VITAMIN D CO-NUTRIENTS

MANY NUTRIENTS WORK HAND-IN-HAND

What is a co-nutrient?

Co-nutrients work together for a specific process, so that if one is limited (missing or not enough) then the process itself might also be limited.

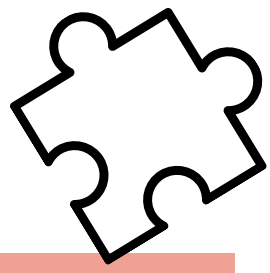
The following nutrients work together with vitamin D and/or directly affect vitamin D utilization, absorption, and levels.

Magnesium

Mg

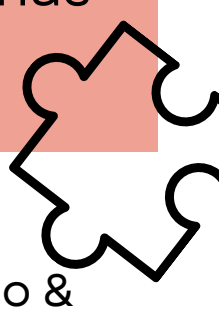
- Involved in biosynthesis, transport & activation of D
- Poor Mg status can impair D metabolism and may result in a D level that does not increase as much as expected with D supplementation
- Can affect the relationship between D and the risk of certain diseases, such as type 2 diabetes & high blood pressure
- RDA 310-420 mg/day; more may be needed per individual

Deng et al. (2013), Huang et al. (2021)



Fun Fact: Magnesium supplementation alone has been shown to increase vitamin D levels!

Vázquez-Lorente et al. (2020)



Vitamin K2

K2

- Found in fermented foods (ie. sauerkraut, natto & kimchi), high fat dairy, eggs, & animal organs; is also synthesized by the bacteria in the gut
- The main forms of vitamin K2 are MK4 and MK7
- Important for directing calcium to bone; without K2 excess calcium may get deposited in plaque buildup in arteries
- If not getting from food, suggested supplement doses of K2 are between 90-200 mcg/day

WOW! Taking both Mg and K2 can help boost D levels for any given D intake amount more than taking either Mg or K2, or neither

Other Important D Co-nutrients:

Calcium

may increase the cancer-fighting benefits of D; women should get 1200 mg/day, men 900 mg/day (from diet & supplements)

Lappe et al. (2017)

Boron
Zinc
Selenium
Vitamin C
B Vitamins
Omega-3s

Experts Recommend a Vitamin D Level of 40-60 ng/ml (100-150 nmol/L)

~90% of US adults are below this level!

It is essential to ensure an adequate supply of these nutrients along with an optimal vitamin D level. Measure your levels & track nutrient intake at grassrootshealth.net