Efficacy and safety of alpha-lipoic acid supplementation in the treatment of symptomatic diabetic neuropathy.

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Abstract

PURPOSE:

The purpose of this article is to review current evidence available for alpha-lipoic acid (ALA) and its ability to improve symptoms of peripheral diabetic neuropathy (PDN).

METHODS:

This article searched MEDLINE from 1966 to November 2005 to identify clinical trials that supplemented ALA to individuals with type 1 or type 2 diabetes and positive sensory symptoms of PDN. Clinical trials to be included in this review met specific criteria of randomization, double masking, and placebo-controlled design.

RESULTS:

The search results produced 5 clinical trials that met the prerequisites for this review. ALA appears to improve neuropathic symptoms and deficits when administered via parenteral supplementation over a 3-week period. Oral treatment with ALA appears to have more conflicting data whether it improves sensory symptoms or just neuropathic deficits alone. An oral regimen of ALA and optimal length of treatment remains unclear. Both parenteral and up to a 2-year time period of oral supplementation of ALA appears to be safe without affecting glycemic control.

CONCLUSIONS:

Based on these results, ALA should be considered as a treatment option for patients with PDN. When discussing supplementation with patients, it is important to discuss potential side effects; vitamin, mineral, and drug interactions; and current evidence available regarding efficacy.