

# Refractory Venous Leg Ulcers: Observational Evaluation of Innovative New Technology

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## Abstract

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### Objectives

This observational case series reports the evaluation of a novel neuromuscular electrical stimulation device (geko™) that stimulates the common peroneal nerve at the fibula head as an adjunctive therapy in patients with non-healing VLU.

### Aims

The aim was to evaluate and determine if the geko™ device was effective in this population and should be added to the medical supply formulary.

### Methods

Patients were identified whose wounds had failed to heal within 24 weeks of standard therapy, in two community settings in Ontario.

### Results

Eleven patients consented to the evaluation with a combined 107-year history of recalcitrant, leg ulcers. Although the pre-geko™ healing rate was unknown, all were considered non-healing. With geko™, the average weekly percentage reduction in Surface Area for ALL patients was 4.5%; for the 6 adherent to geko™ and best practices, 7.0%. By comparison, the average weekly percentage reduction for measurable wounds in the 5 non-adherent patients was 1.8%.

### Conclusions

Requirements for success appear to include an arterial status adequate for healing, effective and prompt management of wound infections and adherence with the treatment schedule. The geko™ device has been added to the medical supply formulary in one centre and is pending in the other.