

# FAT-SOLUBLE VITAMINS



## Vitamins: A Snapshot of Overall Nutrition



### *What are the benefits of measuring all fat-soluble vitamins together in one test?*

Testing these fat-soluble vitamins together in one panel is important because proper functionality is dependent on adequate supply of each nutrient.

Vitamins A, K, and D work together to provide essential bone health. Vitamin D helps increase calcium absorption in the body which is then used by vitamin K to help with bone calcification. Additionally, to keep bones strong and healthy, adequate levels of vitamin A are required.

Vitamins A and E, plus beta-carotene and CoQ10 work together to provide optimal antioxidant protection. Vitamin A, playing a dual role in the body, also helps to protect the immune system in conjunction with vitamin D.

### *Why are vitamins essential for my diet?*

Vitamins are compounds your body needs to be healthy. Vitamins are “essential” for proper function, which means they are not made inside your body and must be consumed in the diet. Your body needs vitamins for many reasons. Without them, organs cannot function properly, skin ages rapidly, and vision fails.

### *What does the Fat-Soluble Vitamins Profile measure?*

Serum levels of the fat-soluble vitamins A, D, E, K, plus beta-carotene and coenzyme Q10 are measured to evaluate total body status of these antioxidant nutrients.

- **Vitamin A** is an antioxidant in the membranes of your cells where it serves a protective function. Vitamin A is required by the eye for vision, and it is also needed to protect the rest of your body from damaging effects of infection and stress.
- **Vitamin D**, “the sunshine vitamin,” is necessary for maintaining blood levels of calcium and phosphorus for healthy teeth and bones. Vitamin D also plays a vital role in immune functions.
- **Vitamin E** is a major part of your protection from daily wear and tear. It is the principle membrane antioxidant.
- **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, cardiovascular disease, and possibly cancer.
- **Beta-carotene** serves to protect tissue and is converted by your body to vitamin A.
- **Coenzyme Q10 (CoQ10)** is produced by the human body and is necessary for energy production in cells.

### *Conditions/Symptoms relating to fat-soluble vitamin insufficiency:*

- Impaired immune function
- Recurring infections
- Neurological disease
- Impaired digestion and absorption
- Heart disease
- Osteopenia and osteoporosis
- Chronic fatigue
- Increased oxidative stress
- Poor dietary intake

## PATIENT INFORMATION SHEET

