



BlueCross BlueShield of Illinois

If a conflict arises between a Clinical Payment and Coding Policy ("CPCP") and any plan document under which a member is entitled to Covered Services, the plan document will govern. If a conflict arises between a CPCP and any provider contract pursuant to which a provider participates in and/or provides Covered Services to eligible member(s) and/or plans, the provider contract will govern. "Plan documents" include, but are not limited to, Certificates of Health Care Benefits, benefit booklets, Summary Plan Descriptions, and other coverage documents. BCBSIL may use reasonable discretion interpreting and applying this policy to services being delivered in a particular case. BCBSIL has full and final discretionary authority for their interpretation and application to the extent provided under any applicable plan documents.

Providers are responsible for submission of accurate documentation of services performed. Providers are expected to submit claims for services rendered using valid code combinations from Health Insurance Portability and Accountability Act ("HIPAA") approved code sets. Claims should be coded appropriately according to industry standard coding guidelines including, but not limited to: Uniform Billing ("UB") Editor, American Medical Association ("AMA"), Current Procedural Terminology ("CPT®"), CPT® Assistant, Healthcare Common Procedure Coding System ("HCPCS"), ICD-10 CM and PCS, National Drug Codes ("NDC"), Diagnosis Related Group ("DRG") guidelines, Centers for Medicare and Medicaid Services ("CMS") National Correct Coding Initiative ("NCCI") Policy Manual, CCI table edits and other CMS guidelines.

Claims are subject to the code edit protocols for services/procedures billed. Claim submissions are subject to claim review including but not limited to, any terms of benefit coverage, provider contract language, medical policies, clinical payment and coding policies as well as coding software logic. Upon request, the provider is urged to submit any additional documentation.

Vitamin D

Policy Number: CPCPLAB003

Version 1.0

Enterprise Medical Policy Committee Approval Date: January 1, 2022

Plan Effective Date: May 1, 2022

Description

BCBSIL has implemented certain lab management reimbursement criteria. Not all requirements apply to each product. Providers are urged to review Plan documents for eligible coverage for services rendered.

Reimbursement Information:

1. 25-hydroxyvitamin D serum testing **may be reimbursable** in individuals with an underlying disease or condition which is specifically associated with vitamin D deficiency or decreased bone density (see **Guideline 1 below**).
2. Testing for D2 and D3 fractions of 25-hydroxyvitamin D **may be reimbursable** as part of the total 25-hydroxyvitamin D analysis.

3. Repeat testing for serum 25-hydroxyvitamin D **may be reimbursable** in individuals who have documented vitamin D deficiency, at least 12 weeks after initiation of vitamin D supplementation therapy.
 - a. Repeat testing for monitoring of supplementation therapy should not exceed 2 testing instances per year until the therapeutic goal is achieved.
 - b. Once therapeutic range has been reached, annual testing, meets coverage criteria.
4. 1,25-dihydroxyvitamin D serum testing **may be reimbursable** in the evaluation or treatment of conditions that are associated with defects in vitamin D metabolism (see **Guideline 2 below**).
5. The following testing **is not reimbursable**:
 - a. 1,25-dihydroxyvitamin D serum testing for testing and screening of vitamin D deficiency.
 - b. Routine screening for vitamin D deficiency with serum testing in asymptomatic individuals and/or during general encounters

Guideline 1: Indications that support reimbursement for serum measurement of 25-hydroxyvitamin D are as follows:

- A. Biliary cirrhosis and other specified disorders of the biliary tract
- B. Blind loop syndrome
- C. Celiac Disease
- D. Coronary artery disease in individuals where risk of disease progression is being considered against benefits of chronic vitamin D and calcium therapy
- E. Dermatomyositis
- F. Eating disorders
- G. Hypercalcemia, hypocalcemia or other disorders of calcium metabolism
- H. Hyperparathyroidism or hypoparathyroidism
- I. Hypervitaminosis of vitamin D
- J. Individuals receiving hyperalimentation
- K. Intestinal malabsorption
- L. Liver cirrhosis
- M. Long term use of anticonvulsants, glucocorticoids and other medications known to lower vitamin D levels
- N. Malnutrition
- O. Myalgia and other myositis not specified
- P. Myopathy related to endocrine diseases
- Q. Neoplastic hematologic disorders
- R. Obesity
- S. Osteogenesis imperfecta
- T. Osteomalacia
- U. Osteopetrosis
- V. Osteoporosis
- W. Pancreatic steatorrhea
- X. Primary or miliary tuberculosis
- Y. Psoriasis
- Z. Regional enteritis
- AA. Renal, ureteral or urinary calculus
- BB. Rickets
- CC. Sarcoidosis

DD. Stage III-V Chronic Kidney Disease and End Stage Renal Disease
EE. Systemic lupus erythematosus

Guideline 2: Indications that support reimbursement for serum testing of 1,25-dihydroxyvitamin D are as follows:

- A. Disorders of calcium metabolism
- B. Familial hypophosphatemia
- C. Fanconi syndrome
- D. Hyperparathyroidism or hypoparathyroidism
- E. Individuals receiving hyperalimentation
- F. Neonatal hypocalcemia
- G. Osteogenesis imperfecta
- H. Osteomalacia
- I. Osteopetrosis
- J. Primary or miliary tuberculosis
- K. Renal, ureteral or urinary calculus
- L. Rickets
- M. Sarcoidosis
- N. Stage III-V Chronic Kidney Disease and End Stage Renal Disease

Procedure Codes

Codes
82306, 82652, 0038U

References:

- ACOG. (2011). ACOG Committee Opinion No. 495: Vitamin D: Screening and supplementation during pregnancy. *Obstet Gynecol*, 118(1), 197-198. doi:10.1097/AOG.0b013e318227f06b
- Annema, W., Nowak, A., von Eckardstein, A., & Saleh, L. (2018). Evaluation of the new restandardized Abbott Architect 25-OH Vitamin D assay in vitamin D-insufficient and vitamin D-supplemented individuals. *J Clin Lab Anal*, 32(4), e22328. doi:10.1002/jcla.22328
- Aspray, T. J., Bowring, C., Fraser, W., Gittoes, N., Javaid, M. K., Macdonald, H., . . . Francis, R. M. (2014). National Osteoporosis Society vitamin D guideline summary. *Age Ageing*, 43(5), 592-595. doi:10.1093/ageing/afu093
- Avenell, A., Bolland, M. J., & Grey, A. (2018). 25-Hydroxyvitamin D - Should labs be measuring it? *Ann Clin Biochem*, 4563218796858. doi:10.1177/0004563218796858
- Awumey, E. M., Mitra, D. A., Hollis, B. W., Kumar, R., & Bell, N. H. (1998). Vitamin D metabolism is altered in Asian Indians in the southern United States: a clinical research center study. *J Clin Endocrinol Metab*, 83(1), 169-173. doi:10.1210/jcem.83.1.4514

Bolland, M. J., Grey, A., & Avenell, A. (2018). Effects of vitamin D supplementation on musculoskeletal health: a systematic review, meta-analysis, and trial sequential analysis. *Lancet Diabetes Endocrinol.* doi:10.1016/s2213-8587(18)30265-1

CDC. (2017a). Home and recreational safety: important facts about falls. Retrieved from <https://www.cdc.gov/homeandrecreationsafety/falls/>

CDC. (2017b). VDSCP: Vitamin D Standardization-Certification Program. Retrieved from VDSCP: Vitamin D Standardization-Certification Program

CDC. (2019). CDC Vitamin D Standardization-Certification Program. Retrieved from https://www.cdc.gov/labstandards/pdf/hs/CDC_Certified_Vitamin_D_Procedures-508.pdf

Chapuy, M. C., Pamphile, R., Paris, E., Kempf, C., Schlichting, M., Arnaud, S., . . . Meunier, P. J. (2002). Combined calcium and vitamin D3 supplementation in elderly women: confirmation of reversal of secondary hyperparathyroidism and hip fracture risk: the Decalyos II study. *Osteoporos Int*, 13(3), 257-264. doi:10.1007/s001980200023

Crowe, F. L., Thayakaran, R., Gittoes, N., Hewison, M., Thomas, G. N., Scragg, R., & Nirantharakumar, K. (2019). Non-linear associations of 25-hydroxyvitamin D concentrations with risk of cardiovascular disease and all-cause mortality: Results from The Health Improvement Network (THIN) database. *J Steroid Biochem Mol Biol*, 195, 105480. doi:10.1016/j.jsbmb.2019.105480

Dawson-Hughes, B. (2021, July 6). Causes of vitamin D deficiency and resistance. UpToDate. Retrieved from <https://www.uptodate.com/contents/causes-of-vitamin-d-deficiency-and-resistance>

Dawson-Hughes, B. (2021, September 20). Vitamin D deficiency in adults: Definition, clinical manifestations, and treatment. UpToDate. Retrieved from <https://www.uptodate.com/contents/vitamin-d-deficiency-in-adults-definition-clinical-manifestations-and-treatment>

Dawson-Hughes, B., Harris, S. S., Krall, E. A., & Dallal, G. E. (1997). Effect of calcium and vitamin D supplementation on bone density in men and women 65 years of age or older. *N Engl J Med*, 337(10), 670-676. doi:10.1056/nejm199709043371003

Dedeoglu, M., Garip, Y., & Bodur, H. (2014). Osteomalacia in Crohn's disease. *Arch Osteoporos*, 9, 177. doi:10.1007/s11657-014-0177-0

Drezner, M. (2019, 09/23/2020). Causes of vitamin D deficiency and resistance - UpToDate. UpToDate. Retrieved from <https://www.uptodate.com/contents/causes-of-vitamin-d-deficiency-and-resistance>

Ebell, M. H. (2019). Vitamin D Is Not Effective as Primary Prevention of Cardiovascular Disease or Cancer. *Am Fam Physician*, 100(6), 374.

Glendenning, P., & Inderjeeth, C. A. (2012). Vitamin D: methods of 25 hydroxyvitamin D analysis, targeting at risk populations and selecting thresholds of treatment. *Clin Biochem*, 45(12), 901- 906. doi:10.1016/j.clinbiochem.2012.04.002

Golden, N. H., & Abrams, S. A. (2014). Optimizing bone health in children and adolescents. *Pediatrics*, 134(4), e1229-1243. doi:10.1542/peds.2014-2173

Granado-Lorencio, F., Blanco-Navarro, I., & Perez-Sacristan, B. (2016). Criteria of adequacy for vitamin D testing and prevalence of deficiency in clinical practice. *Clin Chem Lab Med*, 54(5), 791-798. doi:10.1515/cclm-2015-0781

Hao, L., Carson, J. L., Schlussel, Y., Noveck, H., & Shapses, S. A. (2020). Vitamin D deficiency is associated with reduced mobility after hip fracture surgery: a prospective study. *The American Journal of Clinical Nutrition*, 112(3), 613-618. doi:10.1093/ajcn/nqaa029

Holick, M. F. (2009). Vitamin D status: measurement, interpretation, and clinical application. *Ann Epidemiol*, 19(2), 73-78. doi:10.1016/j.annepidem.2007.12.001

Holick, M. F. (2020). A call for action: standard of care guidelines to assess vitamin D status are needed for patients with hip fracture. *Am J Clin Nutr*, 112(3), 507-509. doi:10.1093/ajcn/nqaa202

Holick, M. F., Binkley, N. C., Bischoff-Ferrari, H. A., Gordon, C. M., Hanley, D. A., Heaney, R. P., . . . Weaver, C. M. (2011). Evaluation, treatment, and prevention of vitamin D deficiency: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*, 96(7), 1911-1930. doi:10.1210/jc.2011-0385

InSourceDx. (2019a). 25OH Vitamin D2/D3 - Droplet. Retrieved from https://insourcedx.com/ISD/demo2/services/blood/testmenu/droplet_tests/25OH-Vitamin-D2-D3

InSourceDx. (2019b). 25OH Vitamin D2/D3 - Sensieva Vena Retrieved from https://insourcedx.com/ISD/demo2/services/blood/testmenu/VENA_individual/25OH_Vitamin_D2-D3

Javed, M., Althwanay, A., Ahsan, F., Oliveri, F., Goud, H. K., Mehkari, Z., . . . Rutkofsky, I. H. (2020). Role of Vitamin D in Colorectal Cancer: A Holistic Approach and Review of the Clinical Utility. *Cureus*, 12(9), e10734-e10734. doi:10.7759/cureus.10734

Krasowski, M. D. (2011). Pathology Consultation on Vitamin D Testing. *American Journal of Clinical Pathology* \$V 136(4), 507-514.

Kusunoki, Y., Matsui, I., Hamano, T., Shimomura, A., Mori, D., Yonemoto, S., . . . Rakugi, H. (2015). Excess 25-hydroxyvitamin D3 exacerbates tubulointerstitial injury in mice by modulating macrophage phenotype. *Kidney Int*, 88(5), 1013-1029. doi:10.1038/ki.2015.210

Looker, A. C., Johnson, C. L., Lacher, D. A., Pfeiffer, C. M., Schleicher, R. L., & Sempos, C. T. (2011). Vitamin D status: United States, 2001-2006. *NCHS Data Brief*(59), 1-8.

Madhusmita, M. (2020, June 22). Vitamin D insufficiency and deficiency in children and adolescents. UpToDate. Retrieved from <https://www.uptodate.com/contents/vitamin-d-insufficiency-anddeficiency-in-children-and-adolescents>

McNamara, M., & Rosenberger, K. D. (2019). The Significance of Vitamin D Status in Breast Cancer: A State of the Science Review. *J Midwifery Womens Health*, 64(3), 276-288.
doi:10.1111/jmwh.12968

Mechanick, J. I., Apovian, C., Brethauer, S., Garvey, W. T., Joffe, A. M., Kim, J., . . . Still, C. D. (2019). Clinical Practice Guidelines For The Perioperative Nutrition, Metabolic, And Nonsurgical Support Of Patients Undergoing Bariatric Procedures – 2019 Update: Cosponsored By American Association Of Clinical Endocrinologists/American College Of Endocrinology, The Obesity Society, American Society For Metabolic & Bariatric Surgery, Obesity Medicine Association, And American Society Of Anesthesiologists. *Endocrine Practice*, 25(Supplement 2), 1-75. doi:10.4158/gl-2019-0406

Mechanick, J. I., Youdim, A., Jones, D. B., Garvey, W. T., Hurley, D. L., McMahon, M. M., . . . Brethauer, S. (2013). Clinical practice guidelines for the perioperative nutritional, metabolic, and nonsurgical support of the bariatric surgery patient–2013 update: cosponsored by American Association of Clinical Endocrinologists, the Obesity Society, and American Society for Metabolic & Bariatric Surgery. *Endocr Pract*, 19(2), 337-372.
doi:10.4158/ep12437.g1

Moyer, V. A. (2013). Vitamin D and calcium supplementation to prevent fractures in adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*, 158(9), 691-696.
doi:10.7326/0003-4819-158-9-201305070-00603

Moyer, V. A., & USPSTF. (2013). Screening for HIV: U.S. preventive services task force recommendation statement. *Ann Intern Med*, 159(1), 51-60. doi:10.7326/0003-4819-159-1-201307020-00645

Pazirandeh, S., & Burns, D. (2019). Overview of vitamin D - UpToDate. In J. Mulder (Ed.), UpToDate. Retrieved from https://www.uptodate.com/contents/overview-of-vitamind?source=history_widget

Ribeiro, H. G., Dantas-Komatsu, R. C. S., Medeiros, J. F. P., Carvalho, M. C. d. C., Soares, V. d. L., Reis, B. Z., . . . Silbiger, V. N. (2021). Previous vitamin D status and total cholesterol are associated with SARS-CoV-2 infection. *Clin Chim Acta*, 522, 8-13. doi:10.1016/j.cca.2021.08.003

Ross, A. C., Manson, J. E., Abrams, S. A., Aloia, J. F., Brannon, P. M., Clinton, S. K., . . . Shapses, S. A. (2011). The 2011 report on dietary reference intakes for calcium and vitamin D from the Institute of Medicine: what clinicians need to know. *J Clin Endocrinol Metab*, 96(1), 53-58. doi:10.1210/jc.2010-2704

Sahota, O. (2014). Understanding vitamin D deficiency. In Age Ageing (Vol. 43, pp. 589-591). England.

Sanders, K. M., Stuart, A. L., Williamson, E. J., Simpson, J. A., Kotowicz, M. A., Young, D., & Nicholson, G. C. (2010). Annual high-dose oral vitamin D and falls and fractures in older women: a randomized controlled trial. *Jama*, 303(18), 1815-1822. doi:10.1001/jama.2010.594

Scott, M. G., Gronowski, A. M., Reid, I. R., Holick, M. F., Thadhani, R., & Phinney, K. (2015). Vitamin D: the more we know, the less we know. *Clin Chem*, 61(3), 462-465.
doi:10.1373/clinchem.2014.222521

Scragg, R., Stewart, A. W., Waayer, D., Lawes, C. M. M., Toop, L., Sluyter, J., . . . Camargo, C. A., Jr. (2017). Effect of Monthly High-Dose Vitamin D Supplementation on Cardiovascular Disease in The Vitamin D Assessment Study : A Randomized Clinical Trial. *JAMA Cardiol*, 2(6), 608-616. doi:10.1001/jamacardio.2017.0175

- Sempos, C. T., & Binkley, N. (2020). 25-Hydroxyvitamin D assay standardisation and vitamin D guidelines for paralysed. *Public Health Nutr*, 23(7), 1153-1164. doi:10.1017/s1368980019005251
- Sempos, C. T., Heijboer, A. C., Bikle, D. D., Bollerslev, J., Bouillon, R., Brannon, P. M., . . . Binkley, N. (2018). Vitamin D assays and the definition of hypovitaminosis D: results from the First International Conference on Controversies in Vitamin D. *Br J Clin Pharmacol*, 84(10), 2194-2207. doi:10.1111/bcp.13652
- Trivedi, D. P., Doll, R., & Khaw, K. T. (2003). Effect of four monthly oral vitamin D3 (cholecalciferol) supplementation on fractures and mortality in men and women living in the community: randomised double blind controlled trial. *Bmj*, 326(7387), 469. doi:10.1136/bmj.326.7387.469
- Ul Afshan, F., Nissar, B., Chowdri, N. A., & Ganai, B. A. (2021). Relevance of vitamin D(3) in COVID-19 infection. *Gene reports*, 24, 101270-101270. doi:10.1016/j.genrep.2021.101270
- USPSTF. (2018). Vitamin D, calcium, or combined supplementation for the primary prevention of fractures in community-dwelling adults: US preventive services task force recommendation statement. *Jama*, 319(15), 1592-1599. doi:10.1001/jama.2018.3185
- USPSTF. (2021). Screening for vitamin D deficiency in adults: U.S. Preventive Services Task Force recommendation statement. *JAMA*, 325(14), 1436-1442. doi:10.1001/jama.2021.3069
- Wallace, A. M., Gibson, S., de la Hunty, A., Lamberg-Allardt, C., & Ashwell, M. (2010). Measurement of 25-hydroxyvitamin D in the clinical laboratory: current procedures, performance characteristics and limitations. *Steroids*, 75(7), 477-488. doi:10.1016/j.steroids.2010.02.012
- Wassenaar, E., O'Melia, A. M., & Mehler, P. S. (2018). Gynecologic Care for Adolescents and Young Women with Eating Disorders. *Obstet Gynecol*, 132(4), 1065-1066. doi:10.1097/aog.0000000000002903
- Weinstein, S. J., Purdue, M. P., Smith-Warner, S. A., Mondul, A. M., Black, A., Ahn, J., . . . Albanes, D. (2015). Serum 25-hydroxyvitamin D, vitamin D binding protein and risk of colorectal cancer in the Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial. *Int J Cancer*, 136(6), E654-664. doi:10.1002/ijc.29157
- Yuniati, T., Judistiani, R. T. D., Natalia, Y. A., Irianti, S., Madjid, T. H., Ghazali, M., . . . Setiabudiawan, B. (2019). First trimester maternal vitamin D, ferritin, hemoglobin level and their associations with neonatal birthweight: Result from cohort study on vitamin D status and its impact during pregnancy and childhood in Indonesia. *J Neonatal Perinatal Med*. doi:10.3233/npm-180043
- Zittermann, A., Pilz, S., & Berthold, H. K. (2019). Serum 25-hydroxyvitamin D response to vitamin D supplementation in infants: a systematic review and meta-analysis of clinical intervention trials. *Eur J Nutr*. doi:10.1007/s00394-019-01912-x

Policy Update History:

5/1/2022	New policy
----------	------------