



Laboratory Comments

LOW COBALT LEVEL:

Cobalt is part of the Vitamin B12 molecule and is necessary for Vitamin B12 activity and function. Cobalt, which is mainly stored in the liver, activates numerous enzymes, and is excreted in bile. A low dietary intake inhibits foetal development and may reflect a low intake of Vitamin B12.

Sources:

All animal products, including all meats, fish, cheese, brewer's yeast and yeast extracts. Strict vegetarians (vegans) and those who lack intrinsic factor risk vitamin B12 and cobalt deficiency.

Symptoms:

Include pernicious anaemia.

Therapeutic Consideration:

Increase vitamin B12 intake and/or consumption of cobalt-rich foods.

LOW/LOW NORMAL MOLYBDENUM LEVEL:

Deficiency has been linked to gout. Low levels in heavy meat eaters reflect digestive disorder, the need for digestive enzymes and dietary changes. Such patients should avoid pork, beef, whole grain and rather eat poultry, fish and other light proteins. Vegetarians should either add some meat to their diet or take molybdenum chelate with B-vitamins, which aid the absorption of molybdenum. Dietary molybdenum is readily absorbed by the intestine and is excreted in the urine and bile.

Sources:

Whole grains, legumes, leafy vegetables and organ meats. The recommended daily intake is 0.15-0.5 mg/day, depending on age and status. Acute deficiency symptoms are unknown in humans. Excess intake of copper, zinc, and sulfates can depress Mo-update, causing disturbances in the uric acid cycle. Low molybdenum levels have been associated with impotency, increased cancer susceptibility, gout, dental caries, defects in the metabolism of sulfur-containing amino acids, and asthma.

LOW/LOW NORMAL CALCIUM LEVEL:

Low hair calcium comment showed correlation as a risk factor in MI and other pathology of the cardiovascular system including chronic pulmonary. Low hair calcium has also been associated with osteoporosis, arteriosclerosis and muscle contraction and cramps.

Calcium aids in apoptosis, blood clotting and nerve conduction/signaling, enzyme regulation and membrane permeability.

Low serum amounts are known to cause osteoporosis, poor growth and maintenance of bones and teeth. Rickets and tetany can also result from poor intake.

Hypertension and colon cancer may relate to chronic low intake.

Symptoms:

Calcium deficiency symptoms such as unhealthy hair, nail and teeth, muscle cramping at night, insomnia, menstrual problems, nervousness and irritability may be present. When such deficiency symptoms are present, moderate calcium supplementation is recommended in combination with a low fat diet and increased activity level. To further support the calcium absorption and to normalize tissue levels, digestive aids and an increased intake of lecithin are recommended.

Therapeutic Considerations:

Recommended Daily Intake: 1,000mg. Best absorbed in acidic medium. Potassium and phosphorus decrease urinary losses. Vitamin D enhances absorption from GI tract. Parathyroid hormone helps with calcium reabsorption in kidneys.

Sources:

Dark green leafy vegetables, dairy products, tofu, canned salmon and sardines.

MTHFR C677T

Heterozygous

Needs methylation support