

Lysine

The Virus Fighter



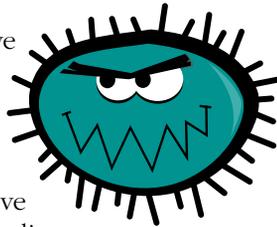
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mino acids are amazing building blocks of life as they make up the proteins that literally keep our hair, skin, muscles and organs intact. In fact, pound per pound of body weight, protein is second only to water. Growth, repair and maintenance require a daily intake of these protein builders since they are not stored. While the

body can make some amino acids (AAs), these few are considered essential and must be provided by diet: arginine (required for the young only), histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine. To synthesize proteins, all AAs must be present. Thus a deficiency of one affects the biochemistry or interaction of the whole since each has distinct capabilities of its own. Lysine's unique action on viruses makes it valuable during the cold and flu season. But as you'll see, lysine is needed all year round.

Vital Virus fighter

As children, about 80% of Americans have been exposed or had chicken pox (herpes simplex virus or HSV) with its itchy, red, blistering lesions. When the initial bout is over, the virus remains dormant in nerve cells. When active, the virus travels along the nerve to the skin surface, causing a burning or tingling sensation at the site before actual lesions appear. HSV type 1 forms cold sores near the lips, nose and mouth or shingles around rib area. HSV type 2 causes genital herpes. Both types are contagious during open sores.



Lysine inhibits the herpes virus from action by blocking arginine which HSV needs in order to replicate. By taking lysine daily, virus activity is restricted to prevent an outbreak. If an outbreak occurs, taking a higher dose of lysine helps clear the infection more quickly to relieve the symptoms and in the case of shingles, reduces the risk of developing post-herpetic neuralgia (PHN). PHN is a painful disorder that can become long term once it occurs.

HSV can be activated if lysine is low and/or during times of stress. Stress may be secondary to nerve pain, trauma, surgery or low immunity caused by illness or immune-lowering drugs, typically steroids or chemotherapy. Hormonal shifts (particularly menses) increase the likelihood of cold sores for women.



RDA & Doses. Food sources of lysine include cottage cheese, chicken, sardines, cod, red meat, brewer's yeast, legumes (peas, beans),

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Lysine at a Glance

- ◆ Helps metabolizes protein, carbohydrates & fatty acids
- ◆ Precursor to L-Carnitine & vital to lean muscle mass
- ◆ Helps maintain nitrogen stores
- ◆ Forms collagen for skin, bone, cartilage, connective tissues & brain chemicals
- ◆ Precursor to Acetyl CoA, an energy cycle metabolite
- ◆ Helps absorb & conserve calcium, decreases excretion rate for bone building
- ◆ May help prevent dental cavities
- ◆ Used by Linus Pauling with Vitamin C to maintain healthy blood vessels & heart
- ◆ Works with Vitamin C, Garlic & Niacin to lower high cholesterol
- ◆ Inhibits replication of Herpes Simplex Virus
- ◆ Strengthens thymus for helper T & B cells for antibody production
- ◆ Likely to be deficient in Vegans who do not consume dairy, eggs & meat
- ◆ Cannot be made in the body, must be supplemented

Lysine The Virus Fighter

continued

wheat germ and eggs. Most people consume enough of this important amino acid on a daily basis according to set RDA guidelines of 12 mg/Kg of body weight for adults over 13; however, health experts suggest 30 mg/Kg as they believe the RDA is too low. For vegans and athletes, a supplemental dose of 1-3 grams (1000-3000 mg) may be needed. The active form of lysine is the L-form, typically sold as a supplement in 500 mg capsules. For best absorption, take one half hour before meals. For herpes prevention 500-1000 mg daily is suggested; during outbreaks 3000 to 9000 mg daily in divided doses. Since vitamin C and zinc are both needed for lysine metabolism, consider a multiple to insure availability of both.

Diet. If you suffer from recurrent viral infections or more than 3 cold sores a year, check your diet since lysine shares a biological pathway with arginine and competes for cell entry. Limit foods high in arginine such as white flour, peanuts, peanut butter, almonds, chocolate, raisins, cereal grains and seeds, and increase lysine containing foods if you note an imbalance.

Other Benefits. Check the *Lysine at a Glance* box to see the many ways in which lysine helps you stay healthy. All in all, lysine is one essential amino as a virus fighter and for the rest of the year, too!

Safety. When taken as directed on the label, no side effects or medication interactions have been reported in humans. Health experts caution taking a single amino acid for a prolonged period can upset your amino acid balance. To counteract that effect, limit single use to less than six months or take an amino complex.

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Health
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