

**Table 1****Drug Interactions with Vitamins and Minerals**

| <b>Vitamin/<br/>Mineral Supplement</b> | <b>Affected Medication</b>  | <b>Effect of Interaction</b>   | <b>Management of Interaction</b>  |
|--|---|--|---|
| Vitamin A                              | Retinoids (isotretinoin and acitretin)  | Risk of toxicity; nausea, vomiting, dizziness, blurred vision, poor muscle coordination      | Avoid concomitant use   |
| Pyridoxine (Vitamin B <sub>6</sub> )   | Levodopa<br>Phenytoin   | Decreased efficacy leading to parkinsonian symptoms<br>Risk of seizure                       | Recommend carbidopa/levodopa combination<br>Discontinue pyridoxine or increase phenytoin dose   |
| Vitamin E                              | Warfarin  | Risk of bleeding   | Avoid doses $\geq 800$ IU/day of vitamin E  |
| Vitamin K                              | Warfarin  | Decreased efficacy; risk of thromboembolism  | Maintain consistent intake of vitamin K   |
| Niacin                                 | HMG-CoA reductase inhibitors  | Risk of myopathy or rhabdomyolysis   | Avoid self-treatment with niacin  |
| Folic acid                             | Methotrexate  | Prevents adverse events or toxicities from methotrexate                                      | Recommend supplementation in patients taking methotrexate for rheumatoid arthritis or psoriasis |
| Calcium                                | Fluoroquinolones and tetracyclines<br>Levothyroxine and bisphosphonates   | Decreased efficacy; risk of antibiotic failure<br>Decreased efficacy; risk of hypothyroidism | Avoid concomitant calcium supplementation<br>Separate doses by at least four hours              |
| Aluminum and magnesium                 | Fluoroquinolones, tetracyclines, bisphosphonates, and levothyroxine   | Decreased efficacy of affected medication  | Separate doses by at least two hours  |
| Iron                                   | Fluoroquinolones, tetracyclines, digoxin, and levothyroxine<br>Methyldopa   | Decreased efficacy of affected medication<br>Worsening of hypertension                       | Separate doses by at least two hours<br>Avoid concomitant use                                   |
| Potassium (including salt substitutes) | ACE inhibitors, angiotensin receptor blockers, digoxin, indomethacin, prescription potassium supplements, and potassium-sparing diuretics | Hyperkalemia   | Avoid concomitant supplementation without physician supervision                                 |

ACE: angiotensin-converting enzyme.