

# Fulfilling the Potential of Lipoic Acid

## R-Lipoic Acid



**L**ipoic acid may be the body's most versatile nutrient. Its critical importance for health is scientifically documented. Not only is it a powerful antioxidant, it supports healthy sugar metabolism and liver function, and is integral to energy generation, which affects all biological functions.

But few know that the commonly available form, alpha lipoic acid (ALA), is not the same compound that occurs naturally in our bodies. ALA is a 50/50 combination of natural form r-lipoic and synthetic s-lipoic acid—and the synthetic form may actually *block* the activity of r-lipoic acid, resulting in a weaker product.

Because it is the natural form, r-lipoic acid is better absorbed and safely metabolized. And it is up to 10 times more effective at producing cellular energy, according to *in vitro* research, and may be a more potent antioxidant.



Source Naturals, the science company, is proud to be one of the first to offer this breakthrough nutrient: R-LIPOIC ACID



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## R-Lipoic Acid: Key to Cellular Energy Generation

Plants capture solar energy in their carbohydrates. In a reverse process called oxidation, animals extract that energy.

R-LIPOIC ACID is a vital link in the metabolic pathway that gives us the power to move and the energy of intelligence.

R-LIPOIC ACID is synthesized in the mitochondria, the tiny power plants inside every cell that produce energy in the form of ATP. It is safely metabolized and up to 10 times more effective than other forms of lipoic acid in mitochondrial ATP production, according to an *in vitro* study.

### Supports Glucose Metabolism

Human and animal studies show that R-LIPOIC ACID can increase glucose uptake by muscle and nerve cells. By enhancing sugar metabolism, R-LIPOIC ACID may protect cells from glycation. In this detrimental process, excess glucose reacts with proteins to create tough crosslinked bonds that damage vital proteins, including the myelin sheath of neurons and the lens of the eye. Scientists believe glycation is a major source of tissue degradation and cellular aging.

Collagen, another important protein, is also subject to crosslinking, which inhibits the flexibility of blood vessel walls—one of the most important indicators of cardiovascular health.

### Increases Antioxidant Protection

R-LIPOIC ACID also neutralizes the harmful byproducts of glucose metabolism, free radicals. The body synthesizes barely enough R-LIPOIC ACID for its metabolic needs, and this decreases with age. As mitochondrial energy production

becomes less efficient, more free radicals are generated. R-LIPOIC ACID protects cells, particularly in the mitochondria, where most oxygen damage occurs.

R-LIPOIC ACID is a leading component of the body's antioxidant network. Unlike other antioxidants, it is water *and* fat-soluble, so it neutralizes a greater number and broader range of free radicals, providing more protection. In animal studies, R-LIPOIC ACID slowed the aging process, which may be the result of cumulative oxidative damage.

Lipoic acid, known as the “universal antioxidant,” is a strong antioxidant in its own right, but it also directly recycles vitamin C and indirectly recycles vitamin E for continued use. And R-LIPOIC ACID is more efficient than other forms of lipoic acid at increasing levels of the key antioxidants, CoQ10 and glutathione. Commercial alpha-lipoic acid is 50% synthetic *s*-lipoic acid, which can interfere with natural form R-LIPOIC ACID when both forms compete for binding sites. Tests showed 40% better absorption by R-LIPOIC ACID, as measured by plasma concentration levels.

### Integral to Your Wellness Program

Because it is central to such critical functions as energy generation, antioxidant protection, anti-glycation activity, and liver support, R-LIPOIC ACID belongs at the center of your wellness program. Source Naturals is happy to join forces with your natural foods retailer in bringing you this advanced nutrient.

#### References:

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