

CADTH RAPID RESPONSE REPORT: REFERENCE LIST

Wearables with Neuroreceptor Activation Patterns for Foot Neuropathy or Musculoskeletal Foot or Back Pain: Clinical Effectiveness

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Research Questions

1. What is the clinical effectiveness of wearables incorporating a neuroreceptor activation sequence or pattern for foot neuropathy?
2. What is the clinical effectiveness of wearables incorporating a neuroreceptor activation sequence or pattern for foot pain or back pain of musculoskeletal origin?

Key Findings

No relevant literature was identified regarding the clinical effectiveness of wearables incorporating a neuroreceptor activation sequence or pattern for foot neuropathy or foot pain or back pain of musculoskeletal origin.

Methods

A limited literature search was conducted by an information specialist on key resources including PubMed, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were wearables incorporating a neuroreceptor activation sequence or pattern and patients with foot neuropathy or foot or back pain of musculoskeletal origin. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2009 and August 20, 2019. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

Population	Q1: Patients of all ages, in any setting with foot neuropathy (i.e., including peripheral diabetic neuropathy) Q2: Patients of all ages, in any setting, with foot or back pain of musculoskeletal origin
Intervention	Q1 & Q2: Wearables (e.g., hosiery, footwear accessories, skin patches) having a neuroreceptor activation sequence or pattern imprinted onto or woven into them
Comparator	Q1 & Q2: Non-patterned wearables (e.g., regular hosiery, shoes, orthotics); Before compared to after the intervention

Outcomes	Q1 & Q2: Clinical effectiveness (e.g., pain, symptoms, functionality, stability, quality of life, side effects, adverse events)
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, and non-randomized studies

Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials and non-randomized studies.

No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, or non-randomized studies were identified regarding the clinical effectiveness of wearables incorporating a neuroreceptor activation sequence or pattern for foot neuropathy or foot pain or back pain of musculoskeletal origin.

References of potential interest are provided in the appendix.

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Appendix — Further Information

Randomized Controlled Trials

Intervention Unclear

1. Hagiwara Y, Yabe Y, Yamada H, et al. Effects of a wearable type lumbosacral support for low back pain among hospital workers: a randomized controlled trial. *J Occup Health*. 2017 Mar 28;59(2):201-209.
[PubMed: PM28132971](#)