

## **VITAMIN K**

Vitamin K and its derivatives are well known in the human health and dietary supplement world for their supportive role in overall human wellness and basic biological functions. Vitamin K is one of the four fat soluble vitamins (a group which also includes Vitamins A, D, and E), and was recognized in the early 1930's to be essential to normal blood coagulation and bone formation<sup>1</sup>.

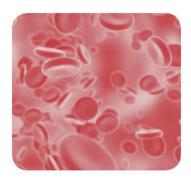


## **VITAMIN K FAST FACTS**

- There are several forms of Vitamin K, but the bestknown forms are Vitamin K1 and Vitamin K2. Vitamin K1 is found in green leafy vegetables such as spinach, while Vitamin K2 is derived from butter, eggs, and other animal based foods<sup>2</sup>.
- The term "fat soluble vitamin" means that Vitamin K is absorbed in the intestine in the presence of fat<sup>3</sup>.

Vitamin K is the essential cofactor for the processes that are involved in blood coagulation, bone metabolism, prevention of vessel mineralization (unwanted deposit of iron or calcium salts in the circulatory system), and regulation of various cellular functions in humans<sup>4</sup>.

The dietary supplement industry is aware of the importance of Vitamin K in the human diet, and Vitamin K supplements in multiple forms continue to remain popular amongst consumers.



## VITAMIN K MVP's

- Vitamin K1: also known as "phylloquinone" in its molecular form, this compound is a major type of dietary vitamin K<sup>5</sup>.
- Vitamin K2: this compound can exist in several different forms, known as "menaquinones". The most well studied forms among this group include menaquinone-4 (MK-4), menaquinone-7 (MK-7) and menaquinone-9 (MK-9)<sup>6</sup>. The different numbers within the menaquinone names indicate differences in chemical structures.

ChromaDex provides a number of chemical reference standards within the Vitamin K family, including but not limited to: menadione, menaquinone-4, menaquinone-7, phytonadione, and others. All members of the Vitamin K family can be searched on ChromaDex's online catalog at chromadex.com/chromadex-catalog/

## References

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- 3. Albahrani, A.A. and R.F. Greaves, Fat-Soluble Vitamins: Clinical Indications and Current Challenges for Chromatographic Measurement. Clin Biochem Rev, 2016. 37(1): p. 27-47.
- 4. Higdon, J. Vitamin K. 2000 [cited 2018; Available from: http://lpi.oregonstate.edu/mic/vitamins/vitamin-K.
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