Pantothenic Acid and Pantethine

Also known as: Calcium pantothenate, vitamin B5

What does it do? Pantothenic acid, sometimes called vitamin B5, is involved in the Kreb’s cycle of energy production and is needed to make the neurotransmitter acetylcholine. It is also essential in producing, transporting, and releasing energy from fats. Synthesis of cholesterol (needed for vitamin D and hormone synthesis) depends on pantothenic acid. Pantothenic acid also activates the adrenal glands.1 Pantethine—a variation of pantothenic acid—has been reported to lower blood levels of cholesterol and triglycerides.

Where is it found? Liver, yeast, and salmon have high levels of pantothenic acid, but most other foods, including vegetables, dairy, eggs, grains, and meat also provide some pantothenic acid.

Pantothenic acid or pantethine have been used in connection with the following conditions (refer to the individual health concern for complete information):

Primary: High cholesterol (pantethine), High triglycerides (pantethine).

Secondary: Rheumatoid arthritis (pantothenic acid).
**Other:** Acne (pantothenic acid), Athletic performance (pantothenic acid), Lupus (SLE), Sinusitis.

**Who is likely to be deficient?** Pantothenic acid deficiencies may occur in people with alcoholism but are generally believed to be rare.

**How much is usually taken?** Most people do not need to supplement with pantothenic acid. However, the 10–25 mg found in many multivitamin supplements might improve pantothenic acid status, as so-called primitive human diets provided greater amounts of this nutrient than is found in modern diets. Most cholesterol researchers using pantethine have given people 300 mg three times per day (total 900 mg).

**Are there any side effects or interactions?** Toxicity has not been reported at supplemental doses. Very large amounts of pantothenic acid (several grams per day) can cause diarrhea.

Pantothenic acid works together with vitamins B1, B2, and B3 to help make ATP—the fuel bodies run on.

**References:**