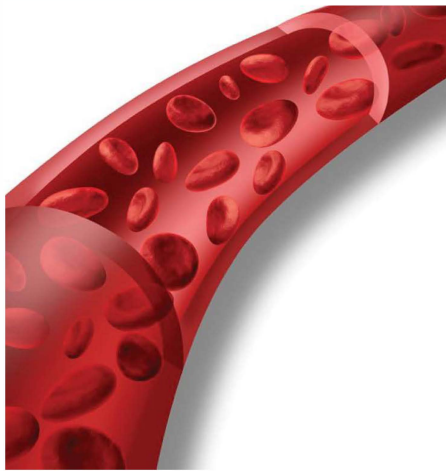


# NanoCelle™ D3 + K2

Oral Mucosal Spray



Medlab's unique NanoCelle™ platform delivers nanoparticle-sized molecules of vitamins D3 and K2 to support immunity, bone health and cellular homeostasis.

NanoCelle™ D3 + K2 is developed from patent-protected nanocellization technology creating Vitamin D3 and Vitamin K2 submicron particles, delivering nano-particle sized molecules of the vitamin for absorption across the oral mucosa, bypassing the GIT. NanoCelle™ D3 + K2 is indicated to assist in the maintenance of mineral homeostasis facilitating optimal immune function, cardiovascular health, blood coagulation and bone metabolism; and to assist in the management of medically diagnosed vitamin D deficiency.<sup>2,3</sup>

## Key Features and Benefits:

- Nanoparticles significantly increase: solubility, absorption, bioavailability, and stability of the active ingredient<sup>1A</sup>
- Supports normal process of blood coagulation cascade<sup>2</sup>
- Assists in the management of vitamin D3 deficiency<sup>3</sup>
- Uses menaquinone-7 form of vitamin K2 for greater bioavailability and effect<sup>5</sup>
- Improves calcium uptake and metabolism<sup>6,7</sup>
- Supports musculoskeletal health<sup>8,9</sup>
- Supports healthy cellular and immunological function<sup>10,11</sup>
- May improve arterial stiffness and prevent bone loss in postmenopausal women<sup>12,13</sup>

PLEASANT  
PEPPERMINT  
FLAVOUR



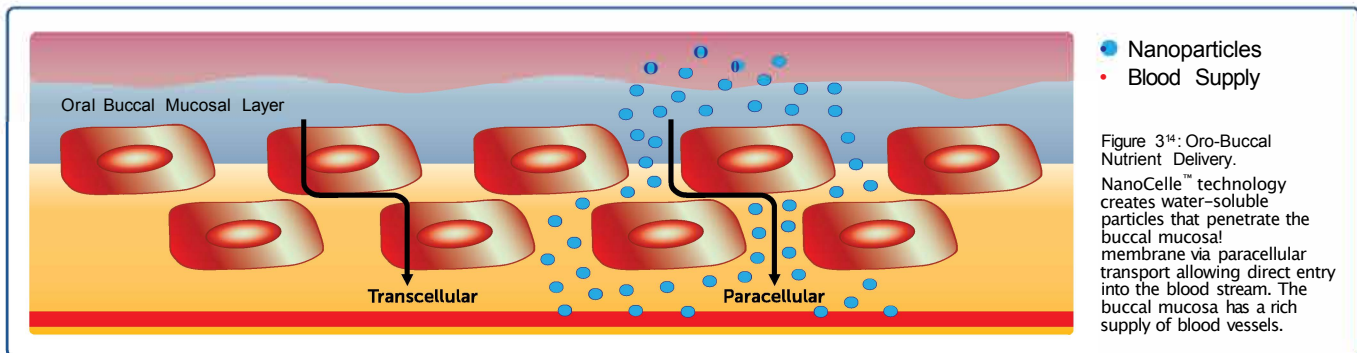
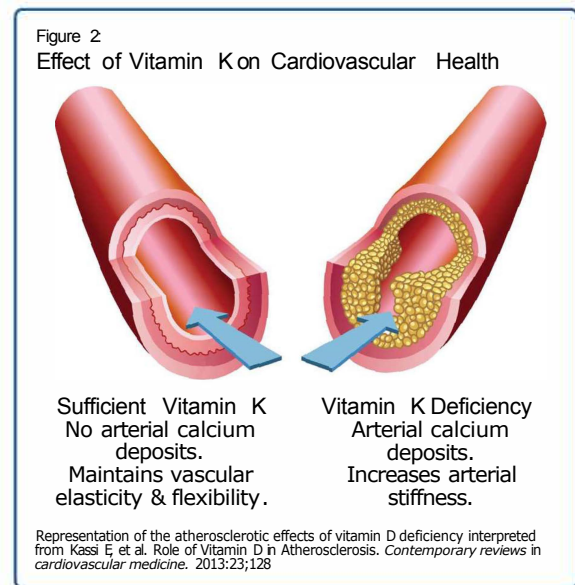
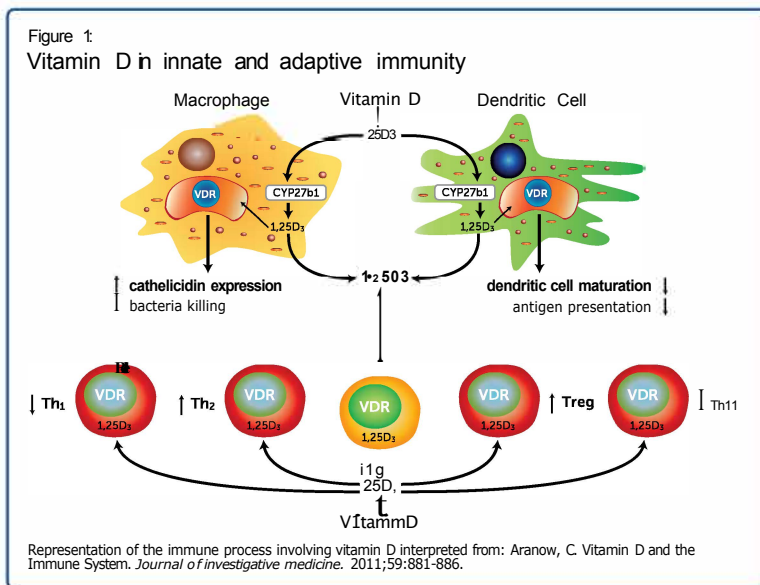
VEGETARIAN  
FRIENDLY

PATENT-  
PENDING  
INNOVATION

DAIRY &  
GLUTEN  
FREE

SAFE,  
EFFECTIVE &  
PRECISE

FOR PROFESSIONAL USE ONLY



**ACTIVE INGREDIENTS:** Each 0.3 mL Dose (2 sprays) Contains:  
 Vitamin D3 (as cholecalciferol) 25 µg (1000 IU)  
 Vitamin K2 (as menaquinone-7) 45 µg

**DOSAGE GUIDELINES:**  
 Deliver two (2) sprays into the inside cheek of the mouth once per day before a meal, or as directed by your health professional.  
**AUST L 273824**

WARNING: Vitamin supplements should not replace a balanced diet. Contains potassium sorbate. If symptoms persist consult your healthcare practitioner.

**REFERENCES:**

- Rutolo DA. Nutrition Delivery Systems II. Micellization and fat-soluble nutrients. *Int Clin Nutr Rev* 1989;9:206-212.
- Dowd P, Seung-Wook H, et al. The mechanism of action of vitamin K. *Ann Rev Nutrition* 1995;15:419
- Halick, M. Vitamin D Deficiency. *N Engl J Med* 2007;357:266-281.
- Pathak K, Raghuvanshi S. Oral bioavailability: issues and solutions with nanoformulations. *Clin Pharmacokinet* 2015;54:325-57.
- Sato T, Schurgers L, et al. Comparison of menaquinone-4 and menaquinone-7 bioavailability in healthy women. *Nutr Journ*, 2012;U:93
- Norman AW. From vitamin D to hormone D: fundamentals of the vitamin D endocrine system essential for good health. *Am J Clin Nutr* 2008;88:491.
- Institute of Medicine. Food and Nutrition Board. Dietary Reference Intakes for Calcium and Vitamin D. *Washington, DC: National Academy Press* 2010.
- Porthouse J, Cockayne S, et al. Randomised controlled trial of supplementation with calcium and cholecalciferol (vitamin D3) for prevention of fractures in primary care. *BMJ* 2005;330:1003.
- Chabas J, Stephan D, et al. Cholecalciferol (vitamin D3) improves myelination and recovery after nerve injury: E65034. *PLoS One* 2013;8:5.
- Milovanovic M, Heine G, et al. Vitamin D receptor binds to the Egerline gene promoter and exhibits transrepressive activity. *J Allergy Clin Immunol* 2010;126:1016.
- Hock AD. Review: Vitamin D3 deficiency results in dysfunctions of immunity with severe fatigue and depression in a variety of diseases. *In Vivo* 2014;28(1):133-45.
- Knapen M, Braam L, et al. Menaquinone-7 supplementation improves arterial stiffness in healthy postmenopausal women. A double-blind randomised clinical trial. *Thromb & Haemo* 2015;1135.
- Knapen M, Drummen N, et al. Three-year low-dose menaquinone-7 supplementation helps decrease bone loss in healthy postmenopausal women. *Osteoporosis Int* 2013;24:2499.
- Laffleur F, Bernkop-Schnurch A. Strategies for improving mucosa! drug delivery. *Future Medicine* 2013;8:2061-75.

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