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**Review Article** 

## VITAMIN K – THE IGNORANT NUTRIENT

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## **ABSTRACT**

Vitamins are widely classify as water soluble and fat soluble vitamins. Fat soluble Vitamin K is called as "Forgotten Vitamin" due to the important vitamin that are usually over looked by Scientist and Nutritionist. The name Vitamin K is discovered from German word Koagulation because vitamin K play important role in blood coagulation. Vitamin K is found in the dark green vegetables and vitamin. The main source of this vitamin are not found in leafy green vegetables and that is vitamin K1, which responsible for blood clotting and serves a different Function than K2.

## **KEYWORDS**

Water soluble vitamins, Koagulation, Vitamin K, green vegetables.

#### INTRODUCTION

Vitamin K1: The vitamin K1 is found in green leafy vegetable. Vitamin K1 goes directly to the liver and helping in blood coating system. It prevent the blood clotting in infants. It is also vitamin K1 that keeps your own blood vessels from calcifying and helps your born retain calcium and develop the right crystalline structure.

Vitamin K2: Vitamin K2 is a type of bacteria that is present in the gut but unfortunately Most of them are passes from stool. It is mainly presents in the fermented foods cheese and mostly in Japanese food Natto.

#### Importance:

Vitamin K is a very important substance that our body needs to form clots and to stop bleeding. We got vitamin by food and the good bacteria that live in our intestines. Because the bacteria in your intestines are capable of Making Vitamin K, most healthy people are most deficient in this Nutrients even If they do not take in the recommended amount but some antibiotic medications can kill the bacteria and cause a mild deficiency. People with gall bladder diseases, Crohn's diseases, liver disease are at an increased risk of becoming deficient in Vitamin K, a problem that cause dangerously heavy bleeding. Babies are born with very small amount of vitamin K stored in their bodies which can lead to serious bleeding problems if not supplemented.<sup>[1]</sup>

Vitamin K deficiency bleeding occurs when babies cannot stop bleeding because their blood does not have enough Vitamin K to form clot. The bleeding can occurs inside the body, it can be occur anywhere on inside or outside of the body. When

the bleeding occurs inside the body, it can be difficult to notice. Commonly, a baby with Vitamin K deficiency will bleed into his or her intestines or into the brain which can lead to brain damage and even death. Infants who do not receive the vitamin K shot at birth can develop Vitamin K deficiency at any time up to 6 months of age. There are three type of Bleeding Problems start early, classical and late.

When baby Born, They have little Vitamin K stored in their bodies because only small amount pass to them through the placenta from their mothers. The good bacteria who produce the vitamin K not yet present in the newborn's intestines. Breast milk contains low amount of vitamin K so exclusively breastfed babies don't get enough vitamin K from the breast milk.<sup>[2,3]</sup>

#### **Blood clotting:**

Vitamin K is a compound that helps several proteins in your blood to coagulate, a process than can stop excessive bleeding. The activation of seven vitamin K-dependent clotting factors depends on their binding to calcium ions in your blood. It helps to prevent problems associated with this blood such as easy bruising, nosebleeds, bleeding gums, blood in urine or stool.

## Osteoporosis:

Our Body needs Vitamin K to build bone. People who have Higher the level of Vitamin K have grater bone density while low level of vitamin K have been found in those with osteoporosis. Similarly, some studies suggest that low level of Vitamin K have grater bone density while low level of Vitamin

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K are associated with a higher risk of Osteoporosis. Similarly, some studies suggest that low levels of vitamin K are associated with a higher risk of osteoarthritis. [4] There is a evidence that proves that Vitamin K improves bone Health and reduce the risk of bone fractures, particularly in postmenopausal women who have also found that vitamin K helps with bone health. However, Some studies shows that vitamin K did not help with Bone density. [5]

## **Coronary Heart Disease:**

Vascular calcification is one of the risk factors for coronary heart disease because it reduces aortic and arterial elasticity. <sup>[6]</sup> Matrix Gla protein is a vitamin K dependent protein that play important role in the prevention of vascular calcification. <sup>[7]</sup> So, Undercarboxylated Matrix Gla protein could increase the risk of coronary heart diseases. Observed Study shows that Dietary Menaquinone intake was inversely associated with coronary calcification. <sup>[8]</sup>

#### **CONCLUSION**

The review aims to discuss about the artificial sweeteners Types and their uses in different food as per FSSAI Rules. The main benefit of the artificial sweeteners is that they are helpful to control on tooth decay, diabetes and weight control. But the excess amount of any thing is harmful to the human body. In the light of these findings, a similar approach might be used to reduce sugar intake. Unsweetening the worlds diet may be key to the reversing all problems.

### **REFERENCES**

- 1) Shearer MJ, Vitamin K deficiency bleeding (VKDB) in early infancy, Blood Rev.2009 Mar;23(2):49-59.
- Sutor AH, Von Kries R, Comelissen EA, Mcninch AW, Andrew M., vitamin K deficiency Bleeding In infancy(VKDB), Int society on thrombosis and haemostasis., March 1999;81(3):456-61.
- 3) Suthor AH, Vitamin K deficiency bleeding in Infants and children, Semin thromb hemost 1995;21(3):317-29.
- 4) Booth SL, Mayer J. Warfarin use and fracture risk. Nut Rev 2000;58:20-22.
- 5) Simon RR, Beaudin SM, Jhonston M. Longterm treatment with sodium warfarin results in decreased femoral bone strength and cancellus bone volume in rats. Thromb Res 2002;105:353-358. the main purpose
- Demer LL, Tintut Y. Vascular Calcification: pathobiology of a multifaceted disease. Circulation 2008;117:2938-48.
- Geleinnse J M, Vermeer C, Grobbee D E, Schurges L J, Dietary intake of menaquinone is associated with a reduced risk of coronary risk of coronary heart disease: The Rotterdam Study. J Nutr 2004;134:3100-5.
- Beulens J W, Bots M L, Atsma F, Bartelink M L, High dietary menaquinone intake is associated with reduced coronary calcification. Atherosclerosis 2009:203:489-93.

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