



Vitamin K

The “Forgotten” Vitamin



Ask anybody what vitamins they know about, and you’re likely to hear Vitamin C, Vitamin D, Vitamin E, and many people will even know that there are multiple vitamins called B. But if you ask about Vitamin K, a lot of people will say “is that really a thing?” Well, we’re here to tell you that not only is it a thing, but it’s as essential as any of the other vitamins you may have heard of. That’s why it’s one of the so-called “13 Essential Vitamins,” which are actually **REQUIRED** by our bodies in order to Function. Complicating matters even more is the fact that Vitamin K is actually a **COMPLEX** of vitamins, each with its own distinct properties. In order to understand Vitamin K, its importance in our diet, how to make sure we’re getting all the benefits of it, and how it interacts with other vitamins, we need to know what it is, what it does, what foods it can be found in, and what the different types are.

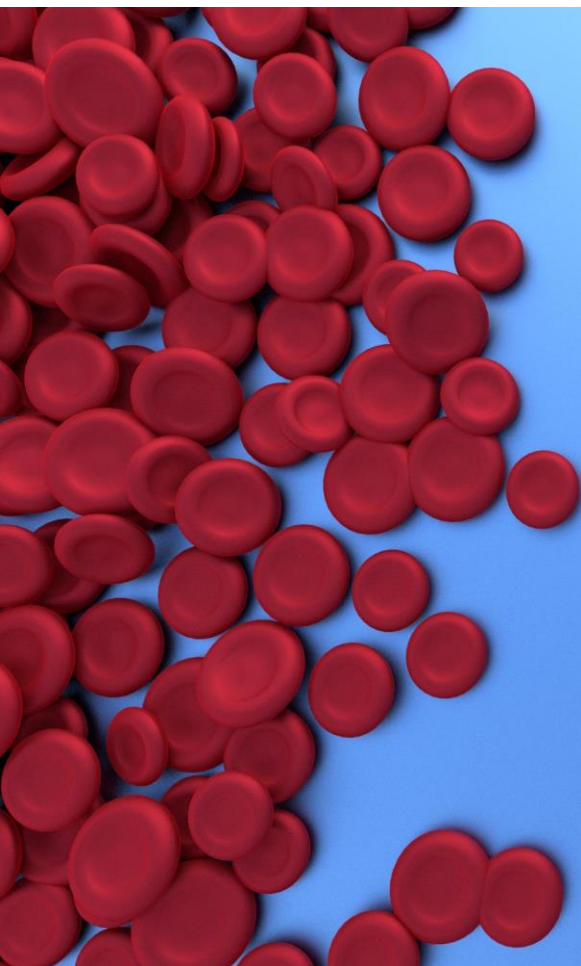




Not Just One Vitamin

Just as Vitamin B is actually a whole group of vitamins (B6, B12, Niacin, Riboflavin, etc.), Vitamin K is also a group of compounds, and not just one vitamin. The two most important of these are K1 and K2. There is also a synthetic form of Vitamin K known as K3, but as it can be toxic, it is not generally used in supplementation.

To make things even more complicated, there are two different forms of Vitamin K2 – MK4 and MK7. So which of these do we need, and why? The simple answer is: all of them, and for a whole host of reasons. Let's take the K family as a whole, and then break it down to each different type.

Blood, Bones, & Heart



The one thing that Vitamin K is best known for is the role it plays in blood clotting, or coagulation. If our blood did not coagulate under the right conditions (wounds, injuries), we would simply bleed to death. There are four coagulation factors (Factor 2, 7, 9, and 10) that are activated by the whole Vitamin K compound. While Vitamin K activates these  coagulation factors, high doses of  Vitamin K will NOT cause the factors to become overactive, so there is no risk of overcoagulation with higher Vitamin K consumption.

Blood, Bones, & Heart

As with many supplements, there are certain conditions that require one be cautious when taking Vitamin K. Because of its coagulation effects, people who take oral anticoagulants – drugs such as Coumadin and Warfarin – need to consult with their physicians before taking a Vitamin K supplement.



That doesn't automatically mean that nobody taking this class of drugs can't take Vitamin K, just that it needs to be with the advice and consent of their physician.

Blood, Bones, & Heart

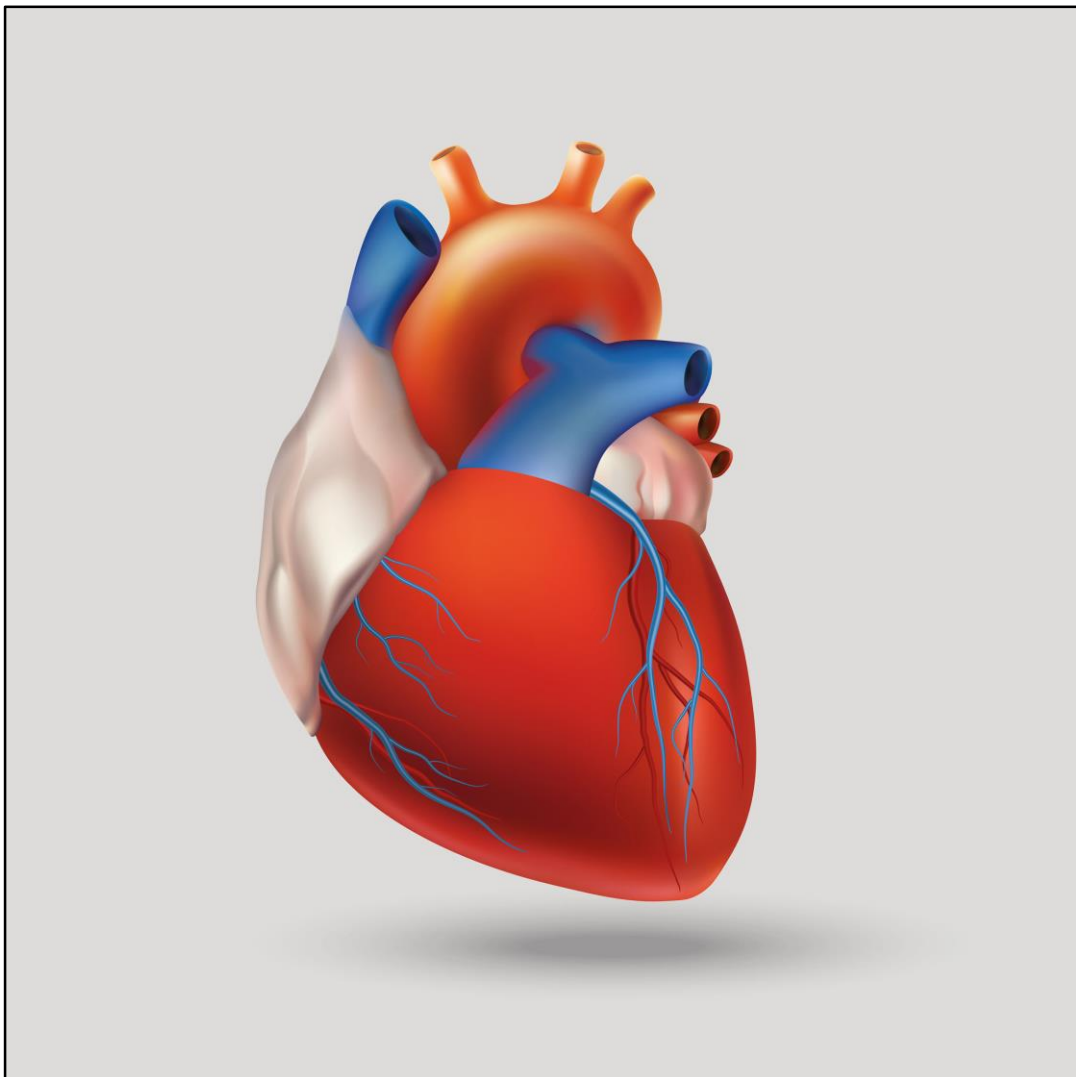
According to the University of Maryland Medical Center, your body needs Vitamin K to use calcium properly in building bone. People with higher levels of Vitamin K tend to have greater bone density, and low levels of Vitamin K have been associated with a higher risk of osteoarthritis and osteoporosis.

Because of its role in the proper assimilation of calcium, Vitamin K is critical for bone health, especially when consumed in conjunction with Vitamin D (for more on this, refer to our PDF on Vitamin D, publishing date 3/14/18). Postmenopausal women are particularly at risk for osteoporosis, so Vitamin K is especially important for them.



Blood, Bones, & Heart

Among the many benefits of Vitamin K, there is significant evidence that it is important for cardiovascular and heart health. Studies have shown that without Vitamin K, an important protein, Matrix Gla (MGP), along with other key proteins, remain inactivated in the system, and cannot perform their biological functions. These proteins, particularly MGP, are very strong inhibitors of calcification, which is one of the major causes of cardiovascular disease. Vitamin K deficiency, therefore, can be a key contributor to cardiovascular disease.



K1, and the two forms of K2

The most confusing aspect of Vitamin K for most people is the many different varieties it comes in. The reality is actually not as complex as it sounds. Let's break it down.

Vitamin K1 – also known as Phylloquinone, or Phytonadione. This is the predominant form of Vitamin K found in the human diet.

Among the foods that are high in Vitamin K1 are:

- Kale
- Collard Greens
- Spinach
- Turnip Greens
- Broccoli
- Brussels Sprouts

The problem with the K1 found in these foods is that it's not well absorbed by the body.



Title of the book

Vitamin K2 comes in two different forms – Menaquinone 4 (MK-4) and Menaquinone 7 (MK-7). Of these two, MK-4 is the easier to get from food. It can be found in:

- Chicken
- Egg Yolks
- Butter

MK-7, on the other hand, is found primarily in fermented foods, like the Japanese dish “Natto,” made from fermented soybeans. MK-7 is therefore very hard to get in adequate amounts from our diet.

Because Vitamin K1 and Vitamin K2, and MK-4 and MK-7, have such different properties, are available from such different foods, and are so differently absorbed by the body, it can be very difficult to ensure that one is getting enough of the entire complex.

Additionally, because Vitamin K has such a unique symbiotic relationship with Vitamin D, in terms of how the two work together to ensure that the body is absorbing and utilizing calcium in the most efficient and beneficial way, it’s crucial to look at one’s diet, and make informed decisions about supplementation. If there are complicating health conditions, as mentioned above, this should certainly be done in consultation with one’s physician.

In summary, it's important to understand that Vitamin K (by which we mean the entire K complex) is every bit as vital a component of nutrition as any of the other 12 "essential vitamins," even if it's the least understood. As with all vitamins and other nutritional supplements, we should all take into consideration how best to get the most we can through our diets, and where appropriate, how best to augment our intake through thoughtful supplementation.



And coming soon –
our **Vitamin D3 plus K Complex**