

High sodium intake is not an osteoporosis risk factor

The relationship between dietary salt intake and bone mineral density (BMD) was evaluated to test the hypothesis that high dietary sodium intake, resulting in sodium-mediated excretion of renal calcium, is a risk factor for osteoporosis.

The study subjects were 258 women (average age, 73.3 years) and 169 men (average age, 72.4 years). A 24-hour diet recall was done for the period 1973 through 1975; follow-up bone mineral density of the ultradistal radius, midradius, total hip, and spine was measured between 1988 and 1991. Covariates were ascertained by self-report and examination at baseline. Multivariable analysis of the sodium-BMD association was performed using gender and menopause-specific linear regressions.

In both male and female subjects, higher levels of sodium intake were strongly associated with higher levels of calcium intake and total calories. Body mass index increased with sodium quartile in women, whereas a modest negative association was seen in men. In women, after age adjustment, positive associations between dietary sodium and bone density were found at the ultradistal radius and the total hip. Bone mineral density increased by 0.01 g/cm² to 0.02 g/cm². After adjustment for estrogen use, body mass, dietary calcium, alcohol, and total calories, these effects were no longer significant. Similar patterns were seen in premenopausal and post-

menopausal women. In men, age and multivariate-adjusted BMD increased with higher sodium intake at the ultradistal radius only.

After control for confounders, a small statistically significant protective effect of sodium was found at the ultradistal radius in men only. At other sites in women and men, no effect of sodium on BMD was apparent in the multivariable models.

Although these results show a small beneficial effect of sodium on bone, there are many overriding public health reasons not to increase sodium intake. The results also suggest that sodium intake, in the range measured, is not a major osteoporosis risk factor.

Greendale GA, Barrett-Connor E, Edelstein S, et al: Dietary sodium and bone mineral density: Results of a 16-year follow-up study. *J Am Geriatr Soc* 1994; 42:1050-1055.

Medicare HMO versus fee-for-service on stage of cancer at diagnosis

Cancer patients in health maintenance organizations (HMOs) were compared with those patients covered under fee-for-service on stage at diagnosis. Most previous studies have found few differences between HMOs and fee-for-service on access to or quality of care.

The study examined stage at diagnosis for aged Medicare enrollees in HMOs and fee-for-service. The investigators used information from the Surveillance, Epidemiology, and End

Results program, linked with Medicare enrollment files. Twelve cancer sites were investigated, and demographics, area of residence, year of diagnosis (1985 to 1989), and education at the census tract level were controlled.

Cancers of the female breast, cervix, colon, and melanomas were diagnosed in HMO enrollees at earlier stages and stomach cancer at later stages. No differences for cancers of the prostate, rectum, buccal cavity and pharynx, bladder, uterus, kidney, and ovary were found. HMO effects were found strongest in areas with large, mature HMOs.

The findings show that HMO enrollees, compared with fee-for-service enrollees, were diagnosed at earlier stages for cancer sites for which effective screening services are available.

Cancer screening and preventive services are often provided by HMOs with Medicare contracts but are not covered under fee-for-service.

Riley GF, Potosky AL, Lubitz JD, et al: Stage of cancer at diagnosis for Medicare HMO and fee-for-service enrollees. *Am J Public Health* 1994;84:1578-1604.

Effect of simvastatin on coronary atheroma

The Multicenter Anti-Atheroma Study (MAAS) began a double-blind clinical trial in 1987 to study the effects on coronary atheroma of reduction of plasma lipids. The tests involved the use of simvastatin relative to placebo in patients with moderate hypercholesterolemia and known coronary artery disease.

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