### Vitamin Deficiency Chart

#### Signs And Symptoms

<table>
<thead>
<tr>
<th>B COMPLEX VITAMIN DEFICIENCY</th>
<th>FOLINIC ACID DEFICIENCY</th>
<th>VITAMIN D3 DEFICIENCY</th>
<th>VITAMIN E DEFICIENCY</th>
<th>VITAMIN K1 DEFICIENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Periodontal Disease</strong></td>
<td><strong>Mouth Ulcers</strong></td>
<td><strong>Psoriasis</strong></td>
<td><strong>Cracked Skin</strong></td>
<td><strong>Easy Bruising</strong></td>
</tr>
<tr>
<td><strong>Dermatitis</strong></td>
<td><strong>Dandruff</strong></td>
<td><strong>Muscle Weakness</strong></td>
<td><strong>Muscle Pain</strong></td>
<td><strong>Varicose Veins</strong></td>
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<tr>
<td><strong>Mouth Ulcers</strong></td>
<td><strong>Vitiligo</strong></td>
<td><strong>Chronic Lower Back Pain</strong></td>
<td><strong>Hyperkeratosis on Heels</strong></td>
<td><strong>Fracture</strong></td>
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<tr>
<td><strong>Dandruff</strong></td>
<td><strong>Depression</strong></td>
<td><strong>Osteoporosis</strong></td>
<td><strong>Calf Tenderness</strong></td>
<td><strong>Osteoarthritis</strong></td>
</tr>
</tbody>
</table>

**Signs:**
- Dermatitis (3-6); hyperpigmentation (6);
glossitis (6); mouth ulcers (6); stomatitis (6, 8);
mouth ulcers (6); dandruff; periodontal disease (3).

**Symptoms:**
- Fatigue; lethargy (9-11); anaemia (9); depression (9);
kidney stone formation (9); peripheral neuropathy (9);
convulsions in infants (9); carpal tunnel syndrome (9);
premenstrual syndrome (9); headaches (9); burning feet (9).

**Treatments:**
- B Complex Vitamins
- Folic acid: 500-1000mcg/day (3)
- Cholecalciferol: 1000-4000 IU/day (9)
- D-alpha tocopherol: 200-1200IU/day (14)
- Mixed tocopherols: 100-200mg/day
- Phytomenadione 2-5mg/day (15)

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This information is for health care practitioners only (References available on request).

This chart is designed as a quick reference tool to help assess possible vitamin and mineral deficiencies. It is not designed to be a diagnostic tool. The chart is a compilation of information from traditional texts, clinical observation, as well as peer reviewed journals and texts. Where possible, references have been made.
Mineral Deficiency Chart
Signs And Symptoms

<table>
<thead>
<tr>
<th>CALCIUM DEFICIENCY</th>
<th>COPPER DEFICIENCY</th>
<th>IODINE DEFICIENCY</th>
<th>IRON DEFICIENCY</th>
<th>MAGNESIUM DEFICIENCY</th>
<th>ZINC DEFICIENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodontal Disease</td>
<td>Poor Wound Healing</td>
<td>Goiter</td>
<td>Pale Lines on Palm</td>
<td>Muscle Spasms</td>
<td>Rashes</td>
</tr>
<tr>
<td>Brittle Nails</td>
<td>Depigmentation of Skin</td>
<td>Scalloped Tongue</td>
<td>Brittle Nails</td>
<td>Headache</td>
<td>Stretch Marks/Alopecia</td>
</tr>
</tbody>
</table>

**Signs:**
- Peeling, splitting, brittle nails (1);
- Periodontal disease; gingivitis; tooth decay; necticles; bone deformity
- Depigmentation of skin; greying hair (2, 3); Menke's kinky hair syndrome (2); poor wound healing (3); neutropenia, leukopenia (4, 5)
- Goiter (3, 5); tongue scalloping; cognitive disorders (3, 4); insulin resistance (3, 4); growth retardation (3, 4)
- Cheilosis (6); glossitis (7); constipation (6); pale conjunctiva (6); hair loss (6); dry; brittle hair (6); brittle nails (6); Kollonychia (spoon shaped nail) (6, 11); pale lines on stretched palm (6)
- Muscle spasms; tremors (16); quivering tongue; poor growth (1); tongue scalloping
- Stretch marks (12); alopecia (12); poor wound healing (1, 12); male hypogonadism (12); rough skin (12); rashes (12)

**Symptoms:**
- Hypertension (6); bone pain (6); pre-eclampsia (6); muscle cramps; muscle tension & soreness (6); dysmenorrhea, menorrhagia & PMS
- Hypercholesterolemia (2); cardiac arrhythmia (2); hypochromic anaemia (2); impaired immune function (2); bone fragility (2)
- Cretinism leading to mental deficiency, hearing loss, spasticity, muscular rigidity (2); spontaneous abortion; birth defects (2); slowed mental & cardiac function (2); fatigue (2); cold intolerance (2); infertility (2); weight gain (2)
- Anaemia (6, 10); fatigue, lethargy (6, 10); stomatitis (6); depressed mental & motor function (6); decreased resistance to infection (6); tachycardia (6); restless legs (6)
- Cardiac arrhythmia (12); hypertension (12, 13); vasoconstriction (12); nausea; vomiting (12); bronchospasm (12); headache (12, 13); pre-eclampsia (12); Insomnia & inability to relax (12, 13); depression (12)
- Impaired taste acuity (12); night blindness (12); sickle cell anaemia (12); poor resistance to infection (12); poor tissue repair (12); poor appetite (12); concurrent bacterial & yeast infections (12)

**Treatments:**
- Calcium (as citrate/orotate) Adults: 800-1300mg/day
- Copper (as gluconate) 2-10mcg/day (2)
- Iodine (as potassium iodide) 200-300mcg/day
- Iron amino acid chelate Adults: 15-50mg/day Children 0.5-10yrs: 12-15mg/day
- Magnesium (as citrate, orotate, aspartate, diglycinate) Adults: 300-800mg/day Children 1-3yrs: 80mg/day Children 4-6 yrs: 120mg/day Children 7-10yrs: 170mg/day Children 11-14yrs: 208mg/day
- Zinc (as citrate) 15-65mg/day (1, 12)

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