# Vitamin D<sub>3</sub> & K<sub>2</sub>

# Supports bone and vascular health<sup>†</sup>

#### **INDICATIONS**

- Ages 18 and up
- Bone and vascular health support<sup>†</sup>

#### **BENEFITS**

- Promote healthy calcium utilization to maintain bone health<sup>†</sup>
- Supports vascular tissue to support healthy arterial calcium balance and vascular elasticity<sup>†</sup>
- Supports immune function with vitamin D<sub>3</sub><sup>+</sup>

#### **FEATURES**

- Provides vitamin D<sub>3</sub> and vitamin K<sub>2</sub> in one convenient capsule
- 100 mcg of biologically active all-trans vitamin K<sub>2</sub> (MK-7) per capsule
- Made with hypoallergenic ingredients

## **VERIFIABLE SCIENCE**

Vitamin K<sub>2</sub> (menaguinone-7) is a fat-soluble nutrient with an important role in maintaining arterial calcium balance and vascular elasticity. 1-12 In a systematic review involving five studies, higher intakes of vitamin K2 were associated with cardiovascular health.<sup>10</sup> In an observational study involving 564 postmenopausal women, higher intake of vitamin K<sub>2</sub> was associated with calcium balance in the vascular tissue.8 One of the primary functions of vitamin  $K_2$  is to support the carboxylation of matrix Gla-protein (MGP), a key protein involved in calcium balance. 11 Accordingly, several studies indicate that Vitamin K<sub>2</sub> also supports proper utilization of calcium in bone. Clinical research indicates that obtaining adequate amounts helps to maintain bone health. 1-6 Vitamin  $K_2$  and vitamin  $D_3$  both participate in the regulation of osteocalcin, a biomarker of bone formation. 1,13<sup>‡</sup>

#### SUGGESTED USE

As a dietary supplement, take 1 capsule daily, with a meal or as directed by a health professional.

### **STORAGE**

Store in a cool, dry place.

#### **WARNING**

Vitamin K may be contraindicated with Coumadin (Warfarin). If you are pregnant or lactating, have any health condition or are taking any medication, particularly blood-thinning medication, consult your health professional before use. It is recommended that individuals taking more than 50 mcg (2,000 IU) vitamin D per day have their blood levels monitored.

### **SOURCE**

- Vitamin K<sub>2</sub> (MK-7) is derived from flower extracts geraniol and farnesol
- Vitamin D<sub>3</sub> is derived from lanolin
- Hypoallergenic plant fiber is derived from pine cellulose

## **NOTES**

Bottle count 120

Capsule size 3

Bottle size 120 cc

Order code VDK41

#### **REFERENCES**

- Gropper SAS, Smith JL, Groff JL. Advanced Nutrition and Human Metabolism. 5th Ed. Chapter 10, pp. 412-414. Wadsworth/Cengage Learning, Australia. c.2009.
- 2. El Borolossy R, El-Farsy MS. Eur J Clin Nutr. 2022 Jun;76(6):848-854.
- 3. Qiu C, Zheng H, Tao H, et al. Mol Cell Biochem. 2017 Sep;433(1-2):149-159.
- 4. Yamaguchi M, Sugimoto E, Hachiya S. Mol Cell Biochem. 2001 Jul;223(1-2):131-7.
- 5. Zhang Y, Liu Z, Duan L, et al. Calcif Tissue Int. 2020 May;106(5):476-485.
- 6. Knapen MH, Drummen NE, Smit E, et al. Osteoporos Int. 2013 Sep;24(9):2499-507.
- 7. Knapen MH, Braam LA, Drummen NE, et al. Thromb Haemost. 2015 May;113(5):1135-44.
- 8. Beulens JW, Bots ML, Atsma F, et al. Atherosclerosis. 2009 Apr;203(2):489-93.
- 9. Mansour AG, Hariri E, Daaboul Y, et al. J Am Soc Hypertens. 2017 Sep;11(9):589-597.
- 10. Rees K, Guraewal S, Wong YL, et al. Maturitas. 2010 Oct;67(2):121-8.





# Vitamin D<sub>3</sub> & K<sub>2</sub>

# Supports bone and vascular health<sup>†</sup>

- 11. Dalmeijer GW, van der Schouw YT, Magdeleyns E. Atherosclerosis. 2012 Dec;225(2):397-402.
- 12. Vermeer C and Vik H. Vascul Dis Ther. 2020;5: doi: 10.15761/VDT.1000179.
- 13. Gigante A, Brugè F, Cecconi S, et al. J Tissue Eng Regen Med. 2015 Jun;9(6):691-701.

#### SUPPLEMENT FACTS

1 capsule daily, with a meal

One (size 3) capsule contains:

100 mcg (4,000 IU) Vitamin D (as cholecalciferol)(D<sub>3</sub>) Vitamin K<sub>2</sub> (menaquinone-7) 100 mcg

Other ingredients: vegetarian capsule (cellulose, water), hypoallergenic plant fiber (cellulose)

Warning: Vitamin K may be contraindicated with Coumadin (Warfarin). If you are pregnant or lactating, have any health couldain (warrann). If you are pregnant or lactating, have any health condition or are taking any medication, particularly blood-thinning medication, consult your health professional before use. It is recommended that individuals taking more than 50 mcg (2,000 IU) vitamin D per day have their blood levels monitored.









Order Vitamin D<sub>3</sub> & K<sub>2</sub> Quantity Code

120 VDK41

Visit PureEncapsulationsPro.com for more information about our GMO policy.

