

Altered pain processing in patients with type I and II diabetes

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Introduction

Diabetes and diabetic neuropathies (DSPN) affect small diameter nerve fibre function responsible for thermal, electrical, and pain perception.

Quantitative sensory testing (QST) can assess small diameter nerve fibre function.

AIM

To summarise the evidence from QST on altered pain threshold and pain modulation in patients with diabetes with and without DSPN (both painful and non-painful).

Methods

Protocol registered on PROSPERO (CRD42018088173) and reported according to guidelines (PRISMA)

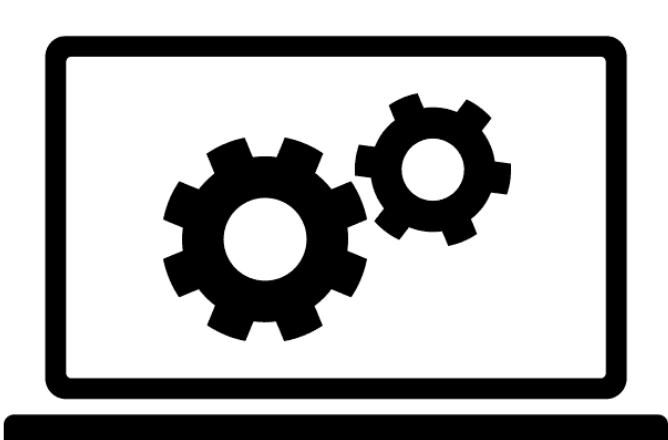
Databases

MEDLINE, CINAHL, EMBASE, Cochrane Library, SPORTDiscus, Web of Science and PEDro

Flow diagram



n = 6,798
(3,839 after duplicates removed)



Screening + eligibility
(2 researchers)

Included:



Systematic review
n=25

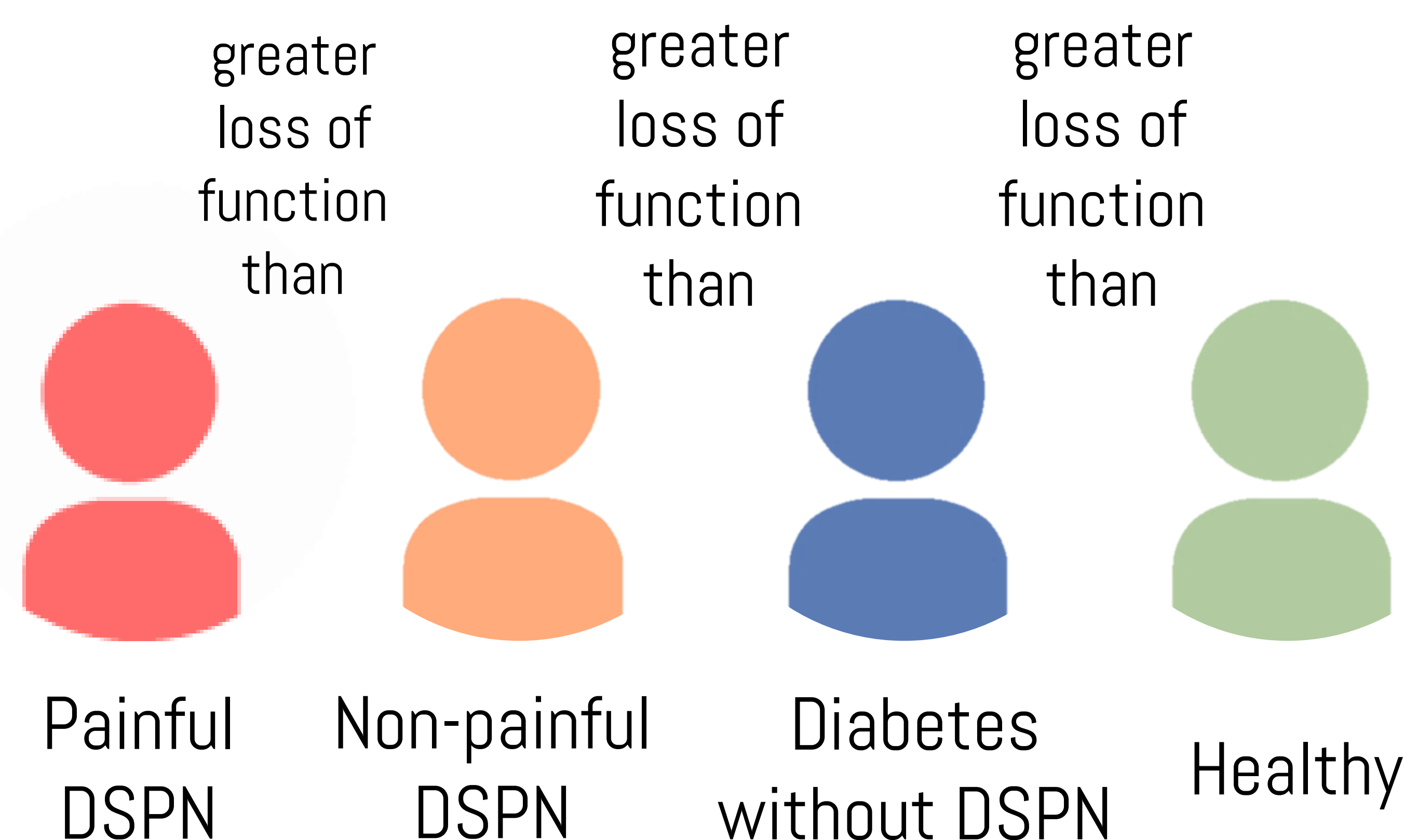


Meta-analysis
n=18

Results

Pain threshold

Progressive loss of function across groups to heat, cold and electrical stimuli



Pain modulation

Only one paper retrieved on pain modulation and temporal summation

Conclusions

Patients with diabetes without DSPN already show **loss of small-diameter nerve function**

Loss of small-diameter nerve function is progressive across the diabetes groups

Pain modulation mechanisms in diabetes requires further investigation

