

# Rickets and Osteomalacia Management

## Adjudication Guideline

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Medical

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## Table of Contents

1.	Abstract.....	3
1.1	For Members .....	3
1.2	For Medical Professionals .....	3
2.	Scope.....	4
3.	Adjudication Policy .....	4
3.1	Eligibility / Coverage Criteria .....	4
3.2	Requirements for Coverage.....	5
3.3	Non-Coverage.....	5
3.4	Payment and Coding Rules.....	6
4.	Denial codes .....	6
5.	Appendices .....	6
5.1	References .....	7
5.2	Revision History .....	7

## 1. Abstract

### 1.1 For Members

Rickets and Osteomalacia are the two disorders caused by insufficient level of vitamin D in the body. When vitamin D deficiency occurs in children, it is termed as rickets, whereas deficient mineralization of the growth plate in adult is termed Osteomalacia.

Rickets symptoms aches, bone pain, and sometimes enlargement occurs in bones at joints, such as the wrists. Fractures may occur without any known trauma.

In Osteomalacia, bone pain and muscle weakness are the classical symptoms. Fractures may also take place with little to no recognized trauma.

Causes of Rickets and Osteomalacia can be lack of vitamins D intake or less exposure to sunlight, hereditary defect in vitamin D metabolism or defect in end-organ response to vitamin D.

Diagnosis is made through clinical examination - blood, urine tests and radiological examination.

### 1.2 For Medical Professionals

Management of active Rickets, a condition normally associated with children, will be covered till 18 years of age only, as active rickets after this age are medically unlikely.

Osteomalacia is a similar condition occurring in adults normally associated to vitamins D deficiency.

Management of Rickets and Osteomalacia if medically necessary is covered for all health plans administered by Daman as per the terms and conditions.

## 2. Scope

The scope of the guideline is to specify the coverage details of Rickets and Osteomalacia management for all the plans administered by Daman.

## 3. Adjudication Policy

### 3.1 Eligibility / Coverage Criteria

**Rickets** (0 to 18 years of age)

Rickets occurs primarily in growing children characterized by deficient mineralization in bones as result of vitamin D deficiency but can be associated with low calcium or low serum phosphates all of which leads to impaired growth and architectural disruption of long bone structure.

**Types of Rickets:**

#### 1. Calcipenic Rickets

- Nutritional - Vitamin D deficiency or calcium deficiency Rickets
- Hereditary - Vitamin D dependent Rickets (Pseudovitamin-D deficiency Rickets, Vitamin-D resistant Rickets)

#### 2. Phosphopenic Rickets OR hypophosphataemic Rickets

- Nutritional – Phosphate deficiency Rickets
- Hereditary Hypophosphatemic Rickets
  - X-linked hypophosphatemic rickets.
  - Hereditary hypophosphatemic rickets with hypercalciuria
  - Hypophosphatemic Ricket-tumour Induced

**Osteomalacia** (18 years onward)

Osteomalacia refers to impaired mineralization of the bone matrix and occurs when the growth plates have fused. Vitamin D deficiency is the most common cause. Diagnosis is made via laboratory results with a low vitamin D level in the setting of low or normal calcium and an elevated intact PTH (Parathyroid Hormone) level. Once the underlying cause is addressed, a successful treatment

regimen is possible: increased sunlight exposure, oral vitamin D, and calcium replacement.

#### Diagnostic/Evaluation factors

- Elderly
- Vitamin D-deficient diet
- Lack of sunlight exposure
- Family history of osteomalacia
- Fractures
- Malabsorption syndromes
- Diffuse bone pain and tenderness
- Proximal muscle weakness
- Waddling gait

#### Types of Osteomalacia

- Vitamin D deficient
- Inherited or acquired disorders of phosphate wasting, or oncogenic osteomalacia

## 3.2 Requirements for Coverage

ICD-10 codes must be coded to the highest level of specificity.

## 3.3 Non-Coverage

- Daman does not cover management of Rickets & Osteomalacia for the visitors plan.
- Daman does not cover management of active Rickets above the age of 18.
- Daman does not cover management of Rickets and Osteomalacia for experimental or clinical trial purposes.

## 3.4 Payment and Coding Rules

Please apply regulator payment rules and regulations and relevant coding manuals for ICD and regulator drug codes.

## 4. Denial Codes

Code	Code description
CODE-014	Activity/diagnosis is inconsistent with the patient's age/gender
MNEC-004	Service is not clinically indicated based on good clinical practice, without additional supporting diagnoses/activities
MNEC-005	Service/supply may be appropriate, but too frequent
MNEC-003	Service is not clinically indicated based on good clinical practice
PRCE-002	Payment is included in the allowance for another service
PRCE-010	Use bundled code

## 5. Appendices

### 5.1 References

- <http://emedicine.medscape.com/article/985510treatment>
- [https://www.uptodate.com/contents/overview-of-rickets-in-children?search=Rickets&source=search\\_result&selectedTitle=1%7E100&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/overview-of-rickets-in-children?search=Rickets&source=search_result&selectedTitle=1%7E100&usage_type=default&display_rank=1)
- <https://www.ncbi.nlm.nih.gov/books/NBK562285/>
- [https://www.uptodate.com/contents/clinical-manifestations-diagnosis-and-treatment-of-osteomalacia-in-adults?search=osteomalacia&source=search\\_result&selectedTitle=1%7E92&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/clinical-manifestations-diagnosis-and-treatment-of-osteomalacia-in-adults?search=osteomalacia&source=search_result&selectedTitle=1%7E92&usage_type=default&display_rank=1)
- <https://bestpractice.bmj.com/topics/en-gb/635>
- <https://bestpractice.bmj.com/topics/en-gb/517?q=Osteomalacia&c=suggested>
- <https://www.fda.gov/news-events/press-announcements/fda-approves-first-therapy-rare-inherited-form-rickets-x-linked-hypophosphatemia>

## 5.2 Revision History

Date	Change(s)
15-07-2013	Release of V1.1
01-11-2018	Release of V2.1 <ul style="list-style-type: none"> <li>• General contents update</li> <li>• Mapping CPT and Drugs Created system support</li> </ul>
09-01-2019	Release of V3.0 <ul style="list-style-type: none"> <li>• Content update</li> </ul>
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30-03-2025	Release of V4.0 <ul style="list-style-type: none"> <li>• Template update, References updated</li> </ul>

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