Rickets

Rickets is a Vitamin-D deficiency which may occur during infancy or childhood. It happens when there is not enough vitamin D in the body. Vitamin D helps the body absorb calcium and phosphate. This process is necessary for proper bone development and growth. This disorder is not uncommon in certain areas of the world.

CAUSES

- Poor nutrition.
- Hereditary rickets (from your family).
- Lack of exposure to the sun. Sunlight helps the body make vitamin D in the skin.
- *Malabsorption* (the gut [*bowel*] is not able to take in foods normally) syndromes. Anything that slows digestion or absorption of fats will lessen absorption of the vitamin. Vitamin D is a fat-soluble vitamin.

SYMPTOMS

Problems commonly seen include:

- Teeth problems.
- Bowed legs.
- Bone pain or tenderness.
- Pelvic deformities.
- Bone disease.
- Muscle cramps.
- Leg fractures.
- Misshapen skull.
- Bumps in the rib cage (*rachitic rosary*).
- Restlessness.
- Growth problems.
- Scoliosis or kyphosis.
- *Pectus carinatum* (pigeon chest).
- Softening of bones.

DIAGNOSIS

- Your caregiver may make the diagnosis by taking a medical history and doing an exam.
- Finding low levels of Vitamin D in the blood.
- Taking blood tests to measure calcium and phosphorus levels may be needed to prove the diagnosis.
- X-rays of affected bones are sometimes taken.

TREATMENT

- 400 international units (IU) of vitamin D a day are recommended for infants and children.
  - Breastfed infants should receive vitamin D supplements.
- Infants taking over 32 ounces of formula (fortified with Vitamin D) per day will receive enough Vitamin D.
- Some good sources of Vitamin D include:
  - 32 ounces of milk fortified with Vitamin D will provide adequate Vitamin D for children.
- Fish, liver and egg yolks are other sources of Vitamin D.
- Your caregiver can give you a prescription for vitamin D, if this diet does not appeal to your child's taste.
- Sunlight exposure will help.
- Braces and surgery are sometimes needed for bone problems.
- Families who have a genetic cause for the rickets can receive counseling.

PROGNOSIS

- Rickets is usually corrected with replacement of deficient minerals and vitamin D.
- It should be corrected during active growth or skeletal deformities and short stature may be lasting.
- If corrected in very young children, boney problems become less or disappear with time.

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