



Rickets

Rickets is a skeletal disorder that is caused by prolonged vitamin D deficiency that leads to the softening and weakening of bones as well as a deficiency of calcium and phosphate, which stimulates excess secretion of parathyroid hormones.

What are the symptoms of rickets?

- Delayed growth
- Delayed motor skills
- Pain in the spine, pelvis and legs
- Muscle weakness

Because rickets softens the areas of growing tissue at the ends of a child's bones (growth plates), it can cause skeletal deformities such as:

- Bowed legs or knock knees
- Thickened wrists and ankles
- Breastbone projection



Causes:

- Rickets is caused by insufficient exposure to sunlight, and low intake of foods containing vitamin D;
- Problems with vitamin D absorption due to certain medical conditions (e.g., bowel resection, chronic pancreatitis, cystic fibrosis);
- Liver problems such as cirrhosis;
- Kidney diseases;
- Medications (e.g., phenytoin);
- Genetics.

When to see a doctor

Talk to your doctor if your child develops bone pain, muscle weakness or obvious skeletal deformities.

What are the risk factors for rickets?

- Children and older adults
- Pregnancy
- Obesity
- Exclusive breast-feeding after the age of 6 months
- Poverty
- Living at high altitudes
- Family history



Complications

Left untreated, rickets can lead to:

- Failure to grow
- An abnormally curved spine
- Bone deformities
- Dental defects
- Seizures

Diagnosis:

- Medical history
- Clinical examination
- Vitamin D test



Prevention

Exposure to sunlight provides the best source of vitamin D. During most seasons, 10 to 15 minutes of exposure to the sun near midday is enough.

To prevent rickets, make sure your child eats foods that contain vitamin D naturally — fatty fish such as salmon and tuna, fish oil and egg yolks — or that have been fortified with vitamin D, such as:

- Infant formula
- Cereal
- Bread
- Milk, but not foods made from milk, such as some yogurts and cheese
- Orange juice

If you're pregnant, ask your doctor about taking vitamin D supplements.

