



Vitamin B5

AT A GLANCE

Introduction

Vitamin B5, also called pantothenic acid, belongs to the group of water-soluble B vitamins. Its name originates from the Greek word pantos, meaning everywhere, as it can be found throughout all living cells.

Health Functions

An adequate supply of vitamin B5 (pantothenic acid) is important as it helps the body to

- convert food into glucose, used to produce energy
- break down fats, carbohydrates, and proteins for energy generation
- synthesize cholesterol
- form red blood cells, as well as sex and stress-related hormones.

The European Food Safety Authority (EFSA), which provides scientific advice to assist policy makers, has confirmed that clear health benefits have been established for the dietary intake of pantothenic acid (vitamin B5) in contributing to:

- normal energy-yielding metabolism;
- normal mental performance;
- normal synthesis and metabolism of steroid hormones, vitamin D and some neurotransmitters.

Disease Risk Reduction

Wound healing

Studies, primarily in test tubes and animals but only a few on people, suggest that vitamin B5 supplements may speed wound healing, especially following surgery.

High cholesterol and triglycerides

Several small studies suggest that vitamin B5 (pantethine) may help to reduce cholesterol and triglycerides in the blood of people with elevated blood fats.

Rheumatoid arthritis

Some very preliminary evidence suggests that pantothenic acid supplements might help with symptoms of rheumatoid arthritis.

Intake Recommendations

As there is insufficient information available on which to base intake recommendations for vitamin B5 (pantothenic acid), most countries have given an estimate of safe and adequate levels for daily intake in healthy population groups, ranging from 3 to 12 mg for adults.

Supply Situation

National nutrition surveys have shown that the estimated daily intakes of vitamin B5 in most people meet the recommendations.

Deficiency

Since vitamin B5 (pantothenic acid) occurs to some extent in all foods, it is generally assumed that deficiency is extremely rare. However, pantothenic acid deficiency in humans is not well documented and probably does not occur in isolation but in conjunction with deficiencies of other B vitamins.

Groups at risk of deficiency are alcoholics, women on oral contraceptives, people with insufficient food intake (e.g., elderly, post-operative), and people with impaired absorption (due to certain internistic diseases).

Symptoms of a vitamin B5 deficiency may include fatigue, insomnia, depression, irritability, vomiting, stomach pains, burning feet, and upper respiratory infections.

Sources

The richest vitamin B5 sources are yeast and organ meats (liver, kidney, heart, brain), but eggs, milk, vegetables, legumes and wholegrain cereals are more common sources.

Safety

Vitamin B5 is considered safe at doses equivalent to the daily intake, and at moderately higher doses. Very high doses may cause diarrhea and may potentially increase the risk of bleeding.

Drug interactions

Please note:

Because of the potential for interactions, dietary supplements should not be taken with medication without first talking to an experienced healthcare provider.