

## Supplement Sampler

### Alpha-Lipoic Acid (ALA)

#### Best Indications

- Neuropathy (Diabetic, Alcoholic)
- Type II DM, Metabolic Syndrome, Pre-Diabetes

#### Mechanism of Action

- A co-enzyme utilized in the metabolism of carbohydrates and energy (ATP) production. It is a strong antioxidant that helps glutathione (a powerful antioxidant made in the liver) regenerate.
- It increases blood flow, glucose uptake and glutathione levels in the neuronal tissue and enhances nerve conduction velocity.
- Improves insulin sensitivity and glucose disposal but does not significantly reduce Hgb A1C levels.
- Alpha lipoic acid is approved in Germany for the treatment of diabetic and alcoholic neuropathies and liver disease since 1959.
- Children treated with alpha-lipoic acid, alone or in combination with vitamin E, showed normalized organ function and lessened indices of oxidative damage following radiation exposure in the Chernobyl accident (*Packer L. Free Rad Biol Med 1995;19:227-50.*).

#### Best Study

*The best study for diabetic neuropathy was competed using IV ALA. Oral forms are readily absorbed and appear to have a slower but similar efficacy.*

120 metabolically stable diabetic patients with symptomatic (stage 2) diabetic sensorimotor polyneuropathy were randomized to receive intravenous infusions of 600 mg ALA or placebo for five days per week for 14 treatments. After 14 treatments, the mean Total Symptom Score improved from baseline by 5.7 points in the ALA group and by 1.8 points in the placebo group ( $P < .001$ ). The ALA group also fared significantly better than the placebo group in terms of improvement on each item of the Total Symptom Score (burning pain, asleep numbness and prickling), neuropathy impairment score, one attribute of nerve conduction, and global assessment of efficacy.

*Diabetes Care. 2003;26:770-776*

A meta-analysis of available data summarized that ALA improves both neuropathic symptoms and deficits in symptomatic diabetic polyneuropathy.

*Ziegler D, et al. Diabet Med 21:114-121,2004.*

#### SUPPLEMENT SAMPLER



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## Alpha-Lipoic Acid (ALA)

### Dose

600 mg once a day. Increase to 600 mg BID if needed after 6 weeks.

### Side Effects

GI (stomach upset, nausea) and headaches. Watch for hypoglycemic effects when used with diabetes medications.

### Cost

One month supply at 600 mg daily ~ \$25

Pharmaceutical grade ALA (*Pure Encapsulations*) is available at the UW Odana Atrium Pharmacy.

### Disclaimer:

*The health benefits from multi-colored whole food eaten with a smile with family and friends significantly trumps any product found in a bottle, be it a supplement or drug!*

*Brought to you by your colleagues in the UW Department of Family Medicine Integrative Medicine Program.*

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