



Patient Resource: Alpha Lipoic Acid (ALA)



What is alpha lipoic acid (ALA)?

Alpha lipoic acid (ALA) is an antioxidant that is naturally produced in small amounts by our body and is also found in different foods including red meat, spinach, brewer's yeast and wheat germ. ALA is administered as an oral or intravenous (IV) supplement.

Why do people use ALA for cancer?

ALA is most commonly prescribed in cancer care to:

- strengthen the effects of other antioxidants (e.g. vitamins C and E)
- stimulate the production of naturally occurring antioxidants (e.g. glutathione)
- prevent and treat chemotherapy induced side-effects (e.g. neuropathy)
- manage some precancerous conditions (e.g., oral submucous fibrosis)
- prevent disease or recurrence of disease

How does ALA work?

The therapeutic activity of ALA is based on its antioxidant properties, and four related mechanisms have been studied extensively: (1) ALA's ability to remove heavy metals from the bloodstream, (2) ALA's ability to find and disarm reactive oxygen species (ROS) before they cause damage to our tissues, (3) ALA's capacity to regenerate our own natural antioxidants, and (4) ALA's ability to repair oxidative damage.

Does ALA work?

There are only a small number of studies conducted in humans that document the use of ALA in cancer and/or in the treatment of chemotherapy-induced peripheral neuropathy. Primarily individual case reports have been published showing improved survival and improved quality of life in cancer patients treated with ALA in combination with other agents, including low-dose naltrexone (LDN), dichloroacetic acid (DCA) or other antioxidants. Many preclinical (laboratory or animal) studies, however, have been published that show that ALA has properties that initiate apoptosis (natural cell death) in cancer cells, and also prevent normal cells from becoming cancerous.

The use of ALA in cancer care is based on a long history of safe and effective use for the treatment of peripheral neuropathy in people living with diabetes. Many studies document that ALA can help relieve neurologic symptoms, improve nerve conduction velocities, and relieve neuropathic pain. There are some data to suggest that ALA might be more effective when administered intravenously.

Does ALA have side effects?

In the majority of published studies, ALA has been well tolerated, with minimal to mild side effects (nausea, gastric pain, vomiting and vertigo) typically occurring at high doses. In IV administration, local pain and redness during infusion are common. Various long term studies on both oral and IV administered ALA show no significant adverse effects when compared to placebo.

Is ALA safe?

ALA appears to be safe when used in recommended amounts, although it is not recommended for pregnant or lactating women at this time. In patients with diabetes or other endocrine disorders that may have an impact on glycemic regulation, ALA should be administered with caution.

What is the recommended dose of ALA?

The typical therapeutic oral dosages of ALA range from 600-1800 mg daily. IV doses are most commonly used in the 300-600 mg range to reduce the risk of adverse effects.

Disclaimer

The OICC has prepared this monograph, as part of a series of monographs being developed to share results of a review of the research evidence related to common therapies and products used within cancer patient care. The monograph is designed to summarize evidence-based research and does not advocate for or against the use of a particular therapy. Every effort is made to ensure the information included in this monograph is accurate at the time it is published. Please note that this monograph does not include an exhaustive list of all potential adverse events; individuals may experience unique side effects. The information in this monograph should not be interpreted as medical advice nor should it replace the advice of a licensed health care provider.