

Cardinal Health™ A-V Impulse™ Foot Compression System

A proven solution to support multiple clinical applications

DVT/PE Prophylaxis

0.0% fatal PE rate	In a study of over 3,000 elective hip surgery patients, the use of A-V Impulse™ foot compression and thigh length graduated compression stockings showed a 0.0% fatal PE Rate, 0.1% symptomatic DVT rate and 0.07% symptomatic proximal DVT rate. ¹
75% reduction of overall DVT	The addition of intra-operative A-V Impulse™ foot compression to a protocol of T.E.D.™ stockings and heparin has been shown to significantly reduce DVT from 27.27% to 6.6% in THA patients as compared to T.E.D.™ stockings and heparin alone. ²
0.0% Proximal DVT	A-V Impulse foot compression in comparison with heparin has been shown to significantly reduce the incidence of proximal DVT from 2.0% to 0.0% in THR patients. ³

Reduction of edema

34% reduction of post-operative thigh and calf swelling ³	A-V Impulse™ foot compression has been shown to provide a 34% swelling reduction of the thigh and calf in THR patients. ³
74% reduction of post-traumatic swelling ⁴	A-V Impulse™ foot compression has been shown to reduce post-traumatic foot and ankle swelling by 74% four days post-injury. ⁵

Further benefits

Reduction of pain	The application of A-V Impulse™ foot compression has been shown to reduce pain due to calcaneal fracture/foot trauma by 63% as compared to patients not receiving foot compression. ⁶
Greater range of motion	A-V Impulse™ foot compression has been clinically proven to increase post-traumatic range of motion in the ankle, as well as increase rapid flexion of the operative knee in TKA patients. ^{6,7}
Enhance circulation	A-V Impulse™ foot compression has been clinically proven to increase femoral blood flow velocity 250% over baseline in the reverse Trendelenburg position. ⁸
Increase arterial blood flow	A-V Impulse™ foot compression has been clinically proven to increase arterial blood flow. ⁹
Decrease compartment pressure	A-V Impulse™ foot compression has been clinically proven to decrease compartment pressure in trauma patients at risk of surgical decompression via fasciotomy. ¹⁰
Decrease time out of work	The application of A-V Impulse™ foot compression has been shown to decrease time out of work due to calcaneal fracture/foot trauma by three months as compared to patients not receiving foot compression. ⁶

DVT: deep vein thrombosis; PE: pulmonary embolism; THA: total hip arthroplasty; THR: total hip replacement

For more information or to order, speak to your local sales representative or visit [cardinalhealth.com/avi](https://www.cardinalhealth.com/avi)

Reference: 1. Sugano, et al. Clinical Efficacy of Mechanical Thromboprophylaxis without Anticoagulant Drugs for Elective Hip Surgery, *The Journal of Arthroplasty*, 2009. 2. Bradley, et al. The Effectiveness of Intermittent Plantar Venous Compression in Prevention of Deep Venous Thrombosis After Total Hip Arthroplasty, *The Journal of Arthroplasty*, 1993. 3. Pitto, et al. Mechanical Prophylaxis of Deep Vein Thrombosis after Total Hip Replacement, *Journal of Bone and Joint Surgery*, 2004. 4. Myerson, et al. Clinical Applications of a Pneumatic Intermittent Impulse Compression Device after Trauma and Major Surgery to the Foot and Ankle, *Foot and Ankle*, 1993. 5. Stockle. Fastest Reduction of Post Traumatic Edema: Continuous Cryotherapy or Intermittent Impulse Compression. American Orthopedic Foot and Ankle Society. 1997. 6. Erdmann, et al. Os Calcis Fractures: A Randomized Trial Comparing Conservative Treatment with Impulse Compression of the Foot, *British Journal of Accident Surgery*, 1992. 7. Windisch, et al. Pneumatic Compression with Foot Pumps Facilitates Early Postoperative Mobilization in Total Knee Arthroplasty, *International Orthopedics*, 2010. 8. White, J. The plantar venous plexus and applications of A-V impulse system technology. *Journal of Angiology*, 1996. 9. Morgan, et al. Arterial Flow Enhancement by Impulse Compression. *Vasc Endovascular Surg*. 1991. January; 25:1 8-16 10. Gardner & Fox. Reduction of Post-Traumatic Swelling and Compartment Pressure by Impulse Compression of the Foot, *Journal of Bone and Joint Surgery*, 1990.

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