoporotic fracture risk. This presentation will review the efficacy of calcium and/ or vitamin D in the primary or secondary prevention of bone loss and fractures.

Attempting to normalise calcium intake and vitamin D levels in deficient patients is considered reasonable and safe, and calcium and/ or vitamin D supplements may be used to maintain bone health in the healthy. Adequate calcium and vitamin D form the basis of most strategies to prevent or treat osteoporosis. However, the effects of calcium or vitamin D ALONE on primary fracture risk remain unclear and are probably weak. In contrast, calcium and vitamin D have been shown to prevent fractures in the institutionalised elderly. There is mixed evidence for the effect of calcium and vitamin D on fracture risk outside institutionalised settings. In patients with osteoporotic fractures, calcium and/or vitamin D alone are insufficient to prevent further fractures; however, these supplements are widely recommended as an adjuvant therapy in established osteoporosis. There is no good evidence to support the notion that calcium supplements may have potential adverse effects on cardiovascular risk. However, calcium and vitamin D should be used with caution in patients at risk of renal calculi. The long-term adherence with daily calcium and vitamin D supplements is poor and requires monitoring and constant reinforcement.