

Vitamin B2

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Riboflavin or vitamin B₂ is part of coenzymes flavinadenine mononucleotide (FAD) and flavin mononucleotide (FMN), plays a key role in oxidative metabolism.



Source

A small amount is found in many foods. Main sources are meat, milk and milk products; good sources are also fish, offal (inner organs), eggs, and whole grain cereals. Milling of cereals removes most of vitamin B₂ - some countries (e.g. USA) fortify cereal products with riboflavin.

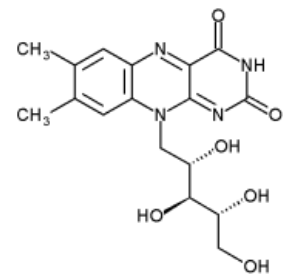
Recommended daily intake for adults: 1.2 to 1.5 mg ^[1]

Deficiency

According to several population studies, the deficiency is widespread in developing countries, where diet is poor in animal foods, vegetables and fruits, and where cereals are milled (white flour)^[2]. Frequently the deficiency is secondary due to malabsorption, enterocolitis, coeliac disease, chronic hepatitis; in children often after the use of broad-spectrum antibiotics. It may develop in cancer, cardiac disease, diabetes^[2]

Clinical picture: The description of the signs of riboflavin deficiency is somewhat inconsistent in various scientific publications. Riboflavin deficiency occurs almost always together with deficiencies of other group B vitamins, which may cause some of the signs described in literature^[3]. The signs most frequently described are: angular stomatitis, peeling lips (cheilosis), glossitis, and normocytic normochromic anemia^[3].

Laboratory evaluation: decreases secretion of vitamin B₂ in urine (normal values are 106–638 nmol/l^[4]), decreased concentrations of glutathione and glutathione reductase in erythrocytes.



Vitamin B2 structure

Excess

Signs of excess are not known.

Links

Related articles

- Fat Soluble Vitamins
- Water Soluble Vitamins

Reference

1. Deutsche Gesellschaft für Ernährung, Österreichische Gesellschaft für Ernährung, Schweizerische Gesellschaft für Ernährungsforschung, Schweizerische Vereinigung für Ernährung. . *Referenzwerte für die Nährstoffzufuhr (DACH)*. 1. edition. Frankfurt am Main : Umschau/Braus, 2000. 216 pp. ISBN 3-8295-7114-3.
2. STANDING COMMITTEE ON THE SCIENTIFIC EVALUATION OF DIETARY REFERENCE INTAKES AND ITS PANEL ON FOLATE, OTHER B VITAMINS, AND CHOLINE AND SUBCOMMITTEE ON UPPER REFERENCE LEVELS OF NUTRIENTS, FOOD AND NUTRITION BOARD, INSTITUTE OF MEDICINE,. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline* [online] . 1. edition. Washington D.C : National Academic Press, 1998. 592 pp. Available from <<https://download.nap.edu/openbook.php?isbn=0309065542>>. ISBN 0-309-59725-0.
3. WHO, FAO,. *Vitamin and mineral requirements in human nutrition* [online] . 2.

edition. Geneva : WHO, 2004. 341 pp. Available from

<<http://whqlibdoc.who.int/publications/2004/9241546123.pdf>>. ISBN 924154612 3.

4. ORDINACE.CZ,. *Laboratorní hodnoty : in Czech: Normal values for laboratory tests The database has been created in collaboration with the Institute of clinical biochemistry and laboratory diagnostics, General University Hospital in Prague* [online]. Pears Health Cyber, s. r. o. 2012, The last revision 2012-02-21, [cit. 2012-02-24]. <<http://www.ordinace.cz/laboratorni-hodnoty/238/#detail>>.

Bibliography

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