



Potential Delays for 1,25-Dihydroxyvitamin D, Serum (DHVD)

Mayo Clinical Laboratories (MCL) has provided notice that due to technical issues, all outstanding and new test requests will be sent via MCL to a Quest reference laboratory.

Sample requirements remain the same, however clients should anticipate prolonged turnaround times.

Alternative Test: Calcitriol 1,25-Dihydroxyvitamin D
Meditech (L-Code): **FV125**
Meditech Description: CALCITRIOL 1,25 diOH VITD
Sample Requirement: Serum

SELECTING THE PROPER TEST 25-hydroxyvitamin D (25-OH Vitamin D) versus 1,25-Dihydroxyvitamin D (DHVD)

Providers are encouraged to carefully select the proper vitamin D assay.

25-OH Vitamin D (VITD) – The preferred initial test for assessing vitamin D status in patients without renal disease.

Order Code: *VITD - Vitamin D, 25-OH Total*

Useful For:

- Diagnosis of vitamin D deficiency
- Differential diagnosis of causes of rickets and osteomalacia
- Monitoring vitamin D replacement therapy
- Diagnosis of hypervitaminosis D

1,25-Dihydroxyvitamin D (DHVD) – Not indicated for routine testing

Order Code: *FV125 - Calcitriol 1,25-Dihydroxyvitamin D*

Useful For:

- Second-order test in the assessment of Vitamin D status, especially with renal disease.
- Investigation of some patients with clinical evidence of vitamin D deficiency (eg, vitamin D-dependent rickets due to hereditary deficiency of renal 1-alpha hydroxylase or end-organ resistance to 1,25-dihydroxyvitamin D)
- Differential diagnosis of hypercalcemia

Other Considerations

- 25-OH Vitamin D is the major circulating form of vitamin D and is the only vitamin D metabolite that is used to determine whether a patient is vitamin D deficient, sufficient, or intoxicated.
- 25-OH Vitamin D has a half-life of approximately 2-3 weeks whereas the circulating half-life of circulating DHVD is only 4-6 hours.
- 25-OH Vitamin D measures a summation of both vitamin D intake and vitamin D that is produced from sun exposure.
- Circulating levels of DHVD are a thousand-fold less than 25-OH Vitamin D.
- DHVD does not reflect vitamin D reserves and is not useful for monitoring vitamin D status of patients. DHVD can be normal or elevated in those with vitamin D deficiency, due to secondary hyperparathyroidism.
- DHVD concentrations are not a reliable indicator of vitamin D toxicity.

Additional Resources:

DHVD Overview, Mayo Clinical Laboratories Test Catalog, <https://www.mayocliniclabs.com/test-catalog/overview/8822#Clinical-and-Interpretive>, accessed 11/20/24.

25HDN Overview, Mayo Clinical Laboratories Test Catalog, <https://www.mayocliniclabs.com/test-catalog/overview/83670#Clinical-and-Interpretive>, accessed 11/20/24

“Choosing Wisely Recommendations, Don’t routinely measure 1,25-dihydroxyvitamin D unless the patient has hypercalcemia or decreased kidney function”, American Family Physician, <https://www.aafp.org/pubs/afp/collections/choosing-wisely/140.html>, accessed 11/20/24

“Vitamin D Testing Recommendations”, University of Washington Department of Laboratory Medicine and Pathology, https://testguide.labmed.uw.edu/guideline/vitamin_d?, accessed 11/20/24

“Vitamin D Status: Measurement, Interpretation and Clinical Application”, National Library of Medicine, National Center for Biotechnology Information, <https://pmc.ncbi.nlm.nih.gov/articles/PMC2665033/>, accessed 11/20/24

The online NMC Test Catalog provides details for these and all other tests.

<https://nmc.testcatalog.org/>

Please contact the Laboratory (802-524-1070) with any questions or concerns.