




دائرة الصحة
DEPARTMENT OF HEALTH

THIQA COVERAGE POLICY ON MANAGEMENT OF VITAMIN D DEFICIENCY

July 2022



 دائرة الصحة DEPARTMENT OF HEALTH	
Document Title:	THIQA Coverage Policy on Management of Vitamin D Deficiency
Document Type:	Coverage Policy
Document Ref. Number:	DOH/Pol/CPL/1/2022
Effective Date:	July 2022
Document Owner:	Community Health Department at Abu Dhabi Public Health Center. Please email phc@adphc.gov.ae for further information.
Applies to:	DOH licensed Healthcare Providers. DOH authorized Health Payers. All Health Insurance products and schemes, as applicable.
<p>This Policy should be read in conjunction with related Abu Dhabi and UAE laws, DOH Standards, Policies and Manuals including but not limited to:</p> <ul style="list-style-type: none"> ● Federal Law on the Practice of Human Medicine. ● Federal Law on Medical Liability. ● Health Insurance Law No. 23 of 2005. ● DOH Standard Provider Contract. ● DOH Quality Policy. ● DOH Regulator Manual. ● DOH Healthcare Provider Manual. ● DOH Health Professional Manual. ● DOH Standard on Patient Healthcare Data Privacy. ● DOH Policy on Health Information Exchange. ● DOH Claims and Adjudication Rules. 	



ABOUT DEPARTMENT OF HEALTH (DOH)

The Department of Health (DOH) is the regulatory body of the Health System in the Emirate of Abu Dhabi and seeks excellence in Health for the community by regulating and monitoring the health status of the population. DOH defines the strategy for the health system, monitors and analyses the health status of the population and performance of the system. In addition, DOH shapes the regulatory framework for the health system, inspects against regulations, enforce regulations, and encourages the adoption of best practices and performance targets by all health service providers. DOH also drives programs to increase awareness and adoption of healthy living standards among the residents of the Emirate of Abu Dhabi in addition to regulating scope of services, premiums, and reimbursement rates of the health system in the Emirate of Abu Dhabi.

The Health System of the Emirate of Abu Dhabi is comprehensive, encompasses the full spectrum of health services and is accessible to all residents of Abu Dhabi. The health system encompasses, providers, professionals, patients, Insurers, and the regulator. Providers of health services include public and private services, and the system is financed through mandatory health insurance (with the exception to Thiqa) and has three main sources of financing: Employers or Sponsors, the Government, and Individuals. The Health Insurance scheme places responsibilities on any Insurer, Broker, Third Party Administrator, Health Provider, Employer, Sponsor (including educational establishments), Limited Income Investors and Insured Persons to participate in the health insurance scheme.



TABLE OF CONTENTS

1. Introduction	2
2. Definitions.....	2
3. Background.....	2
4. Purpose	3
5. Scope.....	3
6. Policy Statement.....	3
7. Determination and Coverage Approval of Medical Necessity in Vitamin D Deficiency Interventions	3
8. Payment Authorization.....	5
9. Billing, Coding and Physician Documentation Information.....	5
10. Enforcement and Sanctions	6
11 Appendices	7
1. Clinical Pathway: Management of Vitamin D in adults.....	7
2. Clinical Pathway: Management of Vitamin D in children.....	8
12. Reviewers	10
13. References	11

1. Introduction

The THIQA Program covers the cost of management of Vitamin D deficiency for UAE Nationals and those of similar status when medically necessary. This policy sets out the medical criteria for coverage of vitamin D interventions under the government funded THIQA Program.

This document is not a guideline on clinical management; in no way does it replace the clinical judgement of the physician. This Policy considers the adjudication guidelines and is a guide to administer the schedule of benefits.

2. Definitions

Term	Definition
Medical Necessity	The term “medical necessity” or “medically necessary service” means medical, surgical or other services required for the prevention, diagnosis, cure or treatment of a health-related condition including such services necessary to prevent a detrimental change in either medical or mental health status.
Payer	For the purpose of this policy is THIQA Third Party Administrator (s).
Healthcare Provider / Provider	A Healthcare Provider is defined in the DOH Healthcare Providers Manual as any person who operates a Healthcare Facility.

3. Background

Vitamin D increasingly appears to be necessary for a multitude of physiological functions and overall health. However, there is insufficient evidence to support all its claimed benefits. What is supported by evidence is Vitamin D proven link to bone health.

An extreme lack of vitamin D results in rickets in children, osteomalacia (softening of bones) and osteoporosis in adults. Bone diseases are a Public Health burden, both in terms of direct cost to society and the government, or indirectly, when patients lose their independence and require nursing care either at home or in institutions.

If osteoporosis, osteomalacia, osteopenia and rickets are not prevented or left untreated, the Quality Adjusted Life years (QALYs) is compromised as it can progress to broken bones, also known as fractures. Any bone can be affected, but of special concern are fractures of the hip and spine. A hip fracture requires hospitalization and major surgery. It can impair a person’s ability to walk unassisted and may cause prolonged or permanent disability. Spinal or vertebral fractures can also have serious consequences, including loss of height, severe back pain, and deformity. The changes in Quality Adjusted Life Years (QALYs) and disability suffered by people



with complications from osteoporosis and osteopenia caused by vitamin D deficiency, impacts their contributions to an effective and healthy society.

4. Purpose

The purpose of this policy is to ensure that medically necessary testing and management of Vitamin D deficiency as per the here stated medical criteria, qualify for THIQA coverage across the Emirate of Abu Dhabi and regulate its insurance coverage.

5. Scope

This Policy applies to THIQA holders eligible for coverage as per clause 7 herein below.

6. Policy Statement

Coverage will be provided for management of Vitamin D deficiency when it is determined that such procedures are medically necessary and fulfill the here stated medical criteria.

7. Determination and Coverage Approval of Medical Necessity in Vitamin D Deficiency Interventions

7.1. Medical Necessity in Testing for Vitamin D deficiency: Testing for Vitamin D deficiency is considered medically necessary in patients with any of the following conditions or taking any of the listed medications categories:

7.1.1. Conditions:

- a. Bone Conditions:
 - i. Rickets;
 - ii. Osteomalacia;
 - iii. Osteopenia
 - iv. Osteoporosis.
- b. Chronic kidney disease and reduced renal production of calcitriol:1.25 (OH)₂ D₃;
- c. Liver failure and reduced hepatic production of 25(OH)D₃;
- d. Malabsorption syndromes:
 - i. Cystic fibrosis;
 - ii. Inflammatory bowel disease;
 - iii. Crohn's disease;
 - iv. Bariatric surgery;
 - v. Radiation enteritis;
 - vi. Celiac disease;
 - vii. Pancreatic insufficiency, extrahepatic biliary obstruction.
- e. Hyperparathyroidism;
- f. Hypoparathyroidism;



- g. Hypercalcemia and Hypocalcemia;
 - h. Hyperphosphatemia and Hypophosphatemia;
 - i. Autoimmune Diseases:
 - i. Multiple sclerosis;
 - ii. Systemic Lupus;
 - iii. Systemic sclerosis;
 - j. Obese children and adult;
 - k. Elderly above the age of 65 (testing once a year).
- 7.1.2. Medications categories:
- a. Anti-seizure medications;
 - b. Glucocorticoids;
 - c. AIDS medications;
 - d. Antifungals like ketoconazole;
 - e. Cholestyramine.

7.2. Medical Necessity in the Management of Vitamin D deficiency

As per international guidelines and recommendations, patients falling under the cutoffs indicated in the table below would be considered to have Vitamin D deficiency or inadequacy and would need to be put on a treatment regimen:

nmol/L*	ng/mL*	Health status
<30	<12	Associated with vitamin D deficiency, which can lead to rickets in infants and children and osteomalacia in adults
30 to <50	12 to <20	Generally considered inadequate for bone and overall health in healthy individuals
≥50	≥20	Generally considered adequate for bone and overall health in healthy individuals
>125	>50	Linked to potential adverse effects, particularly at >150 nmol/L (>60 ng/mL)

*Serum concentrations of 25(OH) D are reported in both nanomoles per liter (nmol/L) and nanograms per milliliter (ng/mL). One nmol/L = 0.4 ng/mL, and 1 ng/mL = 2.5 nmol/L.



7.2.1. Treatment regimens:

7.2.1.1 Clinical Pathway: Management of Vitamin D in adult (Appendix 1)

Below 30 nmol/L: will require 8-10 weeks of treatment followed by daily maintenance dose indefinitely specially for elderly patients and those with limited direct sunlight exposure, obese and bariatric surgery patients.

Between 30-50 nmol/L: same as above if they have risk factors (refer to section #7: Medical Necessity in Screening and management of Vitamin D deficiency).

Above 50 nmol/L: Follow the prevention guideline.

7.2.1.2 Clinical Pathway: Management of Vitamin D in Children (Appendix 2).

7.2.3 Frequency for testing Vitamin D:

7.2.3.1 Vitamin D testing is allowed in individuals with an underlying disease or condition which is specifically associated with vitamin D deficiency or decreased bone density (Coverage details see section 7.1).

7.2.3.1.1 Vitamin D deficiency testing is allowed in individuals who have documented vitamin D deficiency. A patient can be re-tested to be assessed for Vitamin D deficiency **12 weeks** after the initiation of vitamin D supplementation therapy. A patient is limited to only two tests per year until the vitamin D supplementation therapy reaches its therapeutic goal.

7.2.3.1.2 Once therapeutic range has been reached, annual testing should meet the coverage criteria.

8 Payment Authorization

Payers must comply with the pre-authorization requirements, where appropriate, for payment for screening and management of Vitamin D deficiency in accordance with this Policy and consistent with the Standard Provider Contract.



9 Billing, Coding and Physician Documentation Information

9.1 Coding for management of Vitamin D deficiency should be in accordance with the codes classification as defined in the Coding Manual, and in compliance with e-claim requirements.

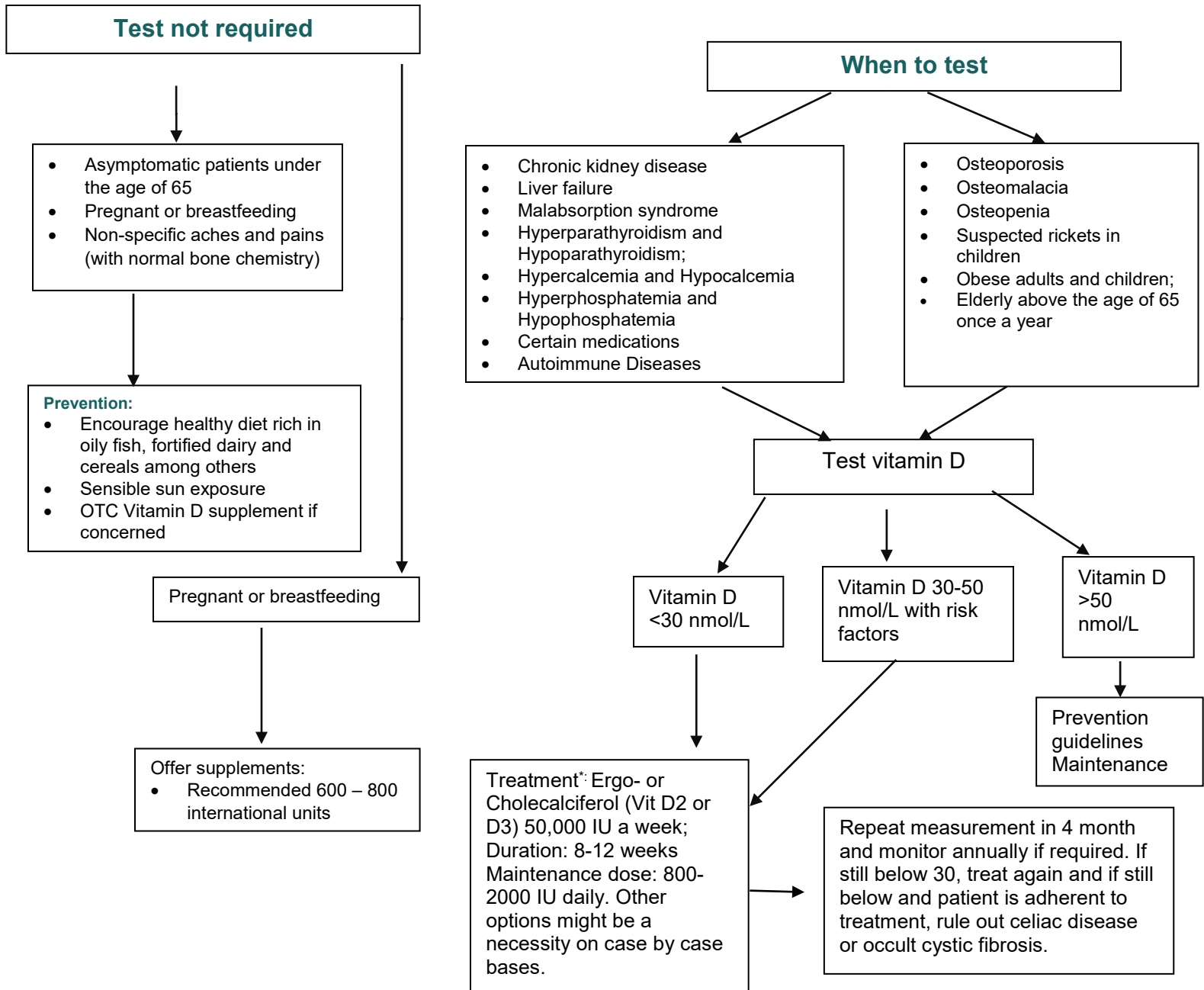
9.2 Charges for management of Vitamin D deficiency and related services shall be in accordance with the Standard Provider Contract agreed rates, and in compliance with Mandatory Tariff pricelist and DOH Claims and Adjudication Rules.

10 Enforcement and Sanctions

DOH-licensed healthcare service providers and Payers must comply with the terms and requirements of this Policy. DOH may impose sanctions in relation to any breach of requirements under this Policy in accordance with the Complaints, Investigations, Regulatory Action and Sanctions Chapter, Healthcare Regulator Manual.

11. APPENDICES

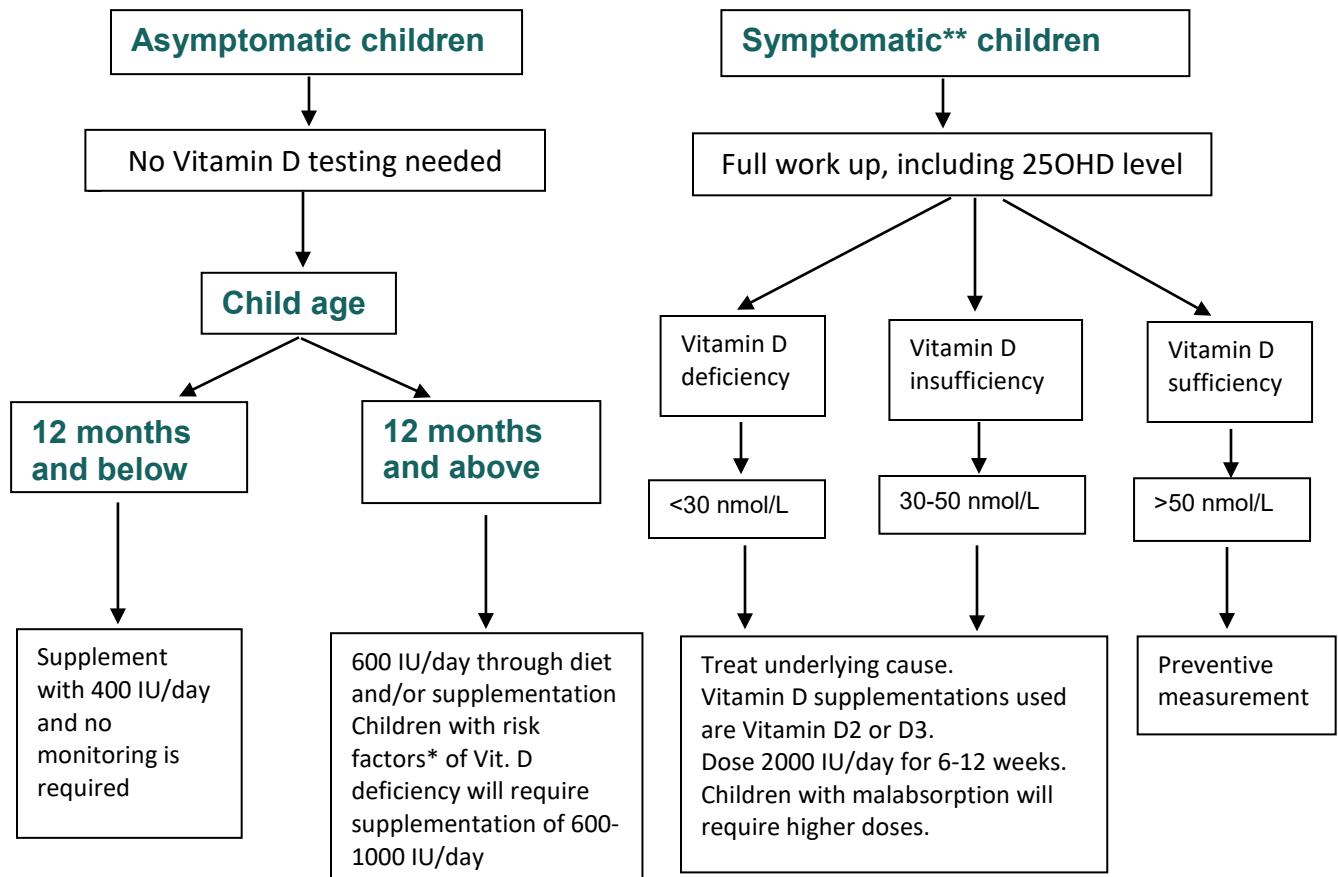
APPENDIX 1 Clinical Pathway: Management of Vitamin D in adult 1





Note: Testing for Calcium and phosphate levels is necessary in some cases when assessing Vitamin D status. Vit D, calcium and phosphate are interconnected. In certain scenarios, all three markers should be measured. For example, in CKD, there is an imbalance in calcium and phosphate levels, on top of a decreased conversion of 25(OH)D to 1,25(OH)D. In these groups, calcium and phosphate should be routinely monitored. Another example is vitamin D resistant rickets, Fanconi syndrome or other conditions affecting the negative feedback loops between vitamin d, PTH and FGF23

APPENDIX 2 Clinical Pathway: Management of Vitamin D in infants, children 16 and below^{2 3 4}



*Risk Factors for Vitamin D Deficiency in Children:

Anticonvulsant medication therapy, chronic diseases associated with fat malabsorption, darker skin pigmentation, exclusive breastfeeding without vitamin D supplementation, insufficient sunlight exposure and low maternal vitamin D levels (risk factor for infants).



** Vitamin D deficiency is most commonly asymptomatic. However, severe vitamin D deficiency may manifest as rickets with the below clinical features:

Bony signs: Swelling of wrists and ankles, leg deformities (genu varum or valgum), rachitic rosary in the chest wall (enlarged costochondral joints), delayed tooth eruption (no incisors by aged 10 months, no molars by age 18 months), craniotabes (softening of skull bones), delayed closure of anterior fontanelle, frontal bossing, minimal trauma fractures.

Non- bony signs: delayed gross motor development, poor linear growth, raised intracranial pressure, dilated cardiomyopathy, symptoms of hypocalcemia - tetany, stridor, seizure.

Radiological features: Splaying, fraying and cupping of metaphyses, osteopenia.



REVIEWERS

Name of Reviewers	Profession	Organization
Dr. Hussein Saadi, MD	Institute Chair of the Medical Subspecialties Institute	Cleveland Clinic Abu Dhabi
Dr. Omniyat Mohammed Al Hajeri	Director of Community Health Department	ADPHC
Dr. Alia Mohammed Al Dhaheri	Consultant Family Medicine	AHS
Dr. Kawthar Salem Al Ameri	Specialist Family Medicine	AHS
Dr. Shamma Jauaan Al Muhairi	Consultant Family Physician	Tawam Hospital-SEHA
Dr. Ihab Marwan Abbas	Consultant Physician Orthopedic Clinic - Medical Affairs	Tawam Hospital-SEHA
Dr. Gianina-Elena Statache	Specialist Rheumatology	Healthpoint Hospital
Dr. Hani Jaber	Family Medicine Consultant	Healthpoint Hospital
Dr. Maurice El Khoury	Pediatrician	Healthpoint Hospital
Dr. Hala Sakal	Consultant Pediatric Endocrinology	Advanced Cure Diagnostic Centers
Dr. Noura Ali Al Hassani	Consultant Physician, Pediatric Endocrinology and Diabetes	Tawam Hospital-SEHA
Dr. Sahar Fahmy	Advisor	DOH Undersecretary office
Dr. Budoor Ahmed Al Shehhi	Section Head, Community Health Department	ADPHC
Dr. Arwa Al Modwahi	Senior Officer, Community Health Department	ADPHC



References

- ¹ International Osteoporosis Foundation (IOF). Impact of osteoporosis. Available on line at <https://www.iofbonehealth.org/impact-osteoporosis> retrieved on January 24, 2019
- ²NOF 2013, *CLINICIAN'S GUIDE TO PREVENTION AND TREATMENT OF OSTEOPOROSIS*. Available on line at <http://emri.tums.ac.ir/upfiles/158936855.pdf> retrieved on May 29, 2018
- ³AMERICAN ASSOCIATION OF CLINICAL ENDOCRINOLOGISTS AND AMERICAN COLLEGE OF ENDOCRINOLOGY 2016, *CLINICAL PRACTICE GUIDELINES FOR THE DIAGNOSIS AN TREATMENT OF POSTMENOPAUSAL OSTEOPOROSIS*. Available on line at <https://www.ace.com/files/postmenopausal-guidelines.pdf> retrieved on June 4, 2018
- ⁴Namrata Singh, MD; Steven N Berney, MD August 19, 2016, *Osteoporosis: A Bare Bones Guide to Diagnosis and Management*. Available online at <https://reference.medscape.com/features/slideshow/osteoporosis#page=8> retrieved on June 12, 2018
- ⁵Ibid
- ⁶National Institutes of Health (NIH). Vitamin D Fact Sheet for Health Professionals. Available on line at <https://ods.od.nih.gov/factsheets/VitaminD-HealthProfessional/> Last accessed 12 December 2020
- ⁷Dubai Standards of Care – 2017. *Management of Vitamin D Deficiency in Children and Adults*. Available on line at [Guidelines on the Diagnosis and Follow up of Vitamin D deficiency \(isahd.ae\)](http://www.isahd.ae/Guidelines-on-the-Diagnosis-and-Follow-up-of-Vitamin-D-deficiency) Accessed 8 December 2020
- ⁸Munns CF, Shaw N, Kiely M, et al. *Global Consensus Recommendations on Prevention and Management of Nutritional Rickets*. J Clin Endocrinol Metab 2016; 101:394.
- ⁹Endocrine Society Clinical Guideline; JCE&M; July 2011, 96(7): 1911–1930
- ¹⁰Switkowski, K. M., Camargo Jr, C. A., Rifas-Shiman, S. L., Fuller, H., & Oken, E. (2021). Early-Life Factors Are Associated with Vitamin D Status in Early and Mid-Childhood and May Differ between White and Black Children. *The Journal of Nutrition*, 151(5), 1256-1268.
- ¹¹Shaikh AS, Guo X, Li Y, Cao L, Liu X, Li P, Zhang R, Guo R. The Impact of Antiepileptic Drugs on Vitamin Levels in Epileptic Patients. *Curr Pharm Biotechnol*. 2018;19(8):674-681. doi: Hori M,
- ¹²Shimizu Y, Fukumoto S. Minireview: fibroblast growth factor 23 in phosphate homeostasis and bone metabolism. *Endocrinology* 2011;152:4–1010.2174/1389201019666180816104716. PMID: 30112988.\

Appendices References

- ¹ Dubai Standards of Care – 2017. *Management of Vitamin D Deficiency in Children and Adults*. Available on line at [Guidelines on the Diagnosis and Follow up of Vitamin D deficiency \(isahd.ae\)](http://www.isahd.ae/Guidelines-on-the-Diagnosis-and-Follow-up-of-Vitamin-D-deficiency) Accessed 8 December 2020
- ² Dubai Standards of Care – 2017. *Management of Vitamin D Deficiency in Children and Adults*. Available on line at [Guidelines on the Diagnosis and Follow up of Vitamin D deficiency \(isahd.ae\)](http://www.isahd.ae/Guidelines-on-the-Diagnosis-and-Follow-up-of-Vitamin-D-deficiency) Accessed 8 December 2020
- ³ Endocrine Society Clinical Guideline; JCE&M; July 2011, 96(7): 1911–1930
- ⁴ Munns CF, Shaw N, Kiely M, et al. *Global Consensus Recommendations on Prevention and Management of Nutritional Rickets*. J Clin Endocrinol Metab 2016; 101:394.