

# "Latest Updates at al mokhtabar"

## Why 25 (OH) VIT D Test?<sup>1</sup>



The **25-hydroxy vitamin D test** is the best way to monitor vitamin D levels. The test can determine if there is a deficiency or excess of vitamin D. It serves as an important indicator of **osteoporosis** (bone weakness), **rickets** (bone malformation), and an unusual metabolism of calcium.<sup>1</sup>

**25-Hydroxy vitamin D (25OHD)** is the major circulating form of vitamin D and the precursor of the active form (1,25-dihydroxy vitamin D). It has a long half-life, which makes its measurements ideal for assessing a patient's vitamin D level.

## Two Forms of Vitamin D: <sup>2</sup>

- **Vitamin D2 (ergocalciferol)** - which is synthesized by plants and is not produced by the human body
- **Vitamin D3 (cholecalciferol)** - which is made in large quantities in the skin when sunlight strikes bare skin. It can also be ingested from animal sources

Both of these forms are metabolized to their respective 25(OH)D forms (i.e., 25OHD3 and 25OHD2).

## Clinical Applications of VIT D. <sup>3</sup>

1. A very common clinical application of Vitamin D testing is for the diagnosis and treatment of **Vitamin D deficiency** that leads to impaired bone metabolism including:
  - Rickets
  - Osteomalacia & Osteoporosis
2. Elevated levels of 25(OH) VitD suggest **vitamin D intoxication** and distinguish this disorder from other **hypercalcemia** causing disorders.

## Other related lab tests:

- + Calcium, Ionized Serum or Plasma
- + Calcium, Urine
- + Parathyroid Hormone
- + Parathyroid Hormone-Related Peptide (PTHrP)

## Who to test?

The following individuals are suitable for testing:

- Patients with suspect vitamin D deficiency symptoms such as persistent, non-specific musculoskeletal pain; the elderly; and house-bound individuals.
- Those with suspected toxicity, such as patients with anemia of an obscure origin or unexplained renal disease.<sup>3</sup>
- People who are already being treated for vitamin D-related disorders.

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### Measuring 25 (OH) Vit D Level.

**Architect 25-OH Vitamin D assay** is a chemiluminescent microparticle immunoassay approved by FDA to measure 25-hydroxyvitamin D, the stable form of Vitamin D. <sup>4</sup>

The optimal level of **25 (OH)D** is above 30 ng/ml (75nmol/l) and the interpretation of results as Vit D deficiency or toxicity can be classified as chart below:<sup>5</sup>



The ARCHITECT 25-OH Vitamin D assay is routinely done in al mokhtabar (Moamena Kamel) Laboratories.

Test Name	• 25-OH Vitamin D Test
Sample Type	• Serum/Red Vacutainer Or Heparin Plasma/Green Vacutainer
Methodology	• Chemiluminescence microparticle immunoassay
Setup Time	• Saturday/Every week
Turn Around Time	• The same day of setup time
Price	• 600 L.E
Precautions	• No precautions / instructions
References	<ul style="list-style-type: none"> <li>•1. 25-Hydroxy Vitamin D . (n.d.). Mid American Clinical Laboratories. Retrieved May 18, 2012, from <a href="http://www.maclonline.com/files/Vitamin_D.pdf">http://www.maclonline.com/files/Vitamin_D.pdf</a></li> <li>•2. Dietary Supplemental Fact Sheet: Vitamin D. Office of Dietary Supplements. National Institutes of Health. Updated 11/13/2009. Accessed 08/17/2010</li> <li>•3. <a href="http://www.ilexmedical.com/files/download/1306390706e065h.pdf">http://www.ilexmedical.com/files/download/1306390706e065h.pdf</a></li> <li>•4. <a href="http://www.empr.com/abbotts-architect-25-oh-vitamin-d-assay-approved-by-fda/article/217925/">http://www.empr.com/abbotts-architect-25-oh-vitamin-d-assay-approved-by-fda/article/217925/</a></li> <li>•5. Holick, MF. <i>Am J Clin Nutr.</i> 2004;80 (suppl):1682S.</li> </ul>