

REVIEW ARTICLE (META-ANALYSIS)

# Systematic Review of Guidelines for the Physical Management of Osteoarthritis



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## Abstract

**Objective:** To undertake a systematic critical appraisal of guidelines to provide a summary of recommendations for the physical management of osteoarthritis (OA).

**Data Sources:** The Cochrane Library, MEDLINE, CINAHL, SPORTDiscus with Full Text, Scopus, ScienceDirect, PEDro, and Google Scholar databases were searched (2000–2013) to identify all guidelines, protocols, and recommendations for the management or treatment of OA. In addition, Internet searches of all relevant arthritis organizations were undertaken. All searches were performed between July 2012 and end of April 2013. Guidelines that included only pharmacological, injection therapy, or surgical interventions were excluded. Guidelines published only in English were retrieved.

**Study Selection:** OA guidelines developed from evidence-based research, consensus, and/or expert opinion were retrieved. There were no restrictions on severity or site of OA, sex, or age. Nineteen guidelines were identified for evaluation.

**Data Extraction:** The quality of all guidelines was critically appraised using the Appraisal of Guidelines for REsearch and Evaluation II instrument. Each guideline was independently reviewed. All relevant recommendations for the physical management of OA were synthesized, graded, and ranked according to available evidence.

**Data Synthesis:** Seventeen guidelines with recommendations on the physical management of OA met the inclusion criteria and underwent a full critical appraisal. There were variations in the interventions, levels of evidence, and strength of recommendations across the guidelines. Forty different interventions were identified. Recommendations were graded from “strongly recommended” to “unsupported.” Exercise and education were found to be strongly recommended by most guidelines.

**Conclusions:** Exercise and education were key recommendations supporting the importance of rehabilitation in the physical management of OA. This critical appraisal can assist health care providers who are involved in the management of people with OA.

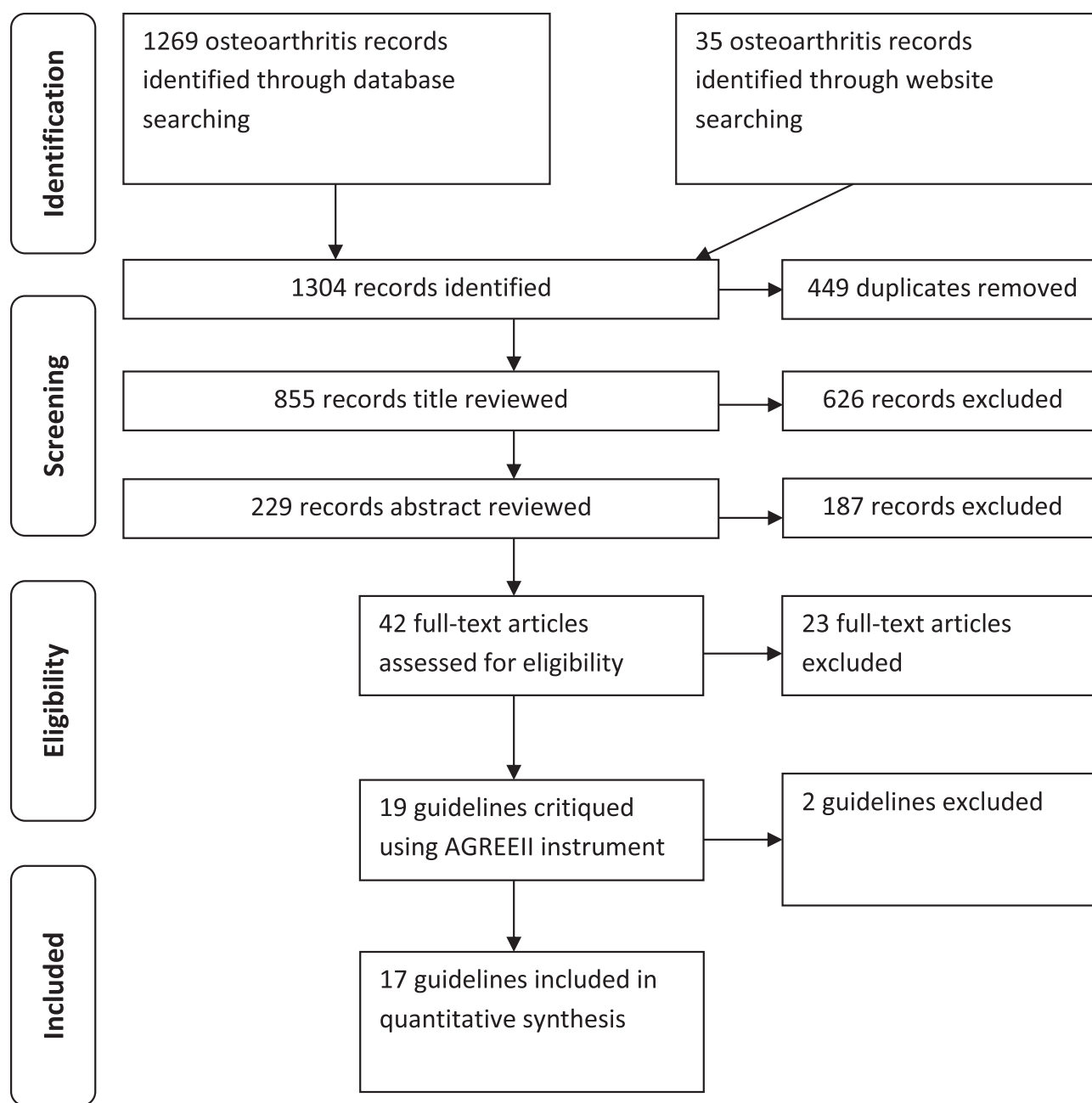
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Osteoarthritis (OA) is the most common form of arthritis and is identified as one of the leading causes of pain and disability worldwide.<sup>1,2</sup> By the year 2020, the prevalence of OA is expected to double.<sup>3</sup> The risk factors associated with OA include age, sex, genetics, occupation, past injuries, and obesity.<sup>4</sup> Hip and knee pain associated with OA often leads to inactivity and loss of mobility,

resulting in deconditioning, weight gain, loss of independence, and decreased quality of life.<sup>5</sup> There are substantial personal and societal costs associated with OA.<sup>1</sup> Personal costs may include the inability to participate in work, sport, hobbies, or caring for others because of pain. Societal costs may include visits to the doctor, medication costs, and assistance equipment. Joint replacement is an effective intervention to alleviate pain and improve quality of life for those with advanced OA. However, despite a growing number of joint replacements undertaken each year, many people are still placed on a waiting list often for a considerable time.<sup>6,7</sup> To reduce the burden of OA, safe and effective health services,

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**Fig 1** Results of the search strategy for international guidelines that contain recommendations for the physical management of OA.

involving a range of nonsurgical treatments options, are required. These services must be effective with respect to intervention and cost as well as meet the affected person's needs.

Evidence-based clinical guidelines are developed to assist the practitioner, patient, and/or policymaker to make informed

clinical decisions.<sup>8</sup> Guidelines are valuable resources that play an integral role in improving treatment and management of various health conditions. They can be used by health practitioners and people suffering with OA seeking information to determine how their disease can best be managed. A preliminary search of the literature identified many international guidelines developed for the management of OA. The preliminary search identified that the guidelines included evidence and recommendations for a number of interventions including pharmacological, non-pharmacological, surgical, and injection therapies, physical management, and lifestyle changes for the management of OA. However, because of adverse effects, patients and health care providers may pursue physical management options rather than surgery, pharmacology, or injection-based therapy. A number of guidelines highly recommend exercise as an intervention for OA.

#### **List of abbreviations:**

<b>AGREE II</b>	<b>Appraisal of Guidelines for REsearch and Evaluation II</b>
<b>LOE</b>	<b>level of evidence</b>
<b>MA</b>	<b>meta-analysis</b>
<b>NICE</b>	<b>National Institute of Clinical Excellence</b>
<b>OA</b>	<b>osteoarthritis</b>
<b>RCT</b>	<b>randomized controlled trial</b>
<b>SOR</b>	<b>strength of recommendation</b>

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