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Beri beri is a manifestation of a lack of **vitamin B₁ (thiamin)**'. Thiamine in the body functions as a coenzyme of carboxylases important for glucose metabolism and the energy supply of nerve and muscle cells. Its sources are peas, soy flour, grain sprouts, plant seeds, offal and pork.

Beri beri used to be very widespread in areas where rice is the main food - East Asia and Japan. It currently occurs in a small number of cases in extreme conditions (refugee camps), in very poor population groups in developing countries in connection with the predominance of husked/polished/white rice in the diet. In coastal areas, the consumption of some raw fish and shellfish containing the thiaminase enzyme may also be adversely affected.

In clinical practice, we distinguish between '2 *main forms* of beri beri disease.

- 'Dry beri beri is manifested by bilateral polyneuritis (dropped wrists and feet), loss of tendon-osseous reflexes, paresthesias of the extremities and muscle weakness.
- **Wet beri beri is manifested by swelling. It is mainly swelling of the face, lower limbs and also ascites. There are also heart rhythm disorders and cardiomyopathy. Patients die of heart and lung failure**".



Patient with beri-beri disease

The infantile form of beri beri occurs in breastfed infants of mothers with vitamin B1 deficiency. In 2003, 23 infants in Israel fell ill after being given breast milk substitutes that lacked vitamin B1. 3 of them died.

In our conditions, thiamine deficiency can develop in **alcoholics**', where it manifests as **Wernicke's Korsakoff's syndrome**' or it can arise secondarily, in persons with [[stomach cancer|stomach cancer]].

Note

White rice, which is sold in our market under the name of husked rice, is called "polished" in English. The name "polished" better corresponds to the process (polishing) by which it is created: During processing, it is first necessary to remove the superficial hard shell of the grain. Beneath it is a brown layer - part of the seed - containing fiber, minerals and vitamins, including vitamin B1. Therefore, beri beri does not occur when eating unpolished rice (known in our country as natural rice). This layer is scraped off during further processing (polishing) of the rice, resulting in white/polished/husked rice, which no longer contains any vitamin B1.

Links

Related Articles

- Vitamin B₁
- Nutrient deficiency disease
- Nutrient Excess Disease

References

- BENCKO, Vladimir, et al. *Hygiene : Teaching texts for seminars with practical exercises*. 2. edition. Prague : Karolinum, 1998. ISBN 80-7184-551-5.
- GREY, Vladimir – BÁLINT, Ondrej, et al. *Tropical and Travel Medicine*. 1. edition. Prague : Medon, 1998. 569 pp. ISBN 80-902122-4-7.