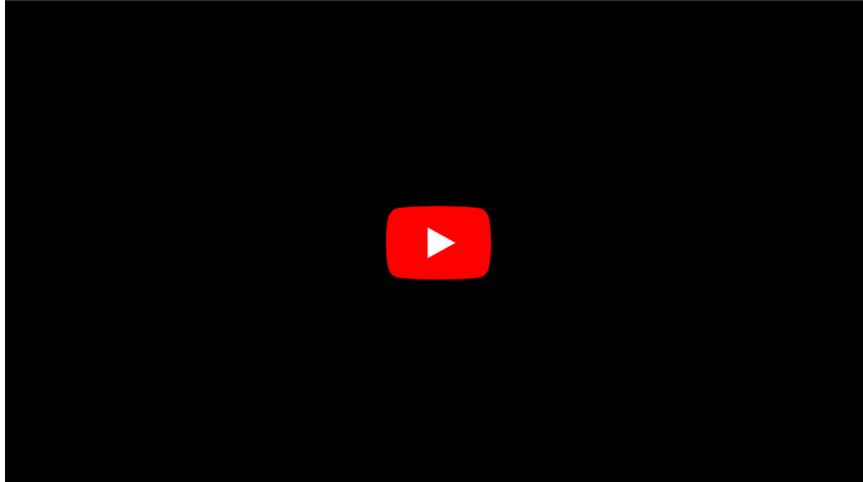


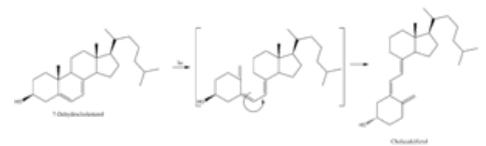
Vitamin D

Vitamin D:



Role

Participates in metabolism of calcium and phosphate and maintains adequate serum concentrations of both. It also promotes calcium absorption in the gut. Vitamin D is especially important in growing children, as it is needed for strong bones and teeth. Research shows that it also provides protection against osteoporosis, hypertension, cancer, and some autoimmune diseases.



Vitamin D synthesis

Source

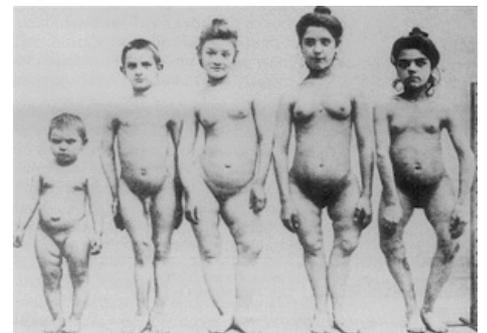
Primary source is milk and other dairy products. It is also found in oily fish and cod liver oil. It is not only found in foods, it can be synthesised in the skin and is triggered by the exposure to UV rays from sunlight (it is recommended to get 10 to 15 minutes of sunshine three times weekly is enough to produce the body's requirement of vitamin D)

Excess

Toxicity causes elevated plasma concentration of calcium which can have some side effects: Blood vessel contract, high blood pressure and Calcium deposits in soft tissues such as the heart and lungs, Kidney stones, Nausea, vomiting, constipation, poor appetite, weakness, and weight loss.

Deficiency

The main diseases associated with vitamin D deficiency are Osteomalacia and rickets (in children). The symptoms that arise are nausea, weight loss and irritability for mild cases, and mental and physical growth retardation, kidney damage and movement of calcium from bones into soft tissues for the severe cases.



Rickets

Links

Related articles

- Fat Soluble Vitamins
- Water Soluble Vitamins

External links

1. Cystic Fibrosis (<http://cysticfibrosis.about.com/od/cysticfibrosis101/f/vitamins.htm>)
2. Medicinenet (<http://www.medicinenet.com/script/main/art.asp?articlekey=10736>)
3. [1] (<http://www.ext.colostate.edu/pubs/foodnut/09315.html>)
4. [2] (<http://www.nlm.nih.gov/medlineplus/ency/article/002399.htm>)

5. Vitamin A (<http://ods.od.nih.gov/factsheets/vitamina>)
6. Mayo Clinic (http://www.mayoclinic.com/health/vitamin-a/NS_patient-vitamina)
7. Vitamin D (<http://ods.od.nih.gov/factsheets/vitamind>)
8. Vitamin D (<http://health.nytimes.com/health/guides/nutrition/vitamin-d/overview.html>)
9. Vitamins Supplements (<http://www.webmd.com/vitamins-supplements/ingredientmono-954-VITAMIN%20E.aspx?activeIngredientId=954&activeIngredientName=VITAMIN%20E>)

Bibliography

- BENCKO, Vladimir, et al. *Hygiene and epidemiology : selected chapters*. 2. edition. Prague. 2008. ISBN 80-246-0793-X.