Key Vitamin D Research

In 2010, William Grant completed a study that estimated the economic burden and premature death rate in Canada attributable to low vitamin D levels. Canadians have a mean serum 25(OH)D levels averaging 67 nmol/L (Stats Canada). The estimated benefits in disease reduction were based on increasing the mean serum 25(OH)D level to 105 nmol/L. The study reported that "the death rate could fall by 37,000 deaths, representing 16.1% of annual deaths and the economic burden by 6.9% or $14.4B. It is recommended that Canadian health policy leaders consider measures to increase serum 25(OH)D levels for all Canadians."

Grant et al., An estimate of the economic burden and premature deaths due to vitamin D deficiency in Canada. Mol. Nutr. Food Res. 2010, 54, 1172-1181

According to research published by Edmonton's Dr. Gerry Schwalfenberg in the medical journal "Public Health" regular sunbed users and those who take high-dosage vitamin D supplements have the highest Vitamin D levels in Canada. Those who do not take supplements and who report receiving minimal sun exposure had the lowest Vitamin D levels. The study concluded "Routine clinical and public health recommendations to achieve solar abstinence and to regularly use complete sun block need to be re-evaluated; judicious sun exposure assists in normalizing VTD levels and provides other beneficial effects to the human body."

Schwalfenberg et al,. Addressing vitamin D deficiency in Canada: A public health innovation whose time has come. Public Health (2010), doi:10.1016/j.puhe.2010.03.003

In 1999, Reinhold Vieth determined that there was no evidence of adverse affects in taking 10,000 IU of vitamin D supplementation per day.

Vieth, R. Vitamin D supplementation, 25-hydroxyvitamin D concentrations, and safety. Am J Nutr 1999;69:842-56

How much vitamin D does your body use each day? Robert Heaney's research published in 2003, found that healthy men used between 3000 – 5000 IU of vitamin D per day. They also found that >80% of this came from cutaneously synthesized accumulations from solar sources during the preceding summer months.

Heaney et al,. Human serum 25-hydroxycholecalciferol response to extended oral dosing with cholecalciferol. Am J Clin Nutr 2003;77:204-10

In 2011, a task force from the Endocrine Society reviewed available research and developed clinical guidelines for the evaluation, treatment and prevention of vitamin D deficiency for all age groups. The key difference in daily intake requirements compared to the 2010 IOM report came from their recommended vitamin D insufficiency level defined as 75 nmol/L (30 ng/ml). For most adults the 2010 IOM recommended dietary allowances (RDA) are 600 IU per day compared with the Endocrine Society daily requirement recommendation of 1500 – 2000 IU per day to reach 75 nmol/L.

Holick et al,. Evaluation, Treatment, and Prevention of Vitamin D deficiency: an Endocrine Society Clinical Practice Guideline. J Clin Endocrinol Metab, July 2011, 96(7):0000-0000