

VITAMIN D (blood spot)

Vitamin D test analyses total Vitamin D, Vitamin D2 and D3. The metabolite 25-hydroxyvitamin D is the major circulating form of Vitamin D in the body and the best indicator of a patient's true vitamin status. Vitamin D is essential for the formation, growth, and repair of bones. Vitamin D is necessary for normal calcium absorption and immune function, maintaining the balance of calcium and phosphorus for bone mineralisation. Vitamin D plays a role in regulation of cell proliferation, cell differentiation and angiogenesis. It also improves muscle strength and helps reduce inflammation.

Vitamin D is a hormone produced in the skin when exposed to sunlight or consumed in the diet. Vitamin D is converted in the liver and kidneys to its active form to regulate calcium and phosphorus predominantly for bone mineralisation.

Vitamin D is synthetic, while D3 is naturally found in food and activated by sun exposure. The richest natural sources of vitamin D are cod liver oils and saltwater fish such as sardines, herring, salmon and mackerel. Eggs, meat, milk, butter and field-grown mushrooms also contain small amounts.

MAIN FUNCTIONS OF VITAMIN D

Regulation of calcium and phosphate blood levels	Bone mineralisation
Important for cardiovascular health	Control of cell growth and differentiation
Modulation of immune system	Regulation of insulin secretion and blood sugar control

Vitamin D deficiency

Vitamin D deficiency has been linked to increased risk for many common and serious diseases, including some common cancers, diabetes, cardiovascular disease, and osteoporosis. Studies suggest that exposure to sunlight, which enhances the production of vitamin D in the skin, prevents many chronic diseases. Vitamin D is also an important immune regulator. It promotes phagocytosis, anti-tumour activity and immune-modulating functions that play a role in autoimmune disease.

The likelihood of vitamin D insufficiency is increased in malabsorption syndromes, ageing (elderly individuals have a reduced capacity for vitamin D3 formation), darker skin (higher concentrations of melanin reduce efficiency in vitamin D3 production), obesity (fat-soluble vitamin D is stored in adipose, which reduces bioavailability), and minimal sun exposure, such as in winter or at more northern latitudes.

Traditional analysis of vitamin D is based on average serum concentrations considered consistent with prevention of hyperparathyroidism, osteomalacia and rickets.

SYMPTOMS AND CONDITIONS ASSOCIATED WITH VITAMIN D DEFICIENCY

Bone pain	Muscle weakness
Cardiovascular disease	Asthma
Depression	Cancer

VITAMIN D BLOOD SPOT [Test code: 1410]

❖ Total Vitamin D, Vitamin D3, Vitamin D2

Other Vitamin D tests available:

- **Vitamin D (serum) [1115]:** 25 hydroxy Vitamin D
- **Vitamin D 1,25 (serum) [1117]:** 1,25 dihydroxy Vitamin D (calcitriol)

How to order a test kit:

To order a test kit simply request the test name and/or test code on a NutriPATH request form and have the patient phone NutriPATH Customer Service on 1300 688 522.



Phone **1300 688 522** for further details
www.nutripath.com.au