

Alpha Lipoic Acid

The main anti-aging compound

Alpha-lipoic acid (ALA) is a fatty acid found naturally inside every cell of the human body. The primary function of alpha-lipoic acid is to provide the energy required to keep living organisms alive and healthy. Lipoic acid is a key component in a variety of vital energy-producing reactions in the body that turn glucose (blood sugar) into energy.

Alpha-lipoic acid is a potent biological antioxidant that, much like other antioxidant rich substances, has been proven to slow oxidative damage in cells. However, **the potency of ALA has even been shown to stabilize or even reverse cell damage**. Alpha-lipoic acid is so effective as an antioxidant because it works on both water and fat-soluble free radicals that cause oxidation and cell damage in the body. It has become known as the "antioxidant's antioxidant" due to its high levels of cell healing properties.

What are these free radicals that cause so much damage to our body?

We are bombarded daily with health hazards and irritants in the form of air pollution, synthetic drugs, chemicals in our water, and additives in the foods we eat. Many of these man-made environmental toxins are made up of free radicals, which can damage the membranes of our bodies' smallest units: our cells. In scientific terms, free radicals are molecules that, due to containing an unpaired electron, maintain a charge that gravitates towards oxygen and other atoms which it can easily bind with.

The cell membranes of our body are made up of lipids that contain exposed oxygen atoms that are easily "stolen" by these bind-happy charged free radicals. The binding process spawns even more free radicals which accelerate the overall oxygen cell decay. This chain effect can result in one free radical molecule tearing apart the membranes of several cells before the cycle is stopped.

When a cell membrane is damaged, the cell loses its ability to function and eventually dies. The cell membrane is the pathway of all communication between the various systems of our body. The cellular membrane is the key component at a micro level that dictates who we are and how efficiently we do or don't function.

Free radical damage and other toxin effects that the body endures are treatable by introducing ALA supplementation. Common conditions that ALA has been shown to combat:

- **Liver damage from alcohol or drug consumption** - ALA actually promotes regeneration of damaged liver cells.
- **Cardiovascular health** - ALA reduces bad cholesterol in the body
- **Brain disorders** - ALA has been shown to stabilize and even reverse brain disorders such as Alzheimer's disease and Dementia.
- **Blood sugar levels** - ALA is used extensively in the treatment of diabetes.

In addition to its use in the treatment of specific medical disorders, many in the scientific community believe that **alpha-lipoic acid can actually reverse the damage in aging cells of the brain caused by free radicals, reversing patterns of memory loss and other age related deterioration.** Alpha lipoic acid has also been used both in oral and topical forms as a way for **keeping skin healthy and young in appearance.**