



Title	Circulator Boot™ for Lower Limb Vascular Insufficiency
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Aim

To identify evidence on the effectiveness of end-diastolic pneumatic compression devices, eg, the Circulator Boot™, in preventing amputation caused by lower limb vascular insufficiency.

Conclusions and results

One overview and 9 systematic reviews/meta-analyses addressed the use of various intermittent pneumatic compression devices in preventing or treating chronic venous or arterial insufficiency. Evidence for the Circulator Boot™ is limited to a handful of observational studies, primarily from a single investigator group led by the physician who invented the technology. For treating venous leg ulcers, the evidence suggests that using some form of external mechanical compression therapy is better than nothing, but the relative benefit of intermittent pneumatic compression (IPC) versus other alternatives, particularly compression bandages, is unclear. Evidence for the effectiveness of IPC alone, or in combination with anticoagulants, in reducing the risk of venous thromboembolism (VTE) is conflicting. Evidence for the use of IPC in peripheral arterial disease is emerging, but inconclusive.

Recommendations

The evidence currently available is insufficient to permit conclusions regarding the relative effectiveness of the Circulator Boot™ as a treatment option for chronic venous insufficiency (CVI).

Methods

The INAHTA database and MEDLINE, EMBASE, and the Cochrane Library, were searched for articles published in English from 2000 to 2009. Searches included terms describing Circulator Boot concepts, CVI, vein or venous leg ulcers, pneumatic compression devices, and IPC devices. End references of retrieved articles were reviewed, as were the data cited on the Circulator Boot™ Corporation's website.

Further research/reviews required

Randomized clinical trials are needed to properly assess the effectiveness of end-diastolic pneumatic compression devices such as the Circulator Boot™. Trials should address optimal administration, risks, and benefits derived from different types of mechanical compression, patient compliance, quality of life, organizational aspects of care, and economic evaluation.