UF IFAS Extension UNIVERSITY of FLORIDA

FCS8667
doi.org/10.32473/edis-fy210-2006

Facts about Thiamin[1]

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Why do we need thiamin?

Thiamin is one of the B vitamins otherwise known as vitamin B_1.



Figure 1. Thiamin is also called vitamin B_1.
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We need thiamin to use the carbohydrates we eat. Thiamin helps turn carbohydrates into energy for the body. The body also needs thiamin to use some of the amino acids that make up proteins.

What happens if we do not get enough thiamin?

A lack of thiamin causes the disease beriberi. People with beriberi have difficulty standing, walking, and controlling their muscles. This disease was common in the 1800s in Southeast Asian countries when people started eating white "polished" rice instead of brown rice. Removing the outer husks of rice removes most of the thiamin.

It is very easy to get enough thiamin in the diet because it is added to many processed grains. However, people affected by alcohol use disorder or who consume a very low-quality diet may suffer from a thiamin deficiency.

How much thiamin do we need?

Table 1 lists recommended daily allowances for thiamin.

Table 1. Recommended daily intakes of thiamin by life stage.

Life Stage	Thiamin (mg/day)
Men, ages 19+	1.2
Women, ages 19+	1.1
Pregnancy	1.4
Breastfeeding	1.4
mg = milligrams	

How can we get enough thiamin?

The best sources of thiamin are enriched, fortified, or whole-grain breads and cereals. Thiamin is one of four vitamins added to enriched grain products. Look for the word "thiamin" in the ingredient list on the label to see if it has been added:

INGREDIENTS: Water, enriched flour (wheat flour, niacin, iron, **thiamin**, riboflavin, folic acid, enzyme), whole wheat flour, honey...

Other good sources of thiamin are pork, legumes (beans and lentils), orange juice, and sunflower seeds. Table 2 lists some foods and the amount of thiamin they contain.

Table 2. Food examples and milligrams per serving of thiamin in each.

Food	Thiamin (mg per serving)
Pork chop, boneless, lean, broiled, cooked, 3 oz	0.6
Ready-to-eat cereal, 1 cup	0.4
Spaghetti, whole wheat enriched, cooked, 1 cup	0.2
Orange juice, 1 cup, raw	0.2
Squash, 1 cup chopped, raw	0.2
Rice, Enriched, white, cooked, 1 cup	0.3
Sunflower seeds, dry roasted with salt 2 oz	0.1
Black beans, cooked, boiled, with salt ½ cup	0.2

mg = milligrams

oz = ounces

How should foods be prepared to retain thiamin?

Thiamin can be lost or destroyed in foods when they are cooked, especially if they have long cooking times or are cooked in large amounts of water. However, because many thiamin sources do not need to be cooked, this is not a major concern.

What about supplements?

Most people get plenty of thiamin in their diet, so supplements are usually not needed. Thiamin is included in most multivitamin supplements.

It is very easy to get enough thiamin in the diet because it is added to many processed grains. However, people affected by alcohol use disorder or who consume a very low-quality diet may suffer from a thiamin deficiency.

Where can I get more information?

The Family and Consumer Sciences (FCS) agent at your county Extension office may have more written information and nutrition classes for you to attend. Also, a registered dietitian (RD or RDN) can provide reliable information to you.

Reliable nutrition information may be found on the Internet at the following sites:

- https://www.eatright.org
- https://www.nutrition.gov

References

Institute of Medicine. (1998). The National Academies Collection: Reports funded by National Institutes of Health Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline. Washington (DC): National Academies Press (US) National Academy of Sciences.

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[1] This document is FCS8667, one of a series of the Department of Family, Youth and Community Sciences, UF/IFAS Extension. Original publication date June 2001. Revised June 2015, September 2018, and May 2022. Visit the Ask IFAS website at https://ask.ifas.ufl.edu/ for the currently supported version of this publication.

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