

NEW RESEARCH INTO THE PREVENTION OF OSTEOPOROSIS

Submitted by: Partners in PR Ltd

Wednesday, 1 July 2009

Vitamin K2 may boost bone health in adolescents

Supplements of vitamin K2 may improve bone health in prepubescent children, and potentially protect them from osteoporosis later in life, says a new study.

Writing in the British Journal of Nutrition, Dutch scientists report that a daily supplement of vitamin K2 in the menaquinone-7 (MK-7) form improved the levels of osteocalcin, a vitamin K-dependent protein which is essential for the body to use calcium in bone tissue efficiently. Without adequate vitamin K, the osteocalcin remains inactive, and thus not effective.

"The present study is the first one to demonstrate that increased vitamin K intake by supplement improves the osteocalcin activity in children," said Professor Cees Vermeer at the VitaK research centre in Maastricht.

"The next step must be to see the effect of MenaQ7 on bone strength or fracture risk in this age group. There is a growing awareness that maximizing bone strength in childhood is an important strategy in the prevention of osteoporosis at a later age," he added.

Osteoporosis is characterized by low bone mass, which leads to an increased risk of fractures, especially the hips, spine and wrists. An estimated 75 million people suffer from osteoporosis in Europe, the USA and Japan. Women are four times more likely to develop osteoporosis than men.

Potential reduction of osteoporosis has to date been approached by either attempting to boost bone density in high-risk post-menopausal women by improved diet or supplements, or by maximising the build up of bone during the highly important prepubescent years. About 35 per cent of a mature adult's peak bone mass is built-up during puberty.

Study details

Professor Vermeer and his co-workers recruited 55 healthy children to participate in a double-blind, randomised placebo-controlled trial. Children were randomly assigned to receive either daily MK-7 supplements (45 micrograms, MenaQ7 provided by NattoPharma, Norway), or placebo for eight weeks. Using the ratio of undercarboxylated osteocalcin (ucOC) to carboxylated osteocalcin (cOC) as a measure of vitamin K status, the researchers found that, in the MK-7 group only, levels of ucOC decreased, and the ratio of ucOC to cOC improved.

No other changes were observed, including bone markers and coagulation parameters.

"The present study indicates that supplementation with MK-7, one of the vitamin K2 species, during 8 weeks reduces the amount of circulating ucOC and thereby improves vitamin K status in healthy prepubertal children," wrote the researchers.

MenaQ-7 a daily supplement formulated using natural vitamin K2 (MK-7) derived from Japanese natto a fermented soy product is now available in the UK from Independent Health Food Stores and Pharmacies and www.nutricentre.com or by calling 0800 587 2290. It is priced at £18.95 for 60 gel capsules or £9.95 for 30 gel capsules. For more information please visit the website: www.menaq7.com

~ ends~

Further press info, images or interviews from Jackie@partnersinpr.co.uk – 01409 281749

Source: British Journal of Nutrition

Published online ahead of print, doi:10.1017/S0007114509382100

“The effect of menaquinone-7 (vitamin K2) supplementation on osteocalcin carboxylation in healthy pre-pubertal children”

Authors: M.J.H. van Summeren, L.A.J.L.M. Braam, M.R. Lilien, L.J. Schurgers, W. Kuis, C. Vermeer