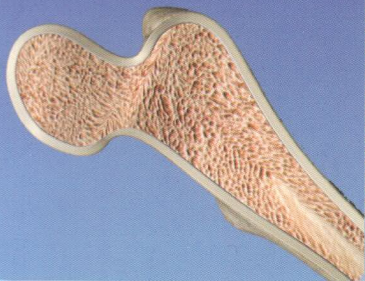




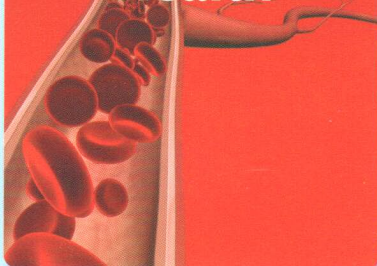
natto  
**Mk-7**™

VIT K2: menaquinone-7

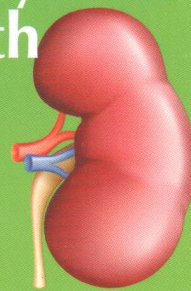
**Bone Health**



**Cardiovascular Health**



**Kidney Health**



Promoting  
**Bone** and  
**Cardiovascular**  
**Health**™

**100% Natural Vitamin K2 (MK-7)  
from natto**

**100% Trans-form**

**Highly Stable & Highly Bioavailable**

**No Solvents/Additives/Preservatives,  
nonGMO, Free of Allergens**

**Clinically-proven to support bone &  
cardiovascular health**

## A Brief History of Vitamin K

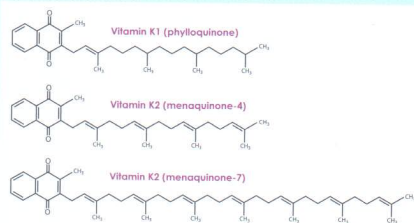
Vitamin K was first discovered back in 1929 by Henrik Dam who was studying the role of cholesterol by depriving chickens of cholesterol in their diet. Henrik Dam and Edward Doisy were awarded the Nobel Prize in 1943 for their important roles of discovering Vitamin K and its structure. Since then, over 15,000 research articles have been published, by countless scientists around the world, concerning the great health benefits and essential functions of Vitamin K.

## About Vitamin K

Vitamin K is a class of fat-soluble vitamins. This essential vitamin exists naturally in foods such as leafy, green vegetables and soybeans, and it is vital for your body to properly regulate and activate important proteins, such as clotting factors in the liver, Matrix Gla Proteins found in your arteries, and osteocalcin in bones.

Your body utilizes Vitamin K in two forms, Vitamin K1 (phylloquinone) and Vitamin K2 (menaquinones, MK for short). Within Vitamin K2 are variants ranging from MK-4 to MK-12, the numbers indicating the length of isoprenoid, carbon side chain. The two naturally occurring forms are MK-4 and MK-7. Vitamin K2 (MK-7) is unique in that it has been shown to be more bioavailable and has a longer half-life in the bloodstream after oral intake, thus providing its benefits for a longer period of time.

Vitamin K1 helps blood coagulate/clot properly. Whereas, Vitamin K2 helps reduce calcium plaque build up in your arteries and to guide calcium absorption to strengthen your bones. Several clinical studies show how Vitamin K2 serves to improve cardiovascular health while simultaneously increasing bone mineral density.



(Vitamin K1 and K2 structures: Vitamin K2 is associated with a longer carbon tail as a number larger than 3. MK-7 = 7)

## Natto: The Tradition behind the Science

nattoMK-7 was named after a long held traditional Japanese dish called Natto. Natto is made through the fermentation of soybeans and has been a staple of the Japanese diet for centuries. Many people started to realize the major health benefits associated with regular Natto consumption, such as decreased blood pressure, reduced incidence of osteoporosis, etc. A group from Kinki Medical School definitively showed how intake of Natto in post-menopausal women caused a reduction in bone loss. Subsequent clinical and population based studies found that these benefits were largely attributed to the fact that Natto was full of Vitamin K2.

Even with its greatly indicated health benefits, Natto remains unknown in many parts of the world. Due to its slimy texture and unique smell, many people find it very unappetizing. Fortunately, Vesta Ingredients, Inc. nattoMK-7 offers the great health benefits of Natto by extracting Vitamin K2 (MK-7) directly from *Bacillus subtilis*, a naturally occurring bacteria responsible for MK-7 production in the fermentation process.

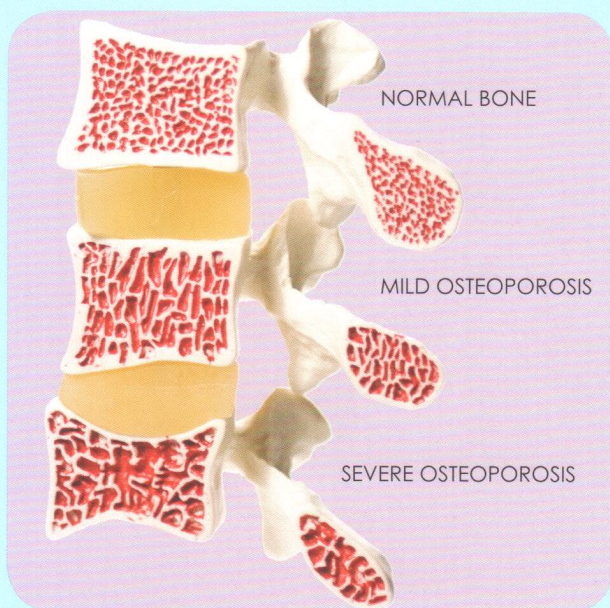
Thanks to engineering from our top scientists and advanced filtration processes, our Vitamin K2 (MK-7) is completely all-natural, allergen-free, nonGMO, and even newly Kosher Certified.



## How Calcium is Absorbed and Incorporated

For the longest time, conventional wisdom suggested that whenever consuming calcium, Vitamin D3 is essential. This is certainly true because Vitamin D3 aids in absorbing calcium from the digestive tract into the arteries, but in light of recent research and studies, we now realize that this is only half the story.

Through aging, malnutrition or disease, bones become weak and brittle while calcium builds up to harden and block off arteries. Healthy bones and clearer arteries can be reestablished with proper diet, exercise, and supplementing with Vitamin K2 (MK-7). Vitamin K2 maintains proper function of vital proteins throughout the body; in your blood vessels by interacting with Matrix Gla Protein to keep calcium from accumulating in your arteries, and within your bones by activating a protein called Osteocalcin to incorporate calcium hydroxyapatite into bones to build them up and keep them strong. Vitamin K2 (MK-7) helps keep calcium from hardening and blocking arteries while redirecting it to maintain bone strength.



Vitamin K deficiency is currently a major problem due to the lack of a proper balanced diet. Vitamin K deficiency can also be caused by diseases such as biliary disease, cystic fibrosis, celiac disease, liver disease, and Crohn's disease. Deficiency in Vitamin K has been linked to both osteoporosis, fractures, and improper calcium balance in arteries and veins. Thus it is very important that we supplement our diets with the proper amount of Vitamin K.

New research is also being performed to link Vitamin K2 with preventing and/or improving kidney disease, liver disease, neurological disorders and even certain cancers!

## Introducing Vitamin K2: nattoMK-7™

Vesta's nattoMK-7 (Vitamin K2: MK-7) is an all-natural product and highly bioavailable. Vitamin K is essential to proper bone mineralization and in regulating calcium levels within arteries. It has gained increased attention due to its highly efficacious nature.

Supplementation of Vitamin K has been shown to be very important in maintaining healthy bones and cardiovascular system. Of all the types of Vitamin K, Vitamin K2 (MK-7) derived from Natto has been shown to be the most effective, and benefits can be seen long after supplementation due to its longer half-life in circulation.

Vitamin K2 (MK-7) does not display toxicity, and does not concentrate in excess amounts in the liver, unlike synthetic Vitamin K2. Simply put, MK-7 may help promote a healthy cardiovascular system and maintain healthy bones, joints and arteries through all-natural means.

**Learn more at [www.nattoMK7.com](http://www.nattoMK7.com)**

See site for literary and technical references.

Vesta was founded in 1996 with a single uncompromising focus: Deliver the absolute highest-quality nutritional ingredients for every customer and at the most competitive price. While Vesta has grown into a premier cGMP and FDA registered full-service provider of nutraceutical supplements, we continue to apply our founding values in every facet of our business.

Vesta Ingredients employs the latest technology and techniques to produce the finest ingredients for our customers. By maintaining our industry certifications, you can rest assured that everything we produce will be exactly as you expect.

**Trust Vesta to deliver.**



**Vesta**®

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info@vestaingredients.com

Vesta Ingredients, Inc.

## Benefits of Vesta's nattoMK-7™

- Greater than **95% pure** menaquinone-7
- **100% Trans-form** - the most usable form for human consumption
- Highly **stable** & Highly **bioavailable**
- **No Solvents/Additives/Preservatives, nonGMO, Free of Allergens**
- Clinically-proven to **support bone & cardiovascular health**
- **Highest purity crystals** and **highest strength** mean less is needed for proper dosage in your custom supplement
- **Kosher Certified** - Your assurance of purity
- **HACCP**-certified manufacturing facility
- Extremely **competitive pricing**

### Specifications and Custom Orders

Vesta Ingredients offers nattoMK-7 in stock concentrations as well as any custom blend you may need:

Physical Form	Strength	Carrier
Powder	13,000ppm (1.3%)	Dicalcium Phosphate
Powder	10,000ppm (1.0%)	Dicalcium Phosphate
Powder	custom blend*	TBD*

\*Vesta offers custom concentrations and carriers (i.e. maltodextrine)



Kosher Certified



www.NaturalProductsAssoc.org

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.