

A new approach

Providing lower limb muscle contraction for the prevention and treatment of edema

Easy-to-use, the geko™ is a battery powered, disposable neuromuscular electrostimulation device designed to increase blood flow in the deep veins of the leg.¹⁷

The geko™ device gently stimulates the common peroneal nerve contracting the calf and foot muscle pumps to prevent and treat edema.

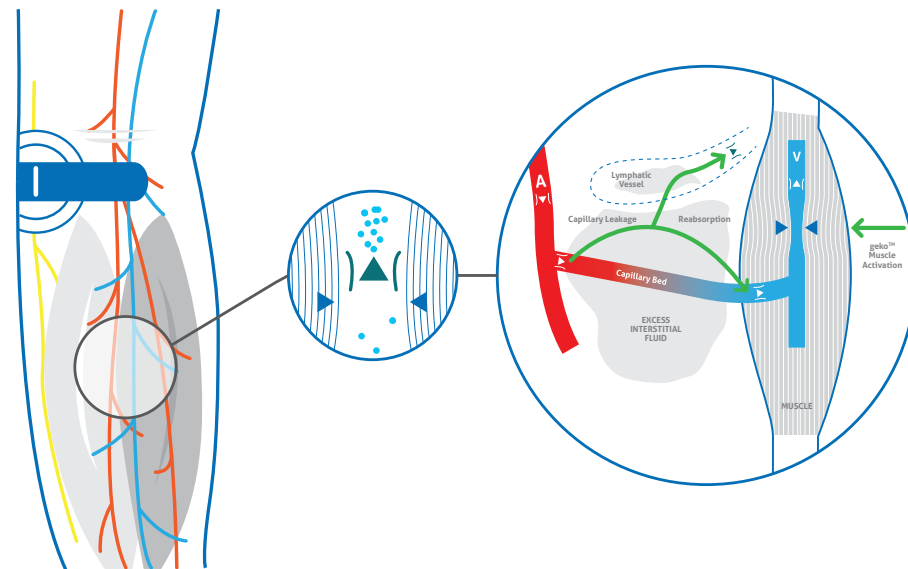


Image modified for illustrative purposes¹⁹

60%

The increase in blood flow is equal to 60%¹⁸ of walking without a patient having to move.

Zero

No wires or leads.
Small, light and comfortable to wear.
Silent in operation.

10g

Weighs just 10g.
Quick and easy to fit.

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Self-contained and wearable, the geko™ device is:

- Simple and easy to use.
- Small and light (weighing just 10g) with no wires or leads, enables the patient to be as mobile as possible.

References

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Post-operative edema prevention

Preventing the build-up of post-operative edema following orthopaedic surgery.

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Swelling in the knee, in the acute recovery period following TKR * can impair quadriceps muscle strength and rehabilitation^{1,2,3}

Knee swelling after TKR can influence the post-operative results.²

- One month after TKR, quadriceps muscle strength drops 50% to 60% of pre-operative levels, despite the initiation of rehabilitation within 48 hours after surgery.^{4,5}
- Muscle weakness, particularly in the quadriceps muscle, has profound functional consequences, especially in older individuals and can be associated with decreased gait speed, balance, stair-climbing ability, and ability to rise from a seated position, as well as an increased risk for falls.^{6,7}
- Impaired functional performance can also be associated with length of stay and patient-reported outcomes⁸ - and the associated knee swelling is known to increase rates of wound dehiscence and infection⁹ and can delay rehabilitation.

Causality:

Impairments in quadriceps muscle strength are caused by edema.¹⁰

Spinal reflex activity from swelling can diminish quadriceps muscle strength. Over time, the fibres of the muscles can atrophy due to the lack of use.¹

Strategies to address early quadriceps muscle weakness should address the underlying edema.¹⁰

The geko™ device is clinically proven to prevent the build-up of post-operative edema¹¹

- The geko™ device delivers mechanical compression by activating the calf and foot muscle pumps resulting in increased blood flow and the reduction of edema.¹¹
- The highly portable geko™ device can lower Ambulatory Venous Pressure (AVP) and Venous Transit Times (VTT) transferring tissue fluid back into the veins.¹²

- The geko™ device can prevent edema and promote functional activity following foot surgery.¹³
- The geko™ device is well tolerated.¹⁴

Associated geko™ benefits

The geko™ device also provides venous thrombosis prevention (VTE). NICE guidance (MTG19) supports use of the geko™ device for people who have a high risk of VTE and for whom pharmacological or other methods of VTE prevention are impractical or contraindicated.^{15,16}

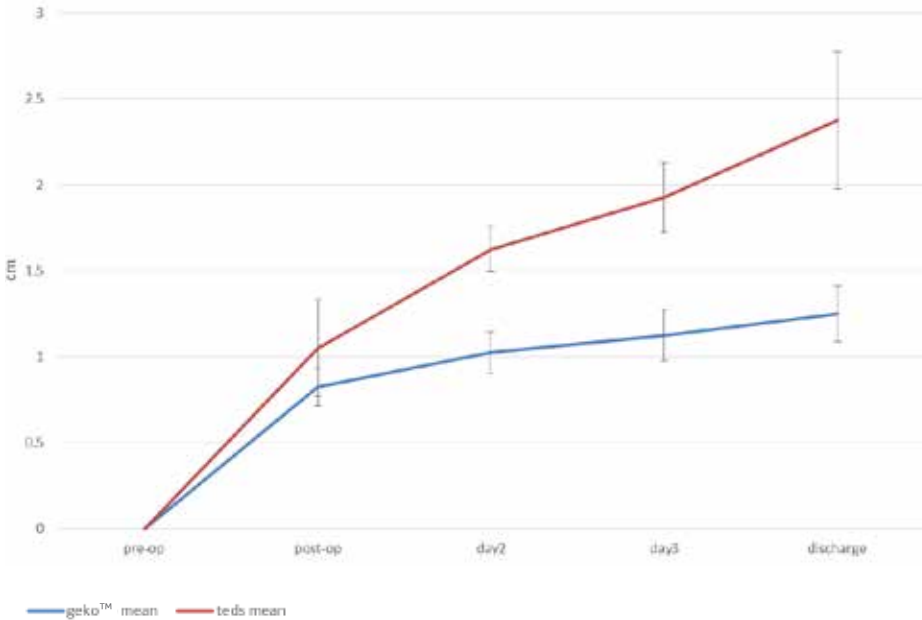


Related geko™ evidence

An RCT comparing the effect of the geko™ device on post-operative edema in Total Hip Replacement patients, demonstrates geko™ efficacy in preventing the build-up of post-operative edema.¹³

The graph shows the change in knee circumference on the hip patient's operated leg.

Change in knee circumference, operated leg



*TKR = Total Knee Replacement.