

VITAMIN D TESTING

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Status: Current

I. POLICY/CRITERIA

- A. Scope: This Medical Policy addresses serum vitamin D testing (25-hydroxyvitamin D; [25(OH) D]; calcidiol).
- B. Inclusions: **25-hydroxyvitamin D ([25(OH)D]; calcidiol)** serum testing may be considered medically necessary, and therefore a covered benefit, **only** in patients with clinical documentation of one or more underlying diseases or conditions specifically associated with vitamin D deficiency or decreased bone density.
- C. Exclusions: Testing for 25-hydroxyvitamin D ([25(OH)D]; calcidiol) is considered **not** medically necessary, and therefore **not** a covered benefit, in any of the following situations:
 - 1. Routine testing or general population screening
 - 2. In individuals exhibiting no known signs or symptoms of vitamin D deficiency or intoxication
 - 3. In the absence of an underlying disease or condition specifically associated with vitamin D deficiency and for which vitamin D treatment is recommended
 - 4. When ordered in response to a diagnosis NOT listed.

II. MEDICAL NECESSITY REVIEW

Required Not Required Not Applicable

III. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- ❖ **HMO/EPO**: *This policy applies to insured HMO/EPO plans.*
- ❖ **POS**: *This policy applies to insured POS plans.*
- ❖ **PPO**: *This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.*
- ❖ **ASO**: *For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.*

- ❖ **INDIVIDUAL:** *For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.*
- ❖ **MEDICARE:** *Coverage is determined by the Centers for Medicare and Medicaid Services (CMS) and/or the Evidence of Coverage (EOC); if a coverage determination has not been adopted by CMS, this policy applies.*
- ❖ **MEDICAID/HEALTHY MICHIGAN PLAN:** *For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html. If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html, the Michigan Medicaid Provider Manual will govern. If there is a discrepancy or lack of guidance in the Michigan Medicaid Provider Manual, the Priority Health contract with Michigan Medicaid will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.*

IV. BACKGROUND

Vitamin D is a fat-soluble vitamin. Very few foods naturally contain Vitamin D (fatty fish and eggs are the exception), so Vitamin D is obtained primarily through fortified foods or supplements and dermal synthesis from exposure to sunlight. Vitamin D has two forms, ergocalciferol (Vitamin D₂) and cholecalciferol (Vitamin D₃), and several metabolites. Estimates of Vitamin D requirements vary and depend in part upon sun exposure and the standards used to define a deficient state. In 2010, the Institute of Medicine (IOM) released a report on dietary intake requirements for calcium and Vitamin D. The IOM committee assumed minimal sun exposure when establishing the dietary reference intakes for Vitamin D. Casual exposure to sunlight provides amounts of Vitamin D that are adequate to prevent rickets in many people, but is influenced by geographic location, season, use of sun block lotion, and skin pigmentation. Vitamin D requirements also may depend on disease states and concomitant medications.

25(OH) D and 1, 25(OH) 2D

Vitamin D from the diet or dermal synthesis is biologically inactive and requires enzymatic conversion to active metabolites. Vitamin D is converted enzymatically:

- in the liver to 25-hydroxyvitamin D (25[OH]D), the major circulating form of Vitamin D; and then
- in the kidney to 1, 25-dihydroxyvitamin D (1, 25[OH] 2D), the active form of Vitamin D.

The concentration of 25(OH) D is almost 1000-fold that of 1, 25(OH) 2D, and the half-life of 25(OH) D is much longer, implying that its concentration is more stable.

25(OH) D (CPT® code 82306)

The best laboratory indicator of Vitamin D adequacy is the serum 25(OH) D concentration. It is the measurement of choice to diagnose Vitamin D deficiency and to assess Vitamin D status. The lower limit of normal for 25(OH) D levels varies depending on the geographic location and sunlight exposure of the reference population (range 8 to 15 ng/mL). However, there is no consensus on the optimal 25(OH) D concentration for skeletal or extraskelatal health. The IOM concluded that a serum 25(OH)D concentration of 20 ng/mL (50 nmol/L) is sufficient for most individuals, but other experts (Endocrine Society, National Osteoporosis Foundation, American Geriatrics Society) suggest that a minimum level of 30 ng/mL (75 nmol/L) is necessary in older adults to minimize the risk of falls and fracture. Additionally, 25(OH) D measurements have had wide spread variation in the results. Serum 25-OH-D assays fall into two main categories: (1) those based on a separation step of chromatography, the most popular of which is liquid chromatography–tandem mass spectrometry (LC-MS/MS) and (2) nonchromatographic methods based on antibody or protein binding, such as radioimmunoassays.

Serum 25(OH) D should be assessed in persons at risk for Vitamin D deficiency or insufficiency. Vitamin D deficiency may result from:

- inadequate exposure to sunlight or intake of Vitamin D
- reduced absorption of Vitamin D (e.g., malabsorption syndromes)
- medications or disorders that affect the metabolism of Vitamin D and phosphate (e.g., glucocorticoids, chronic kidney disease)
- resistance to the effects of Vitamin D

Causes of malabsorption may include:

- diseases of the gallbladder, liver, or pancreas
- some conditions such as cystic fibrosis
- damage to the intestine from infection, inflammation, trauma, or surgery
- parasitic diseases
- certain congenital defects such as biliary atresia

Another reason to measure serum 25(OH) D is in hypercalcemic individuals when there is a suspicion of Vitamin D intoxication. This may occur with over-the-counter drugs, fortification errors, or too high doses for a prolonged period.

V. CODING INFORMATION**CPT/HCPCS codes**

- 82306 Vitamin D; 25 hydroxy, includes fraction(s), if performed
82652 Vitamin D; 1, 25 dihydroxy, includes fraction(s), if performed

Not covered for any diagnosis:

0038U Vitamin D, 25 hydroxy D2 and D3, by LC-MS/MS, serum microsample, quantitative Sensieva™ Droplet 25OH Vitamin D2/D3 Microvolume LC/MS Assay; InSource Diagnostics)

ICD 10 Diagnosis: *Codes 82306 and 82652 are covered only for the following diagnoses for Commercial and Medicaid plans:*

A15.0 – A15.9	Respiratory Tuberculosis
A17.0 – A17.9	Tuberculosis of nervous system
A18.01 – A18.89	Tuberculosis of other organs
A19.0 – A19.9	Miliary tuberculosis
B38.0 - B38.89	Coccidioidomycosis
B39.0 - B39.5	Histoplasmosis
C22.0 -C22.9	Malignant neoplasm of liver and intrahepatic bile ducts
C23	Malignant neoplasm of gallbladder
C24.0 – C24.9	Malignant neoplasm of other and unspecified parts of biliary tract
C25.0 – C25.9	Malignant neoplasm of pancreas
C26.0 – C26.9	Malignant neoplasm of other and ill-defined digestive organs
C82.00 - C82.99	Follicular lymphoma
D13.0 – D13.9	Benign neoplasm of other and ill-defined parts of digestive system
D86.0 - D86.89	Sarcoidosis
E20.0	Idiopathic hypoparathyroidism
E20.8	Other hypoparathyroidism
E20.9	Hypoparathyroidism, unspecified
E21.0 - E21.5	Hyperparathyroidism and other disorders of parathyroid gland
E55.0 – E55.9	Vitamin D deficiency
E64.3	Sequelae of rickets
E66.01	Morbid (severe) obesity due to excess calories
E66.9	Obesity unspecified
E67.2	Megavitamin-B6 syndrome
E67.3	Hypervitaminosis D
E67.8	Other specified hyperalimentation
E68	Sequelae of hyperalimentation
E83.30-E83.39	Disorders of phosphorus metabolism and phosphatases
E83.50-E83.59	Disorders of calcium metabolism
E84.0-E84.9	Cystic fibrosis
E89.2	Post procedural hypoparathyroidism
G73.7	Myopathy in diseases classified elsewhere
I12.9	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
J63.2	Berylliosis
K50.00 - K50.919	Crohn's disease [regional enteritis]
K51.00 - K51.919	Ulcerative colitis
K70.2	Alcoholic fibrosis and sclerosis of liver

K70.30 - K70.31	Alcoholic cirrhosis of liver
K74.0 - K74.69	Fibrosis and cirrhosis of liver
K75.81	Nonalcoholic steatohepatitis (NASH)
K76.0	Fatty (change of) liver, not elsewhere classified
K76.89	Other specified diseases of liver
K80.01	Calculus of gallbladder with acute cholecystitis with obstruction
K80.11	Calculus of gallbladder with chronic cholecystitis with obstruction
K80.13	Calculus of gallbladder with acute and chronic cholecystitis with obstruction
K80.19	Calculus of gallbladder with other cholecystitis with obstruction
K80.21	Calculus of gallbladder without cholecystitis with obstruction
K80.31	Calculus of bile duct with cholangitis, unspecified, with obstruction
K80.33	Calculus of bile duct with acute cholangitis with obstruction
K80.35	Calculus of bile duct with chronic cholangitis with obstruction
K80.37	Calculus of bile duct with acute and chronic cholangitis with obstruction
K80.41	Calculus of bile duct with cholecystitis, unspecified, with obstruction
K80.43	Calculus of bile duct with acute cholecystitis with obstruction
K80.45	Calculus of bile duct with chronic cholecystitis with obstruction
K80.47	Calculus of bile duct with acute and chronic cholecystitis with obstruction
K80.51	Calculus of bile duct without cholangitis or cholecystitis with obstruction
K80.61	Calculus of gallbladder and bile duct with cholecystitis, unspecified, with obstruction
K80.63	Calculus of gallbladder and bile duct with acute cholecystitis with obstruction
K80.65	Calculus of gallbladder and bile duct with chronic cholecystitis with obstruction
K80.67	Calculus of gallbladder and bile duct with acute and chronic cholecystitis with obstruction
K80.71	Calculus of gallbladder and bile duct without cholecystitis with obstruction
K80.81	Other cholelithiasis with obstruction
K82.0	Obstruction of gallbladder
K82.8	Other specified diseases of gallbladder
K82.9	Disease of gallbladder, unspecified
K82.A1	Gangrene of gallbladder in cholecystitis
K82.A2	Perforation of gallbladder in cholecystitis
K83.0 - K83.9	Other diseases of biliary tract
K85.10 - K85.12	Biliary acute pancreatitis
K86.2	Cyst of pancreas
K86.3	Pseudocyst of pancreas
K86.81 - K86.89	Other specified diseases of pancreas
K86.9	Disease of pancreas, unspecified

K87	Disorders of gallbladder, biliary tract and pancreas in diseases classified elsewhere
K90.0 - K90.49	Intestinal malabsorption
K90.89	Other intestinal malabsorption
K90.9	Intestinal malabsorption, unspecified
K91.2	Postsurgical malabsorption, not elsewhere classified
L40.0 - L40.4	Psoriasis
L40.8	Other psoriasis
L40.9	Psoriasis, unspecified
L90.0	Lichen sclerosus et atrophicus
L94.0	Localized scleroderma [morphea]
L94.1	Linear scleroderma
L94.3	Sclerodactyly
M32.0 - M32.9	Systemic lupus erythematosus (SLE)
M33.01 - M33.09	Juvenile dermatomyositis
M33.11 - M33.19	Other dermatomyositis
M33.91 - M33.99	Dermatopolymyositis
M36.0	Dermato (poly) myositis in neoplastic disease
M60.811	Other myositis, right shoulder
M60.812	Other myositis, left shoulder
M60.821	Other myositis, right upper arm
M60.822	Other myositis, left upper arm
M60.831	Other myositis, right forearm
M60.832	Other myositis, left forearm
M60.841	Other myositis, right hand
M60.842	Other myositis, left hand
M60.851	Other myositis, right thigh
M60.852	Other myositis, left thigh
M60.861	Other myositis, right lower leg
M60.862	Other myositis, left lower leg
M60.871	Other myositis, right ankle and foot
M60.872	Other myositis, left ankle and foot
M60.88	Other myositis, other site
M60.89	Other myositis, multiple sites
M79.10 - M79.18	Myalgia
M79.7	Fibromyalgia
M80.00XA-M80.88XS	Osteoporosis with current pathological fracture
M81.0 - M81.8	Osteoporosis without current pathological fracture
M83.0 - M83.9	Adult osteomalacia
M85.80	Other specified disorders of bone density and structure, unspecified site
M85.811	Other specified disorders of bone density and structure, right shoulder
M85.812	Other specified disorders of bone density and structure, left shoulder
M85.821	Other specified disorders of bone density and structure, right upper arm

M85.822	Other specified disorders of bone density and structure, left upper arm
M85.831	Other specified disorders of bone density and structure, right forearm
M85.832	Other specified disorders of bone density and structure, left forearm
M85.841	Other specified disorders of bone density and structure, right hand
M85.842	Other specified disorders of bone density and structure, left hand
M85.851	Other specified disorders of bone density and structure, right thigh
M85.852	Other specified disorders of bone density and structure, left thigh
M85.861	Other specified disorders of bone density and structure, right lower leg
M85.862	Other specified disorders of bone density and structure, left lower leg
M85.871	Other specified disorders of bone density and structure, right ankle and foot
M85.872	Other specified disorders of bone density and structure, left ankle and foot
M85.88	Other specified disorders of bone density and structure, other site
M85.89	Other specified disorders of bone density and structure, multiple sites
M85.9	Disorder of bone density and structure, unspecified
M88.0	Osteitis deformans of skull
M88.1	Osteitis deformans of vertebrae
M88.811	Osteitis deformans of right shoulder
M88.812	Osteitis deformans of left shoulder
M88.821	Osteitis deformans of right upper arm
M88.822	Osteitis deformans of left upper arm
M88.831	Osteitis deformans of right forearm
M88.832	Osteitis deformans of left forearm
M88.841	Osteitis deformans of right hand
M88.842	Osteitis deformans of left hand
M88.851	Osteitis deformans of right thigh
M88.852	Osteitis deformans of left thigh
M88.861	Osteitis deformans of right lower leg
M88.862	Osteitis deformans of left lower leg
M88.871	Osteitis deformans of right ankle and foot
M88.872	Osteitis deformans of left ankle and foot
M88.88	Osteitis deformans of other bones
M88.89	Osteitis deformans of multiple sites
M88.9	Osteitis deformans of unspecified bone
M89.9	Disorder of bone, unspecified
M94.9	Disorder of cartilage, unspecified
N18.2 - N18.9	Chronic kidney disease (CKD)
N25.0	Renal osteodystrophy
N25.81	Secondary hyperparathyroidism of renal origin
O07.0 - O9a.53	Pregnancy, Childbirth and the Puerperium

O99.841 - O99.845	Bariatric surgery status complicating pregnancy, childbirth and the puerperium
Q78.0	Osteogenesis imperfecta
Q78.2	Osteopetrosis
T30.0 - T30.4	Burn and corrosion, body region unspecified
Z32.00 - Z32.3	Encounter for pregnancy test and childbirth and childcare instruction
Z33.1 - Z33.3	Pregnant state
Z34.00 - Z34.93	Encounter for supervision of normal pregnancy
Z36.0 - Z36.9	Encounter for antenatal screening of mother
Z37.0 - Z37.9	Outcome of delivery
Z38.00 - Z38.8	Liveborn infants according to place of birth and type of delivery
Z39.0 - Z39.2	Encounter for maternal postpartum care and examination
Z3A.00 - Z3A.49	Weeks of gestation
Z68.30 - Z68.45	Body mass index (BMI) 30.0-30.9, adult - Body mass index (BMI) 70 or greater, adult
Z68.54	Pediatric body weight > 95% for ageZ79.3
Z79.51 - Z79.52	Long term (current) use of hormonal contraceptives
Z79.891	Long term (current) use of steroids
Z79.899	Long term (current) use of opiate analgesic
Z98.0	Other long term (current) drug therapy
Z98.84	Intestinal bypass and anastomosis status
	Bariatric surgery status

VI. REFERENCES

1. American Academy of Dermatology. [Position Statement of Vitamin D](#). November 5, 2022.
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3. Anthem. Screening for Vitamin D Deficiency in Average Risk Individuals. Clinical UM Guideline CG-LAB-11. Publish Date October 17, 2018.
4. Blue Shield of CA. Testing Serum Vitamin D Levels. Medical Policy 2.04.135.
5. Cigna. [Vitamin D Testing](#). Medical Coverage Policy Number 0526.
6. Choosing Wisely. American Society for Clinical Pathology. Vitamin D Tests: When you need them—and when you don't.
7. Choosing Wisely. American Academy of Pediatrics – Section on Endocrinology [Avoid ordering Vitamin D concentrations routinely in otherwise healthy children, including children who are overweight or obese](#). October 2, 2017.
8. Choosing Wisely. Endocrine Society. [Don't routinely measure 1, 25-dihydroxyvitamin D unless the patient has hypercalcemia or decreased kidney function](#). October 16, 2013.

9. National Institute of Health. Office of Dietary Supplements. [Vitamin D Fact Sheet for Health Professionals. Health Information](#). August 12, 2022.
10. U.S. Preventive Services Task Force. Final Recommendation Statement: [Vitamin D Deficiency: Screening](#). April 13, 2021.
11. Wisconsin Physicians Service Insurance Corporation. Centers for Medicare & Medicaid Services. Vitamin D Assay Testing. Local Coverage Determination (LCD) [L34658](#).

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