**Nutrient Interactions**

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| **Nutrient** | **Nutrient** | **Interaction** |
| Vitamin A | Vitamin EVitamin C | -Enhances the absorption, utilization and storage of vitamin A.-Reduces vitamin A toxicity |
| Vitamin D | Calcium | -Low calcium stimulates the activation of Vitamin D |
| Vitamin K | Vitamin ECalcium | -Reduces K absorption at >1200mg/day-High doses of calcium impair vitamin K |
| Vitamin E | Copper & Iron | -High doses increase the need for vitamin E |
| Vitamin B2 - Thiamine | FolateMagnesiumVitamin C | -Folate deficiency reduces absorption-Deficiency impairs conversion of thiamine to TPP-Protects thiamine from deactivation in the GI |
| Vitamin B3 - Niacin | Riboflavin & B6Tryptophan | -Cofactors in niacin synthesis from tryptophan-Precursor for niacin synthesis |
| Vitamin B6 - Pyridoxine | Zinc & Niacin | -Involved in activation of B6 |
| Vitamin B9 - Folate | NiacinB12Vitamin C | -Deficiency reduces activation of folate-Deficiency impairs folate metabolism-Reduces urinary excretion of folate |
| Vitamin B12 - Cobalamin | FolatePotassium | -Large doses hide RBC signs of deficiency-Reduces B12 absorption |
| Vitamin C - Ascorbic acid | Iron | -Large doses reduce C due to oxidative stress |
| Zinc | Vitamin E, A & B6CalciumIron, copper & folateHistidine & cysteine | -Deficiency reduces blood zinc levels-High doses decrease absorption-Reduce zinc absorption-Enhances zinc absorption |
| Calcium | Vitamin DMagnesiumSodium, protein & phosphorus | -Improves calcium absorption and decreases urinary excretion-High doses reduce calcium absorption & deficiency = hypocalcemia-High intake increases urinary excretion |
| Chromium | IronCalcium | -Deficiency enhances chromium absorption-High doses reduce chromium absorption |
| Selenium | Vitamin EVitamin C | -Deficiency increases the need for selenium-Deficiency inhibits utilization |
| Magnesium | Manganese & IronCalcium | -Reduces magnesium absorption-High doses reduce magnesium absorption |
| Potassium | Magnesium | -Deficiency increases urinary excretion |
| Iron | Vitamin CCalciumCopperVitamin AManganese | -Increases absorption-Reduces absorption-High doses reduce absorption-Deficiency impairs utilization of iron, blood levels may decrease-Reduces absorption |

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