geko™
circulation support

NICE guidance

NICE guidance (MTG19) supports the use of the geko™ device for people who have a high risk of VTE and for whom pharmacological or other mechanical methods of VTE prevention are impractical or contraindicated[1]

VTE Prophylaxis

Providing venous thromboembolism (VTE) prophylaxis to all at risk hospital patients

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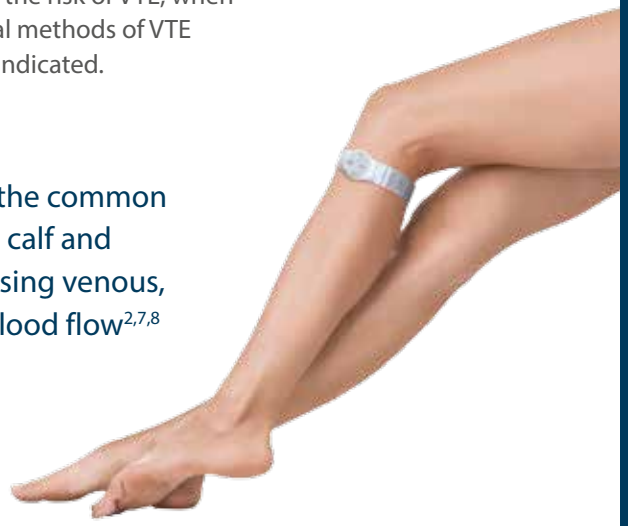
NICE guidance (MTG19) supports the geko™ device for reducing the risk of VTE[1]

The geko™ is a battery powered, disposable, neuromuscular electro-stimulation device designed to increase blood flow in the veins of the leg, reducing the risk of VTE, when pharmacological or other mechanical methods of VTE prevention are impractical or contraindicated.



The geko™ device **stimulates** the common peroneal nerve **activating** the calf and foot muscle pumps and increasing venous, arterial and microcirculatory blood flow[2,7,8]

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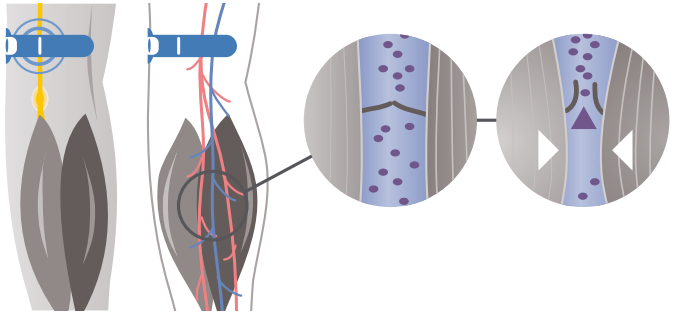


The geko™ device is cost saving[1,3]

The savings, as outlined within the NICE guidance, would result from a reduction in the relative risk of DVT and the associated conditions of VTE such as post thrombotic syndrome as well as reduced length of stay.

NICE guidance estimates a **cost saving of**

£197

per patient

when the device is used for a period of

6 days

when compared to no VTE prophylaxis and that under these circumstances use of the device will be **cost saving until day 14.**

In high risk patients when a combination of pharmacological and mechanical VTE prophylaxis is desirable but current mechanical prophylaxis is contraindicated or impractical, the **geko™ device** in combination with pharmacological prophylaxis will be cost neutral for up to 3 days compared to pharmacological prophylaxis alone.

Cost neutral for up to **3 days** of device use.

The adoption of the NICE guidance and the use of the geko™ device supports the NHS objective of providing

cost effective

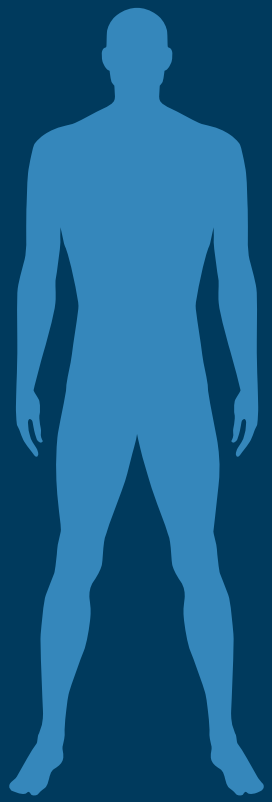
VTE prevention to all at risk hospital patients.

When is pharmacological VTE prevention impractical or contraindicated?

Do not offer pharmacological VTE prophylaxis if patient has any risk factor for bleeding and risk of bleeding outweighs risk of VTE

Who is at risk of bleeding?

All patients who have any of the following:



- Concurrent use of anticoagulants known to increase the risk of bleeding (such as warfarin with INR > 2)
- Active bleeding
- Acquired bleeding disorders (such as acute liver failure)
- Lumbar puncture / epidural / spinal anaesthesia within the previous 4 hours or expected within the next 12 hours
- Thrombocytopenia (platelets < 75 x 109/l)
- **Acute stroke**
- Uncontrolled systolic hypertension (≥ 230/120 mmHg)
- Untreated inherited bleeding disorders (such as haemophilia or von Willebrand's disease)

When is current mechanical compression contraindicated?[4,5]

- Suspected or proven peripheral arterial disease[4,5]
- Peripheral arterial bypass grafting[4]
- Peripheral neuropathy or other causes of sensory impairment[4]
- Local conditions in which stockings may cause damage, such as fragile 'tissue paper' skin, dermatitis, gangrene or recent skin graft[4]
- Known allergy to material of manufacture[4]
- Cardiac failure[4,5]
- Severe leg oedema or pulmonary oedema from congestive heart failure[4,5]
- Unusual leg size or shape[4]
- Major limb deformity preventing correct fit[4]

Use caution and clinical judgement when applying anti-embolism stockings over venous ulcers or wounds.

Benefits of the geko™ device compared with mechanical compression

Small, light with no leads or wires

10g (weighs just) no trip hazard and reduced bedside apparatus

Discreet, battery operated knee-worn micro-device

Wearable & portable technology

toilet visits are simplified

Easy and **quick to fit**

opportunity for patient self-administration

Silent operation permits undisturbed sleep

z z Z

high levels

of patient compliance

Increases blood flow

up to 60% walking

Daily disposable

potential for **less clinical waste**

Single sized device

less stock keeping **NO** capital investment or maintenance

Potential clinical areas to be explored with VTE committees include:*

- Suspected or proven peripheral arterial disease
- Peripheral arterial bypass grafting
- Cardiac failure
- Bilateral lower extremity trauma
- Local leg conditions in which other mechanical methods of prophylaxis may cause damage or pain
- Patients with a known allergy to the materials used in current methods of mechanical prophylaxis
- Recent vein ligation
- Severe or critical lower limb ischemia
- Stroke – depending on clinical circumstances
- Major trauma or spinal injury
- Pregnancy

The geko™ device prevents stasis in the deep veins of the calf where early thrombi form

The publication of a recent study by Professor Andrew Nicolaides and Dr Maura Griffin has measured the effect of the geko™ device in blood flow in the deep veins of the calf. The study has shown significant volume and velocity increases within the gastrocnemius, peroneal and posterior tibial veins – of particular clinical importance as early thrombi often form in these veins[9].

This is the first time that a mechanical device has reported enhancement to blood flow for the prevention of stasis in the deep veins, and is the result of the unique dorsiflexion achieved by the geko™ device. With this proven ability to prevent stasis in the deep veins of the calf, the study strongly supports use of the geko™ device for VTE prevention[9].

Providing venous thromboembolism (VTE) prophylaxis to all at risk hospital patients

- NICE guidance (MTG19) supports the geko™ device for reducing the risk of VTE when pharmacological or other mechanical methods of VTE prevention are impractical or contraindicated[1]
- The geko™ device is cost saving[1]
- The geko™ device is simple and easy to use[6]

Business Case available on request
Further information available at: **www.gekodevices.com**

Product order code	MT2RW25
Product description	geko™ T-2 carton (25)
Order placement	0845 2222 920
Enquiries	0845 2222 921
Fax	0845 2222 820
Email	geko.support@firstkindmedical.com

References

1. *NICE medical technologies guidance (MTG19). Published date: June 20 2014*
2. *Tucker A, Maass A, Bain D, Chen LH, Azzam M, Dawson H, et al. Augmentation of venous, arterial and microvascular blood supply in the leg by isometric neuromuscular stimulation via the peroneal nerve. The International journal of angiology: official publication of the International College of Angiology, Inc. 2010 Spring; 19(1):e31-7*
3. *NICE guidance geko™ national costing statement (June 2014)*
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5. *ArjoHuntleigh website accessed September 2014 www.arjohuntleigh.com*
6. *Post Market Surveillance. Data on file Firstkind Limited*
7. *Williams KJ et al, Phlebology.2015 Jun;30(5):365-72*
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9. *A. Nicolaides, M Griffin, measurement of blood flow in the deep veins of the lower limb using the geko™ device neuromuscular electro-stimulation device, accepted for publication June 2016*

**Clinicians should assess patients and consider any additional risks associated with increasing the blood flow e.g. following surgery where muscle contractions may disrupt the healing process. Do not apply over sore, infected or inflamed areas, broken skin or skin eruptions, e.g. phlebitis, thrombophlebitis, varicose veins etc. Clinicians should observe the warnings and precautions detailed in the Instructions for Use provided with the device.*

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