**INGREDIENTS**

Natural Vitamin K2 – MenaQ7® contains pure MenaQ7®, the superior form of vitamin K for optimum bioavailability and delivery to the body. MenaQ7® is purified from fermented chickpeas which are naturally rich in vitamin K2. Not just a single vitamin, Vitamin K is a family of fat-soluble vitamins with similar structures, but different metabolic properties. Vitamin K2 belongs to the group of vitamin K compounds called “menaquinones” which demonstrate greater bioactivity when compared to vitamin K1 (the ordinary form of supplemental vitamin K). Vitamin K2 is absorbed more completely, remains in the body longer and delivers more benefits for bones, blood vessels and other soft tissues.*

**BENEFITS OF VITAMIN K2**

Supports Bone Health and Soft Tissue Elasticity*
Delivers Optimum Levels of Vitamin K to Bone and Soft Tissue*
Supports Calcium Metabolism for Maintenance of Healthy Bone*

**The Importance of Vitamin K**

Vitamin K, a fat-soluble vitamin, is primarily known for its role in regulating blood coagulation. Vitamin K is required for the activity of specialized proteins that control blood clotting (Coagulation factors II, VII, IX) in a series of metabolic steps known as the coagulation cascade. The daily intake of vitamin K recommended by the National Academy of Sciences is based on the amount needed for biosynthesis of these clotting factors in the liver.

Vitamin K-dependent proteins are also found in bone and soft tissues, including osteocalcin, the protein that deposits calcium in bone. Activation of vitamin K-dependent proteins occurs through carboxylation, a metabolic process that adds a molecule composed of carbon, hydrogen and oxygen to glutamate, an amino acid within the protein structure. (Vitamin-K dependent proteins are also referred to as “Gla proteins.”) Osteocalcin cannot perform its function of incorporating calcium into bone unless it is activated first. A rise in the amount of inactive (under-carboxylated)

**Supplement Facts**

**45mcg, 60VC & 180VC**

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>1 Veggie Capsule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Servings Per Container</td>
<td>60 &amp; 180</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>%Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin K2 (from MenaQ7® Menaquinone, MK-7)</td>
<td>45 mcg</td>
</tr>
</tbody>
</table>

**Other Ingredients:** Microcrystalline cellulose, modified cellulose (vegetarian capsule), glycerol monostearate, magnesium stearate (vegetable source), ascorbyl palmitate, rosemary extract.

**Suggested Adult Use:** Take 1 capsule daily with food, or as recommended by a nutritionally-informed physician.

**WARNING:** This product contains vitamin K. Consult your physician if using blood-thinning medications such as Warfarin.

**Non-GMO / Gluten Free / Soy Free / Vegan**

Store in a cool dry place.

**100mcg, 60VC**

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>1 Veggie Capsule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Servings Per Container</td>
<td>60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>%Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin K2 (from MenaQ7® Menaquinone, MK-7)</td>
<td>100 mcg</td>
</tr>
</tbody>
</table>

**Other Ingredients:** Microcrystalline cellulose, modified cellulose (vegetarian capsule), glycerol monostearate, magnesium stearate (vegetable source), ascorbyl palmitate, rosemary extract.

**Suggested Adult Use:** Take 1 capsule daily with food, or as recommended by a nutritionally-informed physician.

**WARNING:** This product contains vitamin K. Consult your physician if using blood-thinning medications such as Warfarin.

**Non-GMO / Gluten Free / Soy Free / Vegan**

Store in a cool dry place.

* 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.
osteocalcin circulating in the blood is now regarded as a measure of vitamin K deficiency. Vitamin K supplementation has been shown to decrease blood levels of inactive osteocalcin.²

Studies report finding elevated levels of inactive osteocalcin in post-menopausal and elderly women.³ Other studies bring to light a connection between inactive osteocalcin and the deterioration of bone quality and strength that occurs with aging.⁴ In view of this, it is probably not coincidental that elderly women with superior vitamin K status have had better bone outcomes, when compared to other women in the same age groups.⁵ The importance of vitamin K for bone health was underscored by the findings of a 10-year dietary analysis of 72,327 women in which higher dietary intake of K and superior vitamin K status were associated with a better outcome marker of bone health.⁶

While osteocalcin is essential for keeping calcium in bone, Matrix Gla Protein (MGP), another vitamin-K dependent protein, helps keep calcium from accumulating in soft tissues where it doesn’t belong, thereby supporting vascular health.⁷

As with osteocalcin, MGP must be carboxylated to be activated. A recent study found a strong connection between blood levels of active MGP and bone turnover.⁸ Other studies bring to light a connection between inactive osteocalcin and the deterioration of bone quality and strength that occurs with aging.⁹ In view of this, it is probably not coincidental that elderly women with superior vitamin K status have had better bone outcomes, when compared to other women in the same age groups.⁵ The importance of vitamin K for bone health was underscored by the findings of a 10-year dietary analysis of 72,327 women in which higher dietary intake of K and superior vitamin K status were associated with a better outcome marker of bone health.⁶

Research on Vitamin K2

A large-scale study on vitamin K intakes among 5,000 Dutch persons suggests that vitamin K2 may help maintain healthy blood vessels, and perhaps even prolong life. The study participants were divided into four groups based on their daily vitamin K intake from food sources, as assessed from a food frequency questionnaire. Compared to those in the low vitamin K2/ menaquinone group, subjects at the highest consumption level had substantially superior heart health. Similar associations were not seen for vitamin K1.¹⁴

In summary, emerging science clearly shows that the body’s need for vitamin K exceeds the amount necessary for its basic function of maintaining normal blood coagulation. Vitamin K is gaining recognition as an essential nutrient for bones and soft tissues. By activating the key Gla proteins such as osteocalcin and MGP, vitamin K helps maintain mineralization of bone while counteracting mineralization of tissues where calcium doesn’t belong.⁷ Compared to other forms of vitamin K2, the effective dose of MK-7 is substantially lower, making it a superior choice for long-term consumption as a dietary supplement.¹⁰

QUALITY CONTROL

MenaQ7® is manufactured exclusively in a government-inspected Japanese facility that adheres to strict quality standards. Robust controls are in place to eliminate any risk of contamination during the manufacturing process. Every batch undergoes thorough testing authenticated by a Certificate of Analysis. Vitamin K2 potency is verified by a state of the art laboratory analytical procedure. MenaQ7® complies with international standards for absence of heavy metals, pesticides, harmful microorganisms and other contaminants.

SCIENTIFIC REFERENCES


¹ 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.