

## **Drug and Nutrient Interaction**

Drugs and nutrients (both in food and in supplements) can interact with each other. It is always important to read the documentation that comes with each prescription. The table below addresses some of the drug-nutrient interactions possible but it does not address if you are taking more than one drug nor does it cover all possible interactions. This is just a short list for your health prevention.

If you see in the list below a drug you are currently taking and it lists a nutrient deficiency may be caused by taking this drug then it would be advised to consult your physician or nutritionists about the advantages to adding a supplement or the correct foods to make-up for this deficiency.

\*The information contained here is for educational purposes only and is not intended to replace professional medical care or advice. Consult your physician before making any changes.

For further reading see these articles on the [DesignedHealthyLiving.com](http://DesignedHealthyLiving.com) website:

### *Safe Supplementing*

A guide to understand the function and use of certain vitamins and minerals along with a list of toxicity and adverse effects.

### *Savoring the Senior Years, Enjoying the Life You Dreamed About*

Start each day preparing for a future of pleasure. This guide will give you the basics and advanced plan for supplementing in the senior years.

<i>Specified Drug</i>	<i>Nutrient</i>	<i>Interaction</i>
<b>5-Fluorouracil</b>	<b>Niacin Thiamin Iron</b>	<b>Long-term therapy has resulted in niacin def. Decreases thiamin. May decrease iron absorption.</b>
<b>Adriamycin</b>	Riboflavin	May inhibit riboflavin.
<b>Alcohol</b>	Vitamin A B6	Chronic consumption of alcohol increases risk of vit. A induced toxicity. Reduces B6.
<b>Allopurinol</b>	Iron	May increase iron storage in the liver. Should not be used in combination with iron supplements.
<b>Aspirin</b>	Vitamins C, K and E	High doses of aspirin increases

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		loss of vitamin C. May decrease vit. K. High doses of vitamin E may increase the effectiveness of antiplatelet effects.
<b>Calcitrol</b>	Phosphorus	High doses of calcitrol and some vit. D may cause hyperphosphatemia
<b>Chloramphenicol</b>	B 12	May decrease the absorption of food-bound B12
<b>Cholestyramine and colestipol</b>	Most vitamins and minerals	May decrease vit/min absorption when taken together.
<b>Anti-inflammatory Corticosteroids: prednisone, decadron, medrol</b>	Calcium, D, Potassium, selenium	These drugs reduce levels of D and decrease absorption of Calcium resulting in bone loss and skeletal problems.
<b>Gout medication: Colchicine, Benemid</b>	Beta-carotene, folic acid, B2, D, potassium, sodium, B12	Inhibits absorbing of all these nutrients. Causes GI problems, plus weakness and peripheral neuritis.
<b>NSAIDS Indomethacin, indocin</b>	C, folic acid, amino acids, iron	Decreases absorption, causes iron loss due to blood loss.
<b>Non-selective NSAIDS Ibuprofen, Naprosyn, clinoril</b>	Folic acid	Long term use could lead to anemia, increased incidence of birth defects, cervical dysplasia, and high homocysteine. May decrease the absorption of food-bound B12.
<b>Cycloserine</b>	B6	May cause functional vit. B6 def.
<b>Anti-arrhythmia</b>	Calcium	High doses of calcium may increase the risk of arrhythmia
<b>Digoxin</b>	Magnesium	Taken with magnesium may decrease the absorption of digoxin.
<b>Beta-blockers</b>	CoQ10	Decreases activity of CoQ10 enzymes which leads to heart, blood pressure and immune system related problems.
<b>DTPA</b>	Zinc	Treatment with DTPA has resulted in severe zinc def.
<b>Isoniazid</b>	Niacin Vitamin B6 Vitamin E Vitamin K	Niacin supplementation is recommended during long-term treatment. May cause functional vit. B6 def. May decrease absorption Vit. E.

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<b>Anti-fungal Ketoconazole</b>	Vitamin D	May increase risk of vit. K def. May decrease blood levels of vit. D.
<b>Levodopa</b>	Vitamin B6 Iron	May cause functional B6 def. High doses of B6 may decrease the efficacy of lecodopa. Taken with iron may decrease efficacy of levodopa.
<b>Lithium</b>	Iodine	Taking iron supplements at the same time may decrease the effectiveness.
<b>Anti-diabetic drugs Metformin</b>	CoQ10 B12 B2	Leads to CoQ10 def. Decreases B12 absorption. Need to take B12 with milk or calcium.
<b>Methotrexate</b>	Folic acid	Requires folic acid supplementation.
<b>Methyldopa</b>	Iron	Taken with iron reduces effectiveness.
<b>Neomycin</b>	B12	Decreases food-bound B12 but not supplemental. Need to supplement.
<b>Nitrous oxide</b>	B12	Results in B12 def.
<b>Olestra</b>	Fat-soluble vitamins	Inhibits absorption of A, D, E, and K.
<b>Weight Loss drugs Orlistat – Xenical Meridia</b>	A, D, E, K Tyrosine, Tryptophan	Decreases absorption take supplements 2 hours away from eating. Inhibition of serotonin, norepinephrine and dopamine.
<b>Pyrimethamine</b>	Folic acid	Increase need for folic acid.
<b>Quinocrine</b>	Riboflavin	Inhibits riboflavin action.
<b>Rifampin</b>	K	Increases risk of K def.
<b>Sucraldate</b>	E	Decreases vit. E absorption.
<b>Anti-rheumatic Sulfasalazine</b>	Folic acid K	Increases need for folic acid. Decreases vita K.
<b>Anti-rheumatic Penicillamine</b>	B6 Copper Iron Magnesium Zinc	Causes B6 def. Causes urinary excretion of copper. Taken with iron at same time decrease drug effectiveness. Treatment causes severe zinc def.
<b>Anti-clotting Coumadin Warfarin</b>	C E K	High doses vit. C may decrease anticoagulant effectiveness in a few cases.

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	Iodine Magnesium	High doses of vit. E may increase effects. High intake of dietary or supplemental K may decrease effects. Not to be taken when pregnant due to harm to the baby. Pharmacologic doses of potassium iodide may decrease effectiveness of warfarin. Magnesium-containing antacids may decrease the anticoagulation effectiveness of warfarin.
<b>Anti-asthmatic Theophylline</b>	B6	Causes B6 depletion.
<b>Chemotherapy Anti-proliferative</b>	Most nutrients	Many chemo therapy drugs cause nausea, vomiting and significant damage to gastric and intestinal mucosa. This leads to nutrient depletions.
<b>Anti-bone resorptive Didronel Aredia Fosamax Actonel Skelid</b>	Zinc	When taken together both have reduced absorption.
<b>Laxatives Mineral oil Agoral, haley's MO Feen-A-Mint Correctol Dulcolax</b>	Vitamins A, D, E, K, Beta Carotene Potassium	Inhibits absorption of fat-soluble vitamins. Decreases absorption of potassium.
<b>Psychiatric Medications</b>	Co Q 10 B2 B6	Inhibit necessary enzymes for production of CoQ10. Def. leads to cardiovascular problems. Def. in B2 and 6 leads to skin, neurological and energy problems.
<b>Antacids Prilosec Prevacid Aciphex Tagemet Pepcid Axid Zantac</b>	B12, Calcium, folic acid, D, iron, zinc, protein,	By altering gastric pH these drugs may cause mal-absorption of these nutrients.
		Chronic use can lead to skeletal

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<b>Tums, Maalox, Gaviscon, Mylanta, Roalids, Alka Seltzer</b>		problems due to nutrient depletion.
<b>Anti-biotics – Anti-bacterial Broad-spectrum Tetracycline Clycloserin, Ethionamide, Isoniazid Cephalosporins Fluoroquinolones Bactrim</b>	All B vitamins, Biotin, C, K	The antibiotics kill beneficial bacterial which produces B vitamins. This in turn impairs the immune system. Tetracycline causes mineral depletion. And interferes with B vitamins absorption. Inhibits liver function that can result in vitamin K def. Taking zinc with fluoro. Decreases absorption of both.

Information compiled from:

*Laboratory Evaluations for Integrative and Functional Medicine*, 2<sup>nd</sup> Edition, Richard Lord and J. Alexander Bralley, editors. 2008 Metametrix Institute.