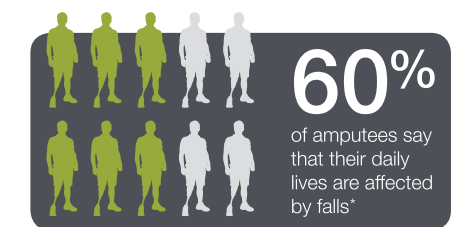


The Benefits of Hydraulic Ankle Technology



The short-term and long-term impact of amputee falls

Considering the short-term and long-term impact of amputee falls is important, because falls can result in tissue injuries, broken bones, head injuries and a subsequent loss of independence, severely affecting the quality of life of the amputee. Prosthetic limbs that are specifically designed for the biomechanical requirements of the older user could help reduce the risk of falls, maintain greater mobility and independence, improve quality of life and reduce avoidable hospital treatment.



How can hydraulic ankles help?

Hydraulic ankles seek to respond to the requirements of natural movement. By continuously and smoothly adjusting to absorb energy, a hydraulic ankle allows for an efficient roll-over, posture and comfort. This technology has been proven to provide a number of benefits to limited community ambulators*, for example; improved safety through increased toe clearance, and more balanced

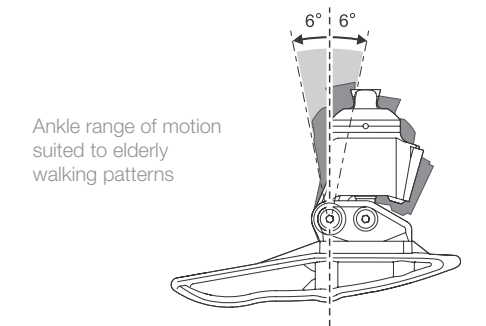
limb loading that helps stability and reduces the chance of musculoskeletal disorders.*

Discover Avalon^{K2}

Endolite's hydraulic ankle, Avalon^{K2}, has been designed specifically for the complex needs of limited community ambulators. Through a combination of award-winning hydraulic technology and a keel suited for characteristic changes in elderly gait, Endolite has created a prosthesis that works with the user to enhance comfort and safety. With 12° of ankle motion, it adapts automatically to different movements by hydraulically self-aligning to inclines, stairs and under chairs to secure the knee joint and encourage good posture. This enhances walking stability during activities to help prevent falls.

The clinical benefits of Avalon^{K2} revealed that users found that walking speed increased and overall user satisfaction was consistently higher in comparison to other prescribed feet.*

Hydraulic ankles can improve mobility and independence for limited community ambulators. Technology such as Avalon^{K2}, a hydraulic foot specifically designed to cater for the older user's requirements, could not only help to reduce avoidable interventions by health care services, but also be beneficial for the confidence, safety and health of the user.



Hydraulic ankle technology controls plantar and dorsiflexion

Ergonomic keel achieves a comfortable rollover action



The main driving force behind advancing lower limb prosthetic technology in the 21st century is biomimetic design; reproducing the biomechanical performance of natural limbs. Inherent in this is recognizing that different demographics of the amputee population have different biomechanical and physiological requirements. The global trends of an increasing ageing population and incidence of chronic disease in developed countries are well known. The prevalence of diabetes and cardiovascular disease increases with age, with vascular disease being a leading cause of lower limb amputations.

Limited Community Ambulators

Elderly amputees are often described as limited community ambulators, which refers to someone who has the ability or potential for ambulation with the ability to traverse low level environmental barriers such as curbs, stairs or uneven surfaces. For those with lower mobility capabilities, functional domestic tasks such as rising from a chair, become imperative to maintaining independence and quality of life. There are many characteristics of advanced age such as slower walking, lower limb muscle weakness and reduced reaction times, which can lead to increased likelihood of falling.



To take a more in-depth look into limited community ambulation and amputee outcomes, and the latest clinical evidence to support the unique design of Avalon^{K2} or to see a full list of references, download the white paper 'A Study of Avalon^{K2}' from endolite.com

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*For a full list of references please refer to the white paper 'A Study of AvalonK2' available to download at endolite.com

