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## The derived positive meaning of physical activity for people with a diabetic foot ulcer; a scoping review protocol

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**Protocol status:** Working

**We use this protocol and it's working**

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## Disclaimer

This mapping of evidence is expected to provide a greater understanding of possibilities for supporting physical activity in ways that are wanted in persons with a diabetic foot ulcer. Further, gaps important for future research aiming to improve healthcare services for persons with a diabetic foot ulcer will be identified.

## Abstract

*Objectives* This scoping review aims to explore the derived positive meaning of physical activity in persons with diabetes who have been imposed mobility restrictions due to treatment of a diabetic foot ulcer

*Background* For a person with diabetes mellitus the treatment of a diabetic foot ulcer entails off-loading treatment regimens that put limitations on physical activity. Physical activity is vital for health and provides possibilities for well-being experiences. However, we lack knowledge on physical activity possibilities for persons with diabetic foot ulcers when weight bearing is discouraged.

*Inclusion Criteria* This review will consider studies that investigate physical activity in persons receiving treatment for a diabetic foot ulcer. Given the apparent little number of studies there will be no limitations regarding study design.

*Methods* A search strategy developed in cooperation with a research librarian a search will be applied in EMBASE, MEDLINE, CINAHL, and Google scholar with no restriction on year of publication. Studies published in English, Danish, Norwegian, Swedish, and German will be considered for inclusion. Two reviewers will independently perform study selection. Data will be extracted and presented in pre-defined data charting form. The presentation of data will be a narrative summary of the characteristics and key findings.

*Findings* The findings are expected to be the first step in developing a planned intervention for physical activity for persons with diabetes who has a foot ulcer.

*Conclusion* The conclusion is expected to map the amount of international evidence that additional guidance on physical activity can be built on.

## General Information

- 1 The derived positive meaning of physical activity for people with a diabetic foot ulcer; a scoping review protocol
- 2 Authors: Rasmussen B, Uhrenfeldt L

## Background

- 3 For a person with diabetes mellitus the treatment of a diabetic foot ulcer entails off-loading treatment regimens that put limitations on physical activity. Physical activity is vital for health and provides possibilities for well-being experiences. However, we lack knowledge on physical activity possibilities for persons with diabetic foot ulcers when weight bearing is discouraged.

## Research question

- 4 The review will answer the following research question
  - What is known from the literature about the derived meaning of physical activity in people with a diabetic foot ulcer?
  - What changes occur in possibilities for physical activity due to treatment of a diabetic foot ulcer?

## Methods

- 5 We will follow the Joanna Briggs Methodology on scoping reviews (1)

### 5.1 Inclusion criteria

These criteria were developed according to the Population–Concept–Context (PCC) mnemonic recommended by the Joanna Briggs Institute for scoping reviews (1) .

*Population:* Adult of all ages, with a DFU in all stages who has been imposed mobility restrictions due to treatment of the a diabetic foot ulcer

*Concept:* The derived meaning of physical activity, in this review defined as:

- Changes in mobility and PA possibilities
- Changes in postural stability
- Changes in muscle strength and physical fitness
- Changes in physical functioning
- Changes in experiences of well-being

*Context:* The adult receives treatment for a diabetic foot ulcer from a clinic with a specialist or a team of specialists.

- 5.2 *Types of studies:* Different study designs are anticipated to provide knowledge relevant to the objective of this scoping review and experimental, quantitative, qualitative as well as mixed method research will be included. Further, government recommendations, international (and national) guidelines, and opinion papers will be included to provide knowledge on key characteristics related to the research questions of this review. Papers published in English, Danish, Norwegian, Swedish and German will be included. Given that a recent scoping review (2) found few studies and only one study published prior to 2005 no restriction on year of publication will be added.
- 5.3 *Search strategy*  
 First step will be an initial limited search in PubMed and CINAHL. Relevant keywords and search terms will be identified in title, abstract, and key words used. Second step will be the cooperation with a research librarian on the development of specific search strategies adapted to each of the following databases: MEDLINE, EMBASE, CINAHL, and Scopus, with EMBASE and Scopus covering grey literature. Further, major organisations focusing on the diabetic population will be reviewed including the American Diabetes Association, the Diabetes Canada, and the IWGDF. To identify additional eligible studies the reference lists of all included studies will be hand searched and a citation search will be conducted through Google Scholar. In case further information about any study is required the authors will be contacted.
- 5.4 *Study selection* All studies that meets the PCC criteria above will be included
- 5.5 *Data presentation* The identification and selection of studies will be visualized through the PRISMA flow diagram (3). Data will be presented in tables or diagrammatic form depending on appropriateness in relation to the nature of the findings and following the suggestions by Joanna Briggs Institute (1). A summary of extracted data and key findings along with the identified knowledge gaps will be presented in a narrative and descriptive form
- 5.6 *Critical appraisal* This scoping review has no critical appraisal included.

## Protocol references

1. Scoping reviews. Joanna Briggs Institute reviewer's manual. 2017;2015:1-24.
2. Brousseau-Foley M, Blanchette V, Trudeau F, Houle J. Physical Activity Participation in People With an Active Diabetic Foot Ulceration: A Scoping Review. *Can J Diabetes*. 2022;46(3):313-27
3. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *International journal of surgery*. 2021;88:105906