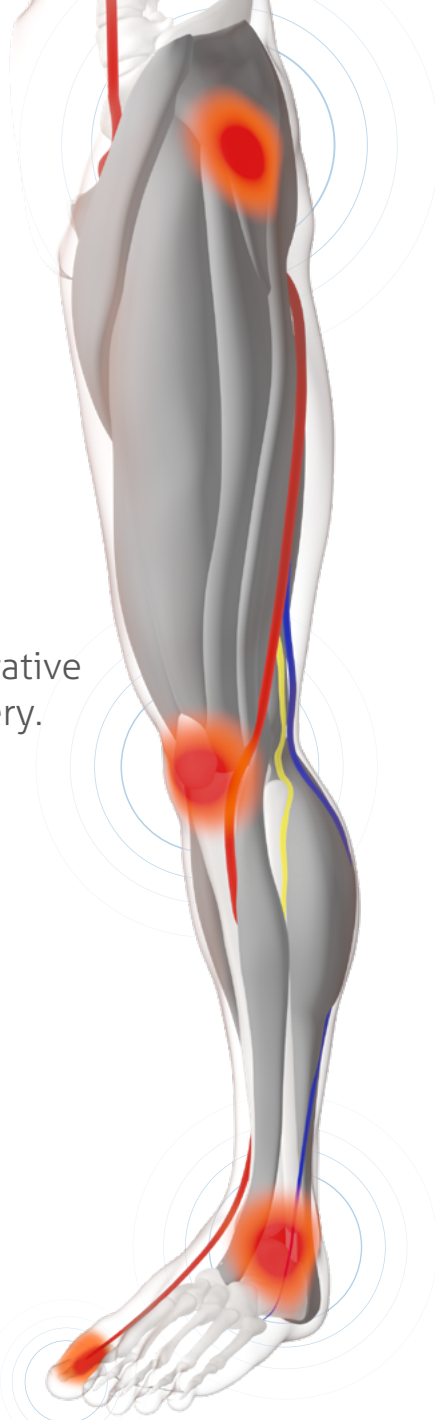
geko
circulation support

Post-operative oedema reduction

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



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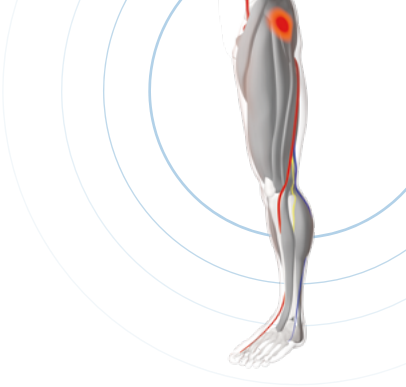
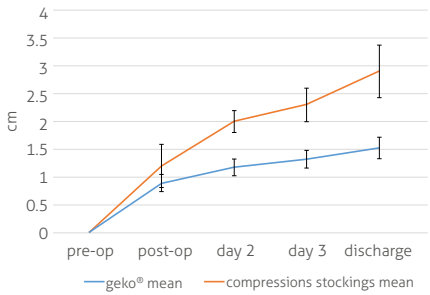


Post-operative oedema prevention – THA

Preventing the build-up of post-operative oedema following total or partial Hip Replacement Arthroplasty (THA).

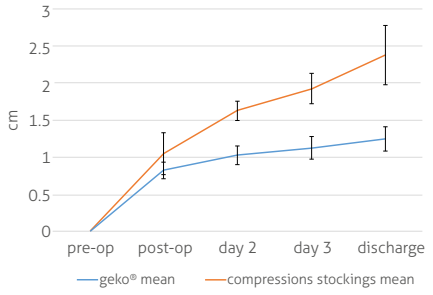
An RCT comparing the effectiveness of the geko® device to compression stockings in preventing the formation of oedema following total hip replacement surgery demonstrates the prevention of oedema build-up in the operated leg.[1]

Change in Thigh Circumference, Operated Leg:

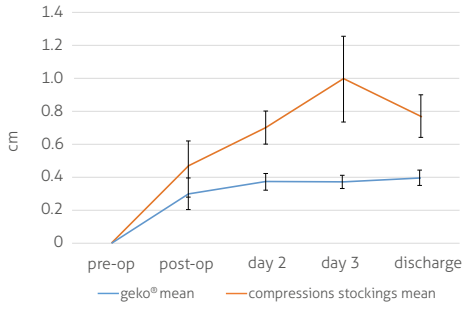


Over 67% reduction compared to the control arm. P = 0.02

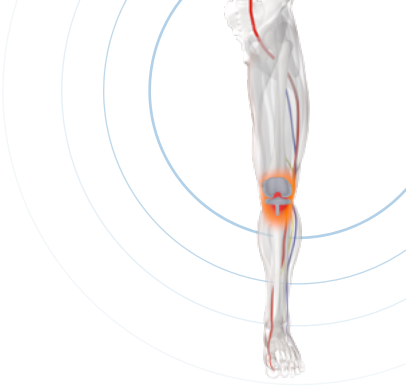
Change in Knee Circumference, Operated Leg:



Change in Ankle Circumference, Operated Leg:



*RCT = Randomised Controlled Trial

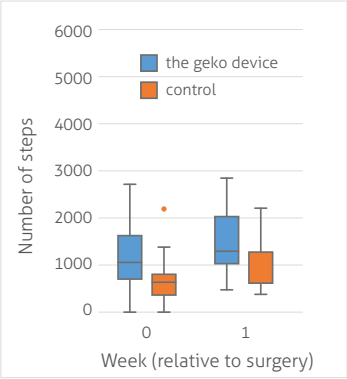


Post-operative oedema prevention – TKA

Preventing post-operative oedema following total or partial Knee Replacement Arthoplasty.

Study results show geko® device vs standard of care (SoC) following TKA:

More active patients



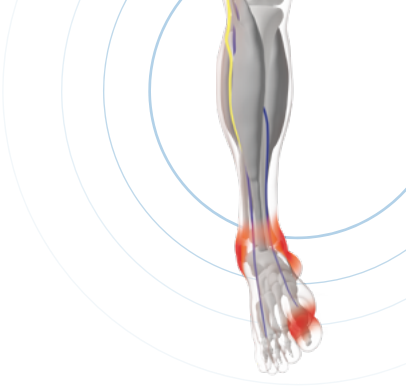
In the first 7 post-operative days vs. SoC the geko device group showed significantly higher physical activity levels. Statistically significant at week 1 (P = 0.008).[2]

Cessation of NSAID drug

Outcome	geko	Control group	p-value
NSAID stop	27 (19-29)	40 (32-48)	0.010

Discontinued NSAIDs 13 days earlier vs SoC (P=0.0010).[2]

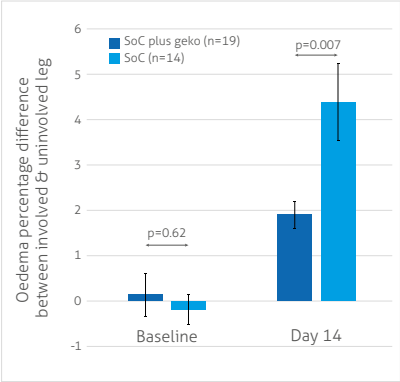
*TKA = Total Knee Arthroplasty



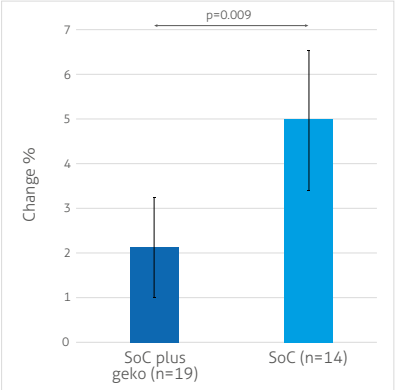
Post-operative oedema reduction – Foot & Ankle

Preventing post-operative oedema following foot and ankle surgery.

A study comparing the effectiveness of the geko® device plus standard of care (SoC), to SoC alone, demonstrated a statistically significant reduction in oedema across the range of foot and ankle surgery types studied.[3]



Oedema difference between involved and uninvolved leg at baseline and 14 days.



Involved leg oedema increase from baseline at day 14.

Significantly less oedema:

Study results show the oedema reduction difference between the involved and uninvolved leg at day 14, and reports:

- Statistically significant reduction in oedema (P=0.007).
- Oedema reduced by 50% in the geko+SoC arm.
- A doubling in the rate of return to normalisation - highly relevant as peak oedema in the range of procedures studied is reported to be between 5 and 7 days.[4]

Surgical site healing was also studied. While the healing difference did not reach statistical significance, the findings showed that a higher proportion of the surgical sites were healed for subjects who wore the geko device compared to those who had standard of care alone.

Associated benefits:

The geko device also provides venous thrombosis prevention (VTE). See NICE guidance (MTG19).[5]

A new approach

Easy-to-use, the geko® device is a battery powered, disposable muscle pump activator (MPA) clinically proven to increase blood flow in the deep veins of the leg.[6]

Through its unique mechanism of neuromuscular electrostimulation, the geko device gently stimulates the common peroneal nerve contracting the calf and foot muscle pumps to prevent and treat oedema.

60%

The increase in blood flow is equal to 60%[7] 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.

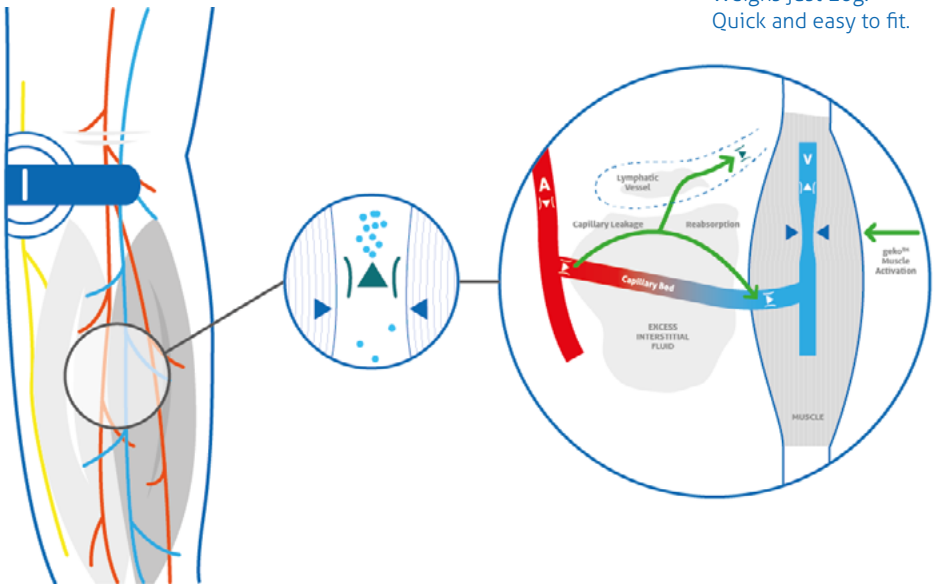
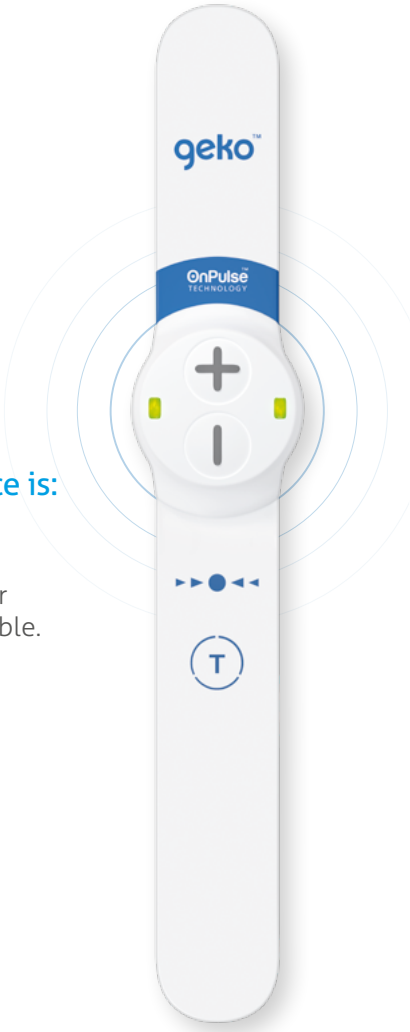


Image modified for illustrative purposes.[8]

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



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

1. Wainwright TW et al. A Feasibility Randomised Controlled Trial to Evaluate the Effectiveness of a Novel Neuromuscular Electro-Stimulation Device in Preventing the Formation of Oedema Following Total Hip Replacement Surgery. Heliyon 18 Jul 2018- Volume 4, Issue 7.
2. Move Up Data on File, Firstkind Ltd.
3. Andrea Sallent, Nicholas Abidi, Albert Baduell, Shelain Patel. Activation of the Venous Muscle Pump by Neuromuscular Stimulation of the Common Peroneal Nerve Reduces Postoperative Edema in the Foot and Ankle. doi: https://doi.org/10.1101/2025.05.20.25327913.
4. As reported by the clinical investigators involved in this study - Data on file.
5. NICE Guidance (MTG19). The geko™ device for reducing the risk of venous thromboembolism. Issued: June 2014.
6. Nicolaides A & Griffin M. Measurement of Blood Flow in the Deep Veins of the Lower Limb Using the geko™ Neuromuscular Electro-stimulation Device. International Angiology 2016 August;35(4):406-10.
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8. Klabunde, RE (2014). Cardiovascular Physiology Concepts. Available at: http://cvphysiology.com/Microcirculation/M010 [Accessed 21 Feb. 2018].

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