

# Medical Policy

## Vitamin D Assay Testing

**Policy Number:** 1081

### Policy History

Approve Date:	08/24/2018	Effective Date:	08/24/2018
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### Preauthorization

All Plans	Benefit plans vary in coverage and some plans may not provide coverage for certain service(s) listed in this policy. Decisions for authorization are subject to all terms and conditions of the applicable benefit plan, including specific exclusions and limitations as well as applicable state and/or federal laws. Please review the benefit plan descriptions for details.
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### Policy

#### Indications of Coverage

- I. Health Tradition considers 25-Hydroxyvitamin D testing appropriate in higher risk patients when results will be used to institute more aggressive therapy (e.g., osteoporosis, chronic kidney disease, malabsorption, and some infections).
- II. 25-Hydroxyvitamin D deficiency testing is considered medically necessary in the following conditions:
  - A. Rickets
  - B. Osteomalacia
  - C. Osteoporosis
  - D. Chronic kidney disease
  - E. Hepatic failure
  - F. Malabsorption syndromes like:
    - i. Cystic fibrosis
    - ii. Inflammatory bowel disease
    - iii. Bariatric surgery
    - iv. Radiation enteritis
  - G. Hyperparathyroidism
  - H. Medications, such as:
    - i. Antiseizure medications
    - ii. Glucocorticoids
    - iii. Certain AIDS medications
    - iv. Antifungals, e.g., ketoconazole
    - v. Cholestyramine
  - I. Pregnant and lactating women
  - J. Obese children and adults (BMI >30 kg/m<sup>2</sup>)
  - K. Older adults with history of non-traumatic fractures
  - L. Older adults with history of falls
  - M. Granuloma-forming disorders like:
    - i. Sarcoidosis
    - ii. Tuberculosis
    - iii. Histoplasmosis
    - iv. Coccidiomycosis
    - v. Berylliosis

- vi. Some lymphomas
- III. Measurement of 25-Hydroxyvitamin D may be considered medically necessary for diseases or conditions specifically associated with vitamin D overproduction and toxicity, such as:
  - N. Blind Loop Syndrome
  - O. Hypocalcemia
  - P. Hyperparathyroidism
  - Q. Hypercalcemia
  - R. Dermatomyositis
  - S. Hypervitaminosis of vitamin D
  - T. Psoriasis
  - U. Systemic Lupus Erythematosus

### Limitations of Coverage

- I. 25-Hydroxyvitamin D testing for routine health checks, general screenings, or in the absence of a diagnosis/risk factors listed above is not indicated as there is no significant evidence demonstrating benefits for screening at the population level.
- II. Evaluating patients' vitamin D level is accomplished by measuring the level of 25-Hydroxyvitamin D. Measurement of other metabolites is generally not medically necessary except in limited situations and for specific conditions.
- III. Once demonstrated to be vitamin D deficient, further testing is medically necessary only to ensure adequate replacement has been accomplished. Once established, annual testing may be appropriate depending upon the indication and other mitigating factors.
- IV. Vitamin D tests done for screening or in the absence of a diagnosis/condition listed in the policy will be denied as not medically appropriate with provider liability for network providers.

### Background

Vitamin D is a hormone, synthesized by the skin and metabolized by the kidney to an active hormone, calcitriol, which then acts throughout the body. It is identified as a "vitamin" due to being able to obtain it through exogenous sources in the form of vitamin D2 and vitamin D3. In the skin, 7-dehydrocholesterol is converted to vitamin D3 in response to sunlight, a process that is inhibited by sunscreen with a skin protection factor (SPF) of 8 or greater. Vitamin D2 and D3 from diet or skin in the blood then binds with vitamin D binding protein and are carried to the liver where they are hydroxylated to yield calcidiol. Calcidiol is then converted in the kidney to calcitriol by the action of 25-Hydroxylase (CYP27B1). The CYP27B1 in the kidney is regulated by nearly every hormone involved in calcium homeostasis, and its activity is stimulated by PTH, estrogen, calcitonin, prolactin, growth hormone, low calcium levels, and low phosphorus levels. Its activity is inhibited by calcitriol, thus providing the feedback loop that regulates calcitriol synthesis.

Vitamin D deficiency can lead to a number of disorders, the best known of these disorders is rickets. Excess vitamin D is unusual but may lead to hypercalcemia. Evaluating patients' vitamin D levels is generally accomplished by measuring the level of 25-Hydroxyvitamin D.

### References

The above policy is based on the following references:

- 1. American Academy of Clinical Pathology. Choosing wisely. Five things physicians and patients should question. February 21, 2013. Accessed at: <http://www.choosingwisely.org/clinician->

- [lists/american-society-clinical-pathologypopulation-based-screening-for-vitamin-d-deficiency/](#). [Accessed August 3, 2015]. DA approved product labeling and Lexicomp
2. Hollick M., Neil C., et al, Evaluation, Treatment and Prevention of Vitamin D Deficiency, An Endocrine Society Clinical Practice Guideline. The Journal of Clinical Endocrinology & Metabolism. July 2011, 96(7): 1911–1930.
  3. Hilborne H. Lee, When Less is more in Laboratory Testing. American Journal for Clinical Pathology. 2013; 139:271-272.
  4. LeFevre M, Screening for Vitamin D Deficiency in Adults: U.S. Preventive Services Task Force Recommendation Statement. Annals of Internal Medicine. 25 November 2014
  5. Looker AC, Johnson CL, Lacher DA, Pfeiffer CM, Schleicher RL, Sempos CT. Vitamin D status: United States, 2001-2006. NCHS data brief. Mar 2011(59):1-8.
  6. Blue Cross Blue Shield of Kansas. Testing for Vitamin D Deficiency. Blue Cross and Blue Shield Association; Current Effective Date: February 5, 2014. Accessed at: [http://www.bcbsks.com/customerservice/Providers/MedicalPolicies/policies/policies/Testing\\_VitaminDDeficiency\\_2014-02-05.pdf](http://www.bcbsks.com/customerservice/Providers/MedicalPolicies/policies/policies/Testing_VitaminDDeficiency_2014-02-05.pdf). [Accessed August 3, 2015].
  7. Premera Blue Cross. Vitamin D Testing. Premera Blue Cross Association; June 10, 2013. Accessed at: <http://www.bcbsms.com/com/bcbsms/apps/PolicySearch/views/ViewPolicy.php?&noprint=yes&path=%2Fpolicy%2Fmed%2FVitamin+D+Testing.html>. [Accessed August 3, 2015].
  8. National Government Services. LCD L33556 Vitamin D Assay Testing;10/01/2015. Accessed at: [https://www.ngsmedicare.com/ngs/portal/ngsmedicare/newngs/home-lob/pages/medical-policy-center/mpc-search-detail/lcd%20for%20vitamin%20d%20assay%20testing%20\(133556\)](https://www.ngsmedicare.com/ngs/portal/ngsmedicare/newngs/home-lob/pages/medical-policy-center/mpc-search-detail/lcd%20for%20vitamin%20d%20assay%20testing%20(133556)). [Accessed May 17, 2018]