

Use of Vitamin K-Antagonizing Drugs to Thin Blood Challenged: New Alternatives DOACs are beneficial without promoting unwanted calcification.

OSLO, NORWAY and METUCHEN, NJ (November 18 2015) – *Nutrients*, an international, peer-reviewed, open journal for studies related to Human Nutrition, recently published a review¹ from Maastricht University (the Netherlands) that updates on oral anticoagulant (OAC) treatment with a special focus on calcification of the vasculature and the role of vitamin K. Most importantly, the review includes recently developed alternative anticoagulant drugs – called direct oral anticoagulants (DOACs) – which researchers deem a safer alternative as they do not pose the negative side effects that typically accompany OACs.

Vitamin K-antagonists (VKA) are the most widely used anticoagulant drugs to treat patients at risk of arterial and venous thrombosis for the past 50 years. Due to unfavorable pharmacokinetics, VKAs have a small therapeutic window, require frequent monitoring, and are susceptible to drug and nutritional interactions. According to researchers, an important interaction is reducing vitamin K status of the vasculature, which may lead to increased arterial calcification.

The limitations of VKAs stimulated the development of alternative anticoagulant drugs, resulting in DOACs, which specifically target either coagulation factor Xa or thrombin more consistently. Further, DOACs do not present nutrient interaction, such as vitamin K, and therefore may actually have benefits for coronary artery disease.

“Oral anticoagulants block the activity of vitamin K-dependent proteins, which has been shown to increase calcification, thereby negatively impacting cardiovascular health. Clearly anticoagulant alternatives that do not interfere with vitamin K would be a better option,” says Hogne Vik, CEO of NattoPharma, exclusive global supplier of MenaQ7® Vitamin K2 as MK-7. NattoPharma also has a long-standing relationship with Maastricht University, and this review is a result of that collaboration.

By activating K-dependent proteins in the body, Vitamin K2 as MK-7 helps the body to properly utilize calcium – directing it to the bones where it is needed, and away from the arteries and blood vessels where calcium can deposit and cause harm. Multiple clinical studies have confirmed that MenaQ7 Vitamin K2 as MK-7 effectively and safely does this; most notably in a 2013 study published in *Osteoporosis International*² and a 2015 study published in *Thrombosis and Haemostasis*³, respectively.

Further, the researchers write, “Presently, ongoing clinical trials are addressing whether vitamin K supplementation can halt or regress vascular calcification. The outcome of these trials will pave the way to test whether co-supplementation of Vitamin K2 with DOACs can benefit both coagulation and calcification.”

"Accumulation of vitamin K from dietary and supplement sources has been shown to be beneficial for bone and cardiovascular health," Vik continues. "We welcome further understanding and acceptance of alternatives to traditional OACs, and hope this trend further shapes the standard of care."

To view the new review in *Nutrition*, visit: <http://www.mdpi.com/2072-6643/7/11/5479/htm>.

References:

- 1 van Gorp RH, Schurgers LJ. New Insights into the Pros and Cons of the Clinical Use of Vitamin K Antagonists (VKAs) Versus Direct Oral Anticoagulants (DOACs). *Nutrients* 2015, 7, 1–20; doi:10.3390/nu7115479
- 2 Knapen MHJ et al. Three-year low-dose menaquinone-7 supplementation helps decrease bone loss in healthy postmenopausal women. *Osteoporos Int.* 2013 Sep;24(9):2499–507.
- 3 Knapen MHJ et al. Menaquinone-7 supplementation improves arterial stiffness in healthy postmenopausal women: double-blind randomised clinical trial. *Thrombosis and Haemostasis*, 2015; 19;113(5).

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About MenaQ7®

MenaQ7® is the best documented, commercially available vitamin K2 as MK-7 with guaranteed actives and stability, clinical substantiation, and international patents granted and pending. MenaQ7® is available in two varieties: natural vitamin K2 as MK-7 Crystals and nature-identical synthetic vitamin K2 as MK-7 PURE. For more information on the health benefits of MenaQ7, visit menaq7.com.

About NattoPharma

NattoPharma ASA, based in Norway, is the world's leader in vitamin K2 research and development. NattoPharma is the exclusive international supplier of MenaQ7® Vitamin K2 as MK-7, and has a multi-year research and development program to substantiate and discover the health benefits of vitamin K2 for applications in the marketplace for functional food and dietary supplements. With a global presence, the company established its North American subsidiary, NattoPharma USA, Inc., in Metuchen, NJ. For more information, visit nattopharma.com.

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