

Difference Between Theanine and L-Theanine

L-theanine is a non-protein forming, water-soluble amino acid commonly used to treat anxiety and high blood pressure. In both medical and commercial literature, "L-theanine" is often used interchangeably with "theanine," but there is a distinction.

Background

Most amino acids exist in both an L- form and D- form. These raw forms refer to the direction in which their chemical chains spiral. The L- form is the version usually considered safe for human consumption. L-theanine is found naturally in green tea and certain mushrooms. D-theanine does not occur naturally in foods.

The term theanine usually refers to the commercially available extraction of L-theanine, though the names are used interchangeably.

Indications

Studies conducted at Nagoya University in Japan (2007) found L-theanine to be effective in treating conditions such as anxiety and high blood pressure. The National Institutes of Health (NIH) reports studies confirming the augmentation of certain cancer drugs such as doxorubicin. L-theanine also appears to relieve insomnia, prevent dementia and provide cardiovascular support, though more evidence is needed. There are currently no known contraindications for L-theanine.

Dosage

There is little data to support recommended dosing for any of the conditions for which L-theanine is used. As with any drug or dietary supplement, an individual's age, any current or pre-existing medical conditions and overall health should be considered before taking L-theanine.

Warnings

Though generally recognized as safe (GRAS) by the Food and Drug Administration, L-theanine is not recommended for pregnant or lactating women. Because it lowers blood pressure, mild-to-moderate interactions may occur if it is combined with antihypertensive medications or stimulant medications. Seek advice from a health care professional before combining treatments of any kind.

Additionally, theanine supplements can contain extracts of both the L- and D- versions of the amino acid. Because D-theanine does not occur naturally in foods, nor has it been studied for its effects on human biology, few supplements can be considered pure L-theanine.

Other Names

L-theanine is also known as 5-N-ethyl-glutamine, gamma-ethylamino-L-glutamic acid, gamma-glutamylethylamide, N-ethyl-L-glutamine, theanine and suntheanine.