

# INPLASY

## Use of the reverse prosthesis in the treatment of shoulder arthropathies: a scoping review protocol

INPLASY202480126

doi: 10.37766/inplasy2024.8.0126

Received: 27 August 2024

Published: 27 August 2024

### Corresponding author:

Gabriel Padilha

gabriel\_fpadilha@hotmail.com

### Author Affiliation:

Serviço de Ortopedia e Traumatologia. Santa Casa de Misericórdia de Ribeirão Preto, Ribeirão Preto - SP, Brazil.

Padilha, GF; Martins, LB; Souto Filho, MMG.

### ADMINISTRATIVE INFORMATION

**Support** - No financial support.

**Review Stage at time of this submission** - Preliminary searches.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202480126

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 August 2024 and was last updated on 27 August 2024.

## INTRODUCTION

**Review question / Objective** What clinical evidence exists on the use of reverse prosthesis in the treatment of shoulder arthropathies?

**Background** Shoulder arthropathies are clinical conditions that cause pain, stiffness and loss of joint function. Among the main causes are osteoarthritis, rheumatoid arthritis and rotator cuff arthropathy, with their different etiologies. Initial management is usually conservative, with rest and medication, but in serious cases surgery may be indicated, especially in severe or irreparable rotator cuff injuries. Reverse shoulder replacement is a type of surgical implant used in cases of severe arthropathy, especially when there is extensive and irreparable rupture of the rotator cuff, the group of muscles and tendons that normally stabilize and

move the shoulder joint. Unlike traditional shoulder replacements, reverse shoulder replacement reverses the natural anatomy of the joint: the ball (head) is placed where the socket (glenoid) would normally be, and the socket is placed where the ball would be. This inversion allows the deltoid muscle, rather than the damaged rotator cuff, to assume the primary role in moving the arm, providing greater stability and range of motion.

**Rationale** Within the context presented, this study focuses on synthesizing the existing evidence on the use of reverse shoulder replacement in the treatment of shoulder arthropathies, evaluating its benefits, risks, and impact on patients' quality of life. This analysis is essential to guide clinical decision-making and ensure the best possible care for individuals affected by these debilitating conditions.

## METHODS

**Strategy of data synthesis** Strategy: reverse[title] AND prosthesis[title] AND (cuff[title] OR shoulder[title]) AND arthropathy[title/abstract] Database: PUBMED / MEDLINE.

**Eligibility criteria** Articles published in the last 5 years, which describe the results of surgeries performed on living patients, and which discuss the topic proposed for the review.

**Source of evidence screening and selection** Evidence screening and selection for this scoping review will be conducted following INPLASY guidelines. An initial search will be performed across major databases, including PubMed / Medline using predefined search terms relevant to the research question. The search strategy included both title and abstract screening to exclude irrelevant studies. Subsequently, full-text articles will be reviewed in detail, with inclusion criteria focusing on study design, population characteristics, and outcome measures. Two independent reviewers will conduct the screening process, with discrepancies resolved by consensus or by a third reviewer. A total of 13 studies were identified, of which 13 were included in the final analysis.

**Data management** All identified studies will be imported into a reference management Zotero software for organization and deduplication. Screening decisions, including reasons for exclusion, will be meticulously recorded within the software. Data from included studies will be extracted using a standardized form, ensuring consistency and accuracy. The extracted data will be stored securely and regularly backed up to prevent data loss. Any discrepancies in data extraction will be resolved through discussion or consultation with a third reviewer. All data management steps will be documented to maintain transparency and reproducibility.

**Reporting results / Analysis of the evidence** Data from the included studies will be synthesized using a descriptive and thematic approach. The findings will be organized into key themes and categories that emerged during the data extraction process. A narrative summary will be provided to map the range and scope of the evidence, highlighting key concepts, gaps in the literature, and areas for future research. Quantitative data, where applicable, will be summarized using basic descriptive statistics. No meta-analysis will be conducted, as the primary aim was to explore the breadth of the evidence rather than to generate

pooled estimates. The quality and relevance of the included studies will be discussed, with attention given to the methodological strengths and limitations. The risk of bias will be not formally assessed, as the focus of the scoping review was on providing an overview of the existing evidence. Any potential biases or gaps in the literature will be noted to guide future systematic reviews or primary research. Data from the included studies will be synthesized using a qualitative and/or quantitative approach, depending on the nature of the data.

**Presentation of the results** The results will be presented in a structured format, with tables and figures used to visualize the distribution of studies across various themes and domains.

**Language restriction** Only texts in English were selected.

**Country(ies) involved** Brazil (Serviço de Ortopedia e Traumatologia. Santa Casa de Misericórdia de Ribeirão Preto, Ribeirão Preto - SP, Brazil).

**Other relevant information** This is an important topic in orthopedic surgery.

**Keywords** reverse; prosthesis; cuff; shoulder; arthropathy.

**Dissemination plans** The findings of this scoping review will be disseminated through publication in a peer-reviewed journal and presentations at relevant conferences. Additionally, summaries will be shared with stakeholders via policy briefs, practice guidelines, and social media platforms. The data will be made available in open-access repositories, and the review will be registered in relevant databases to ensure broad accessibility and impact.

### Contributions of each author

Author 1 - Gabriel padilha - Conception/design of the paper, future acquisition, analysis and interpretation of data, future writing of the text and critical review of its intellectual content, in addition to the future final approval of the version of the manuscript to be published.

Email: gabriel\_fpadilha@hotmail.com

Author 2 - Márcio Souto Filho - Conception/design of the paper, future acquisition, analysis and interpretation of data, future writing of the text and critical review of its intellectual content, in addition to the future final approval of the version of the manuscript to be published.

Email: marcinhogw8@gmail.com

---

Author 3 - Leandro Martins - Conception/design of the paper, future acquisition, analysis and interpretation of data, future writing of the text and critical review of its intellectual content, in addition to the future final approval of the version of the manuscript to be published.

Email: leandro\_barizza@hotmail.com