

Vitamin K Overview

Vitamin K is a fat-soluble vitamin that plays a critical role in blood clotting but it also contributes to the integrity of bones activating several proteins important in bone health. Vitamin K promotes optimal bone matrix deposition (through the action of a bone protein called osteocalcin). Vitamin K is required for full activity of the osteocalcin protein. Senior citizens with low vitamin K intake have been shown to have sub-optimal bone density and an increased risk of osteoporosis. Women with higher vitamin K intakes have a significantly lower relative risk of hip fracture (about 30% lower) than women with lower vitamin K intake. Studies in postmenopausal women have shown that an increased intake of vitamin K results in an increase in bone formation and a slowing of bone loss.

Dietary Sources: The most common form of Vitamin K, phylloquinone, is found in avocado, liver, some oils, especially soybean oil, and dark-green vegetables such as spinach and broccoli.

Dosage: The adult RDA ranges from 60-80mcg/day. According to the US Department of Agriculture, improved analytical methods show that the vitamin is not as abundant in the diet as once thought. Also, people between the ages of 18 and 44 don't get enough vitamin K.

Side Effects: High intake of vitamin K – from either foods or supplements, is not recommended for individuals taking anticoagulant medications such as Warfarin (coumadin). As with any fat-soluble vitamin, chronic consumption of doses above RDA levels is not recommended due to concerns regarding buildup and toxicity.

(Source: www.supplementwatch.com and <http://www.ars.usda.gov/is/AR/archive/jan00/green0100.htm>)

Research Overview

Vitamin K research shows the following:

1. Promotes blood clotting
2. Improves bone density
3. Improves bone strength
4. Required in the formation of blood clotting proteins
5. Prevents hemorrhagic disease in infants
6. May contribute to anti-cancer therapies
7. Reduces bruising after laser therapy
8. Promotes bone formation
9. Reduces bone loss
10. Reduces risk of hip fracture
11. Increases bone mass in postmenopausal women
12. May be a treatment for leukemia cells
13. Is a treatment for osteoporosis
14. Is a treatment for diabetic neuropathy
15. May prevent bone loss in space flight
16. May improve glucose tolerance
17. Prevents excessive anticoagulation

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