

## Technical information – Specifications

### WalkAide

Size	8.2cm(H) x 6.1cm(W) x 2.1cm(T)
Weight	87.9 g
Power Source	One 1.5 volt Alkaline AA battery (LR6)
Maximum Current	200 mA at 500 ohm; 121 mA at 1 K ohm
Maximum Voltage	121 V at 1 K ohm; <150 V at 1 M ohm
Number of Modes	2 - Exercise, Walking
Number of Channels	1
Pulse Type	Asymmetrical Biphasic
Pulse Width	50-250 microseconds (Adjustable)
Frequency Range	16.7 – 33 Pulses Per Second (Adjustable)
Maximum Stimulation Period	5 second
Stimulation Trigger Source	Tilt or Heel Sensor
Controls and Indicators	<ul style="list-style-type: none"> <li>• ON/OFF/Intensity; Stimulation, Exercise</li> <li>• Error</li> </ul>

#### Shipping and

#### Storage Conditions:

#### Device (Long Term)

Temperature: -4° – 140°F (-20° – +60° C)

Relative

Humidity: 95% max., non-condensing

#### Electrodes (Long Term)

Temperature: 41° – 80.6°F (5° – +27° C)

Humidity: 35 – 50%

#### Electrodes (Short Term - less than 1 month)

Temperature: 32° – 104° F (0° – +40° C)

Humidity: 35 – 50%

## Functional electrical stimulation research

The literature reports that functional electrical stimulation (FES) has been shown to improve walking speed and decrease energy cost in gait for subjects with drop foot secondary to upper motor neuron lesions.

"Mean increase in walking speed between the beginning and end of the trial was 20.5% in the FES group (n=16) and 5.2% in the control group (n=16). Improvement was also measured in physiological cost index with a reduction of 24.9% in the FES group and 1% in the control group." Burridge et al, 1997. The effects of Common Peroneal Stimulation on the Effort and Speed of Walking: a randomized controlled trial with chronic hemiplegic patients. *Clinical Rehabilitation* 11: 201-210.

"Walking speed with the stimulator increased at 3 months by 14% (n= 56, p<0.001) and decreased effort of walking, measured by the physiological cost index of 37% (n=56, p<0.001)" Burridge et al, 1997. Experience of Clinical Use of the Odstock Dropped Foot Stimulator. *International Society for Artificial Organs* 21(3): 254-260.

"On average, the increase in walking speed from the initial value without the Walkaide to the value at 3 months with the Walkaide was 15% (n=26, p<0.01), 32% after 6 months (n=16, p<0.01), and 47% after 12 months (n=8, p<0.05), while physiological cost index decreased" Stein et al, 2006. A Multicentre Trial of a Footdrop Stimulator Controlled by a Tilt Sensor. *Neurorehabilitation and Neural Repair* 20 (3): 371-379.

For further information please contact our customer service team on:

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**THE PHYSIO COMPANY**  
Chartered Physiotherapy & Sports Injury Clinics

# WalkAide® System

## For Your Clinician Introducing WalkAide



**THE PHYSIO COMPANY**  
Chartered Physiotherapy & Sports Injury Clinics

# WalkAide: A major step forward in the treatment of foot drop.

Chartered Physiotherapists treating patients presenting with foot drop now have the option of prescribing WalkAide. WalkAide addresses the lack of ankle dorsiflexion secondary to an upper motor neuron lesion. People who have suffered a stroke, spinal cord injury or disease process associated with disruption of the upper motor neuron system may benefit from this technology.



Using sophisticated sensor technology and software, the WalkAide<sup>®</sup> System analyses the unique movement of the leg and foot in the individual with foot drop. Based on that analysis, WalkAide creates a unique stimulation pattern for walking, then sends appropriate functional electrical stimulation (FES) to the common peroneal nerve as it passes near the head of the fibula.

This stimulation activates the muscles that dorsiflex the foot at the appropriate time during the gait cycle, producing a much more natural, efficient, and safe pattern of walking.

WalkAide is comfortable, small, and discreet, designed for one-handed application, and easy for most individuals to use. It is applied directly to the leg below the knee and can be worn under most clothing.

"The WalkAide really is a miracle in a box which has given back my life and muscle strength".

— WalkAide user



## WalkAide patient benefits

- Activates the intact portion of the neuromuscular system to generate movement
- Reduces the increased effort associated with walking with foot drop by stimulating and controlling foot/ankle alignment during the swing phase of the gait cycle
- Small, self-contained unit offers easy, one-handed application and operation
- Does not require orthopaedic or special footwear
- Includes an exercise mode that allows a home-based therapeutic program
- May improve circulation, reduce atrophy, improve voluntary control, and increase joint range of motion



## Customised for the individual patient

Our credentialed and trained clinicians are required to fit and program WalkAide to maximise the walking potential for each patient.

A peripheral nerve stimulator is used to find the appropriate stimulation site of the common peroneal nerve to stimulate dorsiflexion and create a natural gait for the patient.



Shown here with standard cuff

Once WalkAide is correctly positioned on the leg, it is then programmed using a Software program called WalkAnalyst.

Ongoing follow-up with our WalkAide clinicians allows the system to be re-optimised as necessary to maximise outcomes for the user.

## Indications

Adults and children with foot drop associated with the following central nervous system conditions may benefit from WalkAide:

- Cerebrovascular accident
- Incomplete spinal cord injury or lesion
- Traumatic brain injury or chronic brain lesion
- Multiple sclerosis
- Cerebral palsy
- Other upper motor neuron lesions



Shown here with Bi-Flex cuff

A thorough evaluation by our specially trained WalkAide clinicians, in conjunction with a rehabilitation team, will provide the final determination of the patient's suitability for the WalkAide<sup>®</sup> System. If your patient is found to be a good candidate for WalkAide, trial fittings can verify effectiveness during this orthotic clinical evaluation.

NOTE: People with pacemakers or who suffer from seizures should not use WalkAide.

## Phone Consultation

If you are unsure how WalkAide can assist with your condition, please contact our expert clinicians on 01 6799685, who will be happy to answer any questions or concerns you may have

## Our Location

Our WalkAide services are available in our IFSC clinic, Gandon House, Lower Mayor Street, Dublin 1.