Comment: Patients with PKU have subtle neurological deficits despite consumption of a low-phenylalanine diet. DHA and other long-chain polyunsaturated fatty acids are low in PKU diets, because the main foods that contain these fatty acids (fish, meat, and eggs) are avoided by people with PKU. The results of this study indicate that fish oil supplementation can improve motor skills in patients with PKU. In a previous study, supplementation with a combination of fish oil and evening primrose oil improved motor skills in children with developmental coordination disorder (also called dyspraxia).


Potassium citrate increases bone mineral density

One hundred sixty-one postmenopausal women (mean age, 58.6 years) with low bone mass (T score of -1 to -4) were randomly assigned to receive, in double-blind fashion, 30 meq per day of potassium citrate or potassium chloride for 12 months. Compared with potassium chloride, potassium citrate significantly increased mean bone mineral density (BMD) by 1.87% at L2-L4 (p < 0.001), by 1.39% at the femoral neck (p < 0.001), and by 1.98% at the total hip (p < 0.001). Potassium citrate also increased mean L2-L4 BMD compared with baseline by 0.89% (p < 0.05), whereas this value decreased significantly by 0.98% (p < 0.05) in the potassium chloride group. Urinary markers of bone resorption decreased significantly in the group receiving potassium citrate, and for deoxypyridinoline, the difference between groups was statistically significant. Urinary net acid excretion correlated inversely and significantly with changes in BMD.

Comment: The typical Western diet, which contains large amounts of animal protein and grains, presents a chronic acid load to the body. In the process of buffering this acid load, calcium is leached from bone, resulting in ongoing bone loss. Potassium citrate is an alkaline compound that can buffer the acid load from the diet. Daily ingestion of potassium citrate reduces the body's need to pull calcium from bones. Potassium salts that are not alkaline (such as potassium chloride) do not have this same buffering effect. Of course, one can also increase the alkali content of the diet by consuming more fruits and vegetables, thereby achieving the same effect as that of potassium citrate supplementation. The acid/alkali balance in the body can be further improved by avoiding excessive intake of animal proteins and grains.

It may seem paradoxical that eating acidic foods such as oranges can increase the alkali content of the diet. However, after oranges are metabolized in the body, the “ash” that remains is alkaline. It is the acidity or alkalinity of the “ash,” rather than of the food before it is ingested, that determines a food’s effect on the acid/alkali balance in the body.
