

Strong Bones Lecture – Research, supplemental reading

Research search made through Pubmed, <http://www.ncbi.nlm.nih.gov/pubmed>

Research search criteria:

Subject - Osteoporosis treatment through diet

Dates - Sept 2010 through Sept 2013

Age of subjects - 19+ years

Type of subject - Human

Language of paper - English

Summary of research findings, specific to search criteria above, over past 3 years:

- In postmenopausal women, age, time since menopause, smoking, and personal or maternal history of fracture were strong clinical indicators of risk for low bone mineral density. Hormone therapy and high body mass index appeared to be protective factors. (Nahas et al., 2011)
- Moderate alcohol intake in women around menopause may have a positive effect on bone mineral density at the femoral neck and lumbar spine. (McLernon et al., 2012)
- Calcium supplements may increase Myocardial Infarction risk. (11 year EPIC – Heidelberg study data was analyzed by Li et al., 2012)
- Fruits and vegetables may have bone sparing effect in Chinese adolescents, young women, and postmenopausal women. More pronounced in young men and postmenopausal women (Li et al., 2013)
- High dietary intake of calcium, especially plant calcium, reduces the risk of osteoporosis and increased bone mineral density in postmenopausal Korean women. (Park et al., 2011)
- Polyunsaturated fatty acid intake is not associated with decreased hip fracture risk in men or women. (24 year follow-up study, Virtanen, et al., 2012)
- Soy isoflavone supplements increase bone mineral density. The effect on BMD is relative to menopausal state, supplement type, isoflavone dose, and intervention duration. (Meta-analysis of several studies reviewed by Wei et al., 2012)
- Hundreds of studies, reviewed by a working group of faculty and panelists composed of clinical and research experts in the field of women's health and botanics, revealed that the efficacy of Isoflavones on bone has not been proven. The review was carried out during a convening of the North American Menopause Society/Utian Translational Sciences Symposium on Soy and Soy Isoflavones in October 2012. (North American Menopause Society, 2011)
- Habitual intake of natto by elderly Japanese men was associated with a beneficial effect on bone health. Vitamin K in natto seems to be responsible. (FORMEN study, Fujita et al., 2012)
- Postmenopausal women taking a supplement including anti-inflammatory phytochemicals and essential bone nutrients (hop rho iso-alpha acids, berberine, vitamin D3, Vitamin K), who ate a

Mediterranean-style diet and exercised, produced a more favorable bone biomarker profile indicative of healthy bone metabolism. (Lamb et al., 2011)

- Postmenopausal women whose diets are deficient in Vitamin D and calcium who consumed soft white cheese fortified with Vitamin D and calcium lowered serum concentrations of bone resorption biomarker TRAP 5b. (Bonjour et al., 2012)
- According to a 19 year longitudinal study of Swedish women, gradual increases in dietary calcium intake above the first quintile were not associated with further reductions in risk of osteoporosis. (Warensjo et al., 2011)
- Greater fish intake may help to reduce bone loss in elderly Chinese men. Effects were not seen in elderly Chinese women. (Chan et al., 2011)
- High protein and high potential renal acid load diet did not have an adverse net effect on bone health. (Cao et al., 2011)
- Over 900 male and female participants' diets from the Framingham Osteoporosis Study were analyzed. It was found that higher diet protein intake reduced the risk of hip fracture. Larger prospective studies were recommended to confirm and extend the findings in elderly men and women. (Misra et al., 2011)
- Vegan diet did not have an adverse effect on bone loss in a 2 year longitudinal study of Asian women. Lower body weight, corticosteroid use and high intakes of animal protein and animal lipid negatively affected bone health. (Ho-Pham et al., 2012)
- Adequate general nutrition and appropriate osteoporosis medication, rather than specific nutritional regimens, may be effective in preventing bone loss in elderly Japanese women. (Nakamura et al., 2012)