

# Vitamin B1

This article was checked by pedagogue

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Checked version of the article can be found here ([https://www.wikilectures.eu/index.php?title=Vitamin\\_B1&oldid=10884](https://www.wikilectures.eu/index.php?title=Vitamin_B1&oldid=10884)).

See also comparison of actual and checked version ([https://www.wikilectures.eu/index.php?title=Vitamin\\_B1&diff=-&oldid=10884](https://www.wikilectures.eu/index.php?title=Vitamin_B1&diff=-&oldid=10884)).

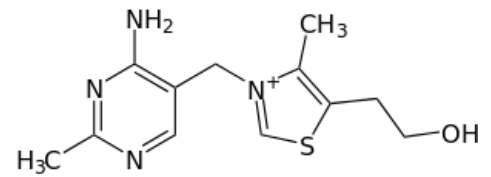
Thiamine ( vitamin B<sub>1</sub> ) is a coenzyme decarboxylase important for the metabolism of glucose and energy supply to nerve and muscle cells.



## Source

Meat, fish, cereals, yeast, legumes.

**Daily recommended intake** for adults: 1-1.4 mg <sup>[1]</sup>



Vitamin B1 - structure

## Deficiency

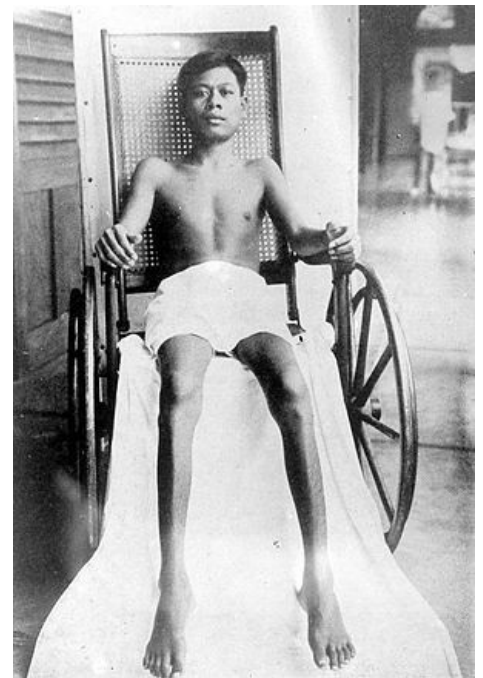
The disease **beri-beri**<sup>[2]</sup>

from a lack of dietary vitamin B<sub>1</sub> is found today in very poor population groups (e.g. refugees) in countries where people live mostly on polished/white rice. It may also develop in people who live mostly on refined wheat flour products and among alcoholics and food faddists.

A typical image consists of nervous disorders, especially peripheral nerves (dry beri beri), edema and heart disease (beri beri wet). Impaired absorption of vitamin B<sub>1</sub> occurs in alcoholics and is manifested by **Wernicke encephalopathy**.

Suboptimal thiamine status based on biochemical criteria in Europe was detected only in 4-6% of the population. Risk group are alcoholics.

**Laboratory evaluation:** thiamine excretion in the urine. In the absence of erythrocytes is reduced transketolase concentration in the blood and the sea is high concentrations of glyoxalate.



Dry beri beri

## Excess

Signs of excess are not encountered.

## 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. WHO, UNHCR. . *Thiamine deficiency and its prevention and control in major emergencies* [online] . 1. edition. Geneva : World Health Organization, United Nations High Commissioner for Refugees, 1999. 52 pp. Available from

## Bibliography

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



Beri beri wet