

The effect of different types of acute exercise on pain thresholds in chronic pain patients versus healthy adults: a systematic review



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INTRODUCTION

Background

Physical training is a crucial element in the treatment of patients with chronic pain. However, training centrally sensitized individuals cannot be taken for granted, as they often suffer from exercise induced hyperalgesia.

In the past, a variety of studies has examined the effect of exercise on pain. These studies used different modalities: type, intensity and duration of exercise as well as different pain stimulations and measurements.

Objective

Systematically review the scientific evidence regarding the effect of acute exercises on pain perception in chronic pain patients, specifically in Chronic Fatigue Syndrome (CFS) and Fibromyalgia (FM), in comparison with the healthy population.

METHODS

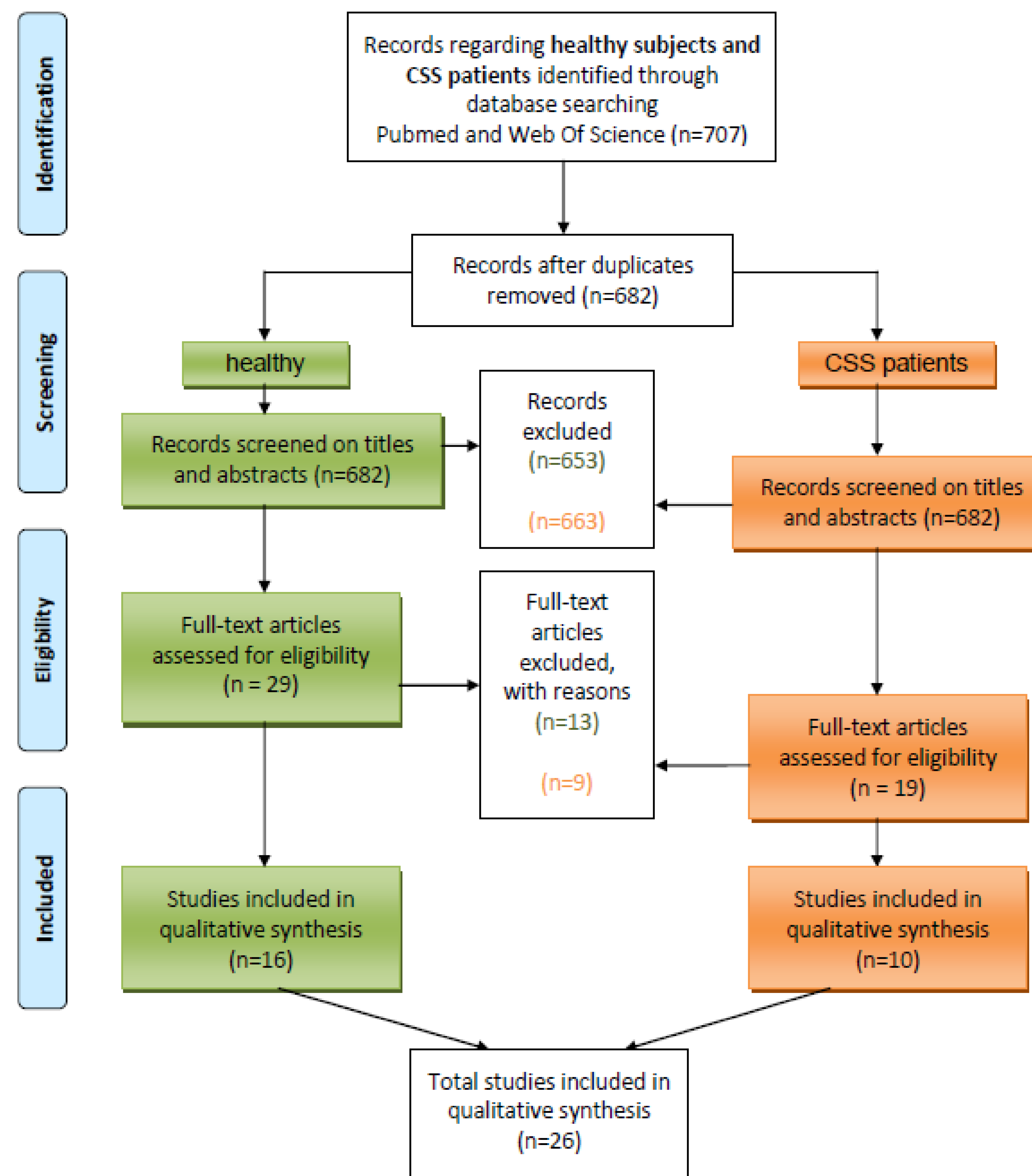
This systematic review is reported following the PRISMA guidelines.

“Pubmed” and “Web Of Science” were searched by using multiple keyword combinations regarding the PICO-question:

The influence of acute exercise (I) to pain (O) in patients with chronic pain (P) compared to healthy controls (C).

Only studies evaluating the effect of acute exercise on pain were included.

RESULTS & DISCUSSION



Isometric & submaximal dynamic exercise

hypoalgesia in healthy people & hyperalgesia in CPP patients

Maximal dynamic exercise

Generally hypoalgesia in healthy people

Exercise of isolated muscle group

Locally ↓ PPT in healthy people

Different types and modalities

Submaximal exercise on a bicycle ergometer seems to be the most appropriate/consistent tool to test the response to exercise in CSS patients.

Modality: The Aerobic Power Index and a self-paced moderate intensity (controlled by 60-75% of HR_{max})

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