

<b>Thesis Title</b>	The Efficacy of Oral Alpha-Lipoic Acid for Physiotherapy Supplementation in the Treatment of Sciatic Neuropathic Pain Treatment.
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## ABSTRACT

**Background:** One of the major health problems among workers is musculoskeletal disorders such as lower back pain, joint and muscle problems. This problem affects quality of life, physical and psychosocial activities, performance at work and everyday-life activities. Although, neuropathic pain is the most common symptom found in patients with nervous system disorder, there is little information available on neuropathic element to LBP. Alpha-lipoic acid improve peripheral neurological problems is well known many studies in the past use ALA to prevent peripheral nervous system, especially polyneuropathies in diabetic patients. ALA may also help peripheral neuropathy caused by back problems and improve their quality of life

**Study Design:** A randomized, double-blinded, placebo-controlled trial.

**Objective:** To study the efficacy of oral alpha-lipoic acid supplement to physiotherapy in the treatment of sciatic neuropathy caused by back pain problems and also in quality of life.

**Method:** 34 Thai patients with sciatic neuropathic pain received physical therapy twice times per week and once-daily oral dose of ALA 600 mg (n=15) or physical therapy alone (n=15) for 4 weeks. 4 of them dropped out because their personal reason. The primary outcome measures were the mean differences of modified NPS and NePIQoL questionnaire.

Result: The modified NPS score in part of total pain scale, sharp pain and intense deep pain characteristic of patients who received 600 mg oral ALA supplementation physical therapy treatment have significantly improved mean from the first week earlier than patients who received physical therapy alone (NPS; pain\_wk2=  $4.06 \pm 1.98$ , p-value < 0.001, sharp pain\_wk2=  $2.47 \pm 2.10$ , p-value < 0.05, intense deep pain\_wk1 =  $4.40 \pm 2.03$ , p-value < 0.001). The NePIQol score in part of the effects on patient's health of patients who were in experiment group has also significantly mean improved from the first week earlier than patients who received physical therapy alone (NePIQol, the effects on patient's health\_wk4 =  $0.93 \pm 1.91$ , p-value < 0.05, )

Conclusion: we suggest that this treatment program, ALA supplementation in the treatment of physical therapy may help decrease pain, sharp pain and intense deep pain earlier than physical therapy alone, and thus results in patient's better quality of life. Nevertheless, using oral ALA 600 mg for long term it cannot be help.

**Keywords:** Peripheral neuropathy/Sciatic neuropathic pain/Neuropathic pain/  
Oral Alpha-Lipoic acid/Physical therapy

