VITAMIN K

The Many Functions of Vitamin K

Vitamin K deficiency symptoms:

- Problems with blood clotting
- Hemorrhaging/Hematomas
- Fractures
- Bruising
- Bleeding
  - Heavy menstruation
  - Gastrointestinal
  - Nosebleeds
  - Gums

Conditions related to vitamin K deficiency:

- Cancer
- Cardiovascular Disease
- Anemia
- Osteoporosis/Osteopenia
- Malabsorption syndromes
  - Crohn's disease
  - Celiac disease
  - Cystic fibrosis
  - Chronic pancreatitis
  - Liver disease

Why is vitamin K important and why should I measure it?

Vitamin K is a fat-soluble vitamin well known as an essential factor for blood coagulation; however in current research it has emerged as a potential protector against osteoporosis, atherosclerosis, and possibly cancer. Higher vitamin K levels in the body may help reduce bone fractures, risk for osteoporosis, and cardiovascular disease. In human studies the intake of vitamin K has been associated with a lower risk of coronary calcification and in animal studies vitamin K has reversed arterial calcification.*

How is vitamin K linked to health?

Vitamin K plays an important role in many functions of the body. Vitamin K can be especially linked with bone and cardiovascular health. There are two natural forms of vitamin K: phylloquinone (vitamin K1) found in leafy greens, such as broccoli and kale, and menaquinone (vitamin K2) found in dairy products, meat, and cheese and synthesized from gut bacteria. Menaquinone has been shown to reduce build up of calcium deposits in the coronary arteries which can help improve cardiovascular health.

Vitamin K status

Undercarboxylated osteocalcin (ucOC) is used as a biochemical marker for vitamin K deficiency. The active form of osteocalcin is required for bone formation due to its activity in calcium deposition and is dependent on vitamin K for activation. Elevated ucOC is a specific and a sensitive sign of vitamin K deficiency. Monitoring vitamin K can help determine if your levels are adequate.

Vitamin K status is especially important in individuals:

- With cardiovascular disease or family history of atherosclerosis
- At high risk of or family history of bone loss/osteoporosis, such as pre- and post-menopausal women
- On blood thinners, such as warfarin or aspirin
- On a restricted diet
- On long term antibiotic therapies
- With gastrointestinal conditions leading to malabsorption

***References are available at www.metametrix.com**
The Vitamin K Assay is not available in New York

PATIENT INFORMATION SHEET

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