ORTHOTIC TREATMENT: THE DIABETIC FOOT

Size and cost of the problem
An estimated 3.8 million people in the UK are affected by type 1 or 2 diabetes. The cost of diabetes during 2010/2011 was estimated at £23.7 billion, about 10% of total NHS expenditure or £27 million a day. Of this £23.7 billion, £985.6 million were costs associated with foot ulcers and amputations. In this context orthotic treatment is crucial given that for every £1 spent on orthotics the NHS could save up to £4. More recently it has been estimated that, once established, improved integration of orthotics within diabetic foot care could result in annual savings of 50%. To do this, orthotic services need improved resources in line with national recommendations.

Orthotists: core members of the specialist foot care team
Orthotists are allied health professionals (AHPs) specialising in the assessment of patients requiring treatment for any part of their body using orthoses. Orthotists are part of the core specialist foot care team and prescribe and design orthoses for the treatment of diabetes, including foot orthoses and footwear, based on consideration of tissue mechanics and biomechanical principles.

Common orthotic treatment in diabetes
Factors including nerve damage and foot deformity increase the risk of mechanical trauma to the diabetic foot, while vascular disease and high blood sugar levels reduce the tissue’s ability to heal. By altering pressures applied to the foot, foot orthoses, therapeutic footwear and other orthotic devices protect at-risk feet and facilitate healing. The National Institute for Health and Care Excellence (NICE) state that any person with two risk factors for ulceration (high risk), or who has previously had a foot ulcer, should be assessed for treatment with foot orthoses and therapeutic footwear to reduce their risk of ulcerating, or re-ulcerating. One study showed this to reduce re-ulceration rates from 79% to 15% and amputation rates from 54% to 6%. In terms of monitoring and education, orthotists offer regular reviews where education and foot care advice is provided and referral to the high risk foot clinic is facilitated if necessary.

People with complications such a partial foot amputations, or Charcot arthropathy may require more extensive orthotic intervention to aid healing, prevent further tissue and joint damage and to improve walking ability. This could include custom Charcot Restraint Orthotic Walkers (CROWs – below left) or partial foot orthoses/prostheses (below centre and right). High level partial foot amputations may also be managed by a prosthetist.

Extended scope of practice (ESP) orthotists also provide other treatment modalities such as total contact casting (TCC).

REFERENCES


TERMINOLOGY

• Orthosis / orthotic device (plural orthoses): externally applied device used to modify the structural or functional characteristics of the neuro-muscular and skeletal systems.
• Orthotics: the science and art involved in treating patients by the use of orthoses.

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