Vitamin D and Effects on BMD

In 15 of the studies the mean baseline vitamin D level was over 50 nmol/l which is higher than values seen in a significant number of Canadian men and women particularly during the winter months. In 1 study of adult Canadians who were not using vitamin D supplements, 34% had evidence of vitamin D insufficiency with vitamin D levels below 40 nmol/L.

The meta analysis completed by Reid and colleagues did not show an effect of vitamin D supplements on bone mineral density.

It is important to remember that vitamin D enables optimal calcium absorption from the bowel and inadequate vitamin D results in poor mineralization of the bone in addition to bone loss due to high levels of parathyroid hormone.

The majority of Canadians have inadequate vitamin D levels and do require approximately 400-2000 IU of vitamin D daily to reach a normal vitamin D level. Osteoporosis Canada's guidelines for vitamin D are safe and are designed to prevent vitamin D deficiency, which is clearly harmful for bone health.

In those with osteoporosis it is necessary to take adequate calcium and vitamin D as well as drug therapy in order to significantly reduce fracture risk.