

# INPLASY

## Effects of magnification on restorative dental preparation performance: a scoping review with evidence mapping

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### ADMINISTRATIVE INFORMATION

**Support** - No funding.

**Review Stage at time of this submission** - Piloting of the study selection process.

**Conflicts of interest** - The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

**INPLASY registration number:** INPLASY202430091

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 March 2024 and was last updated on 23 March 2024.

### INTRODUCTION

**Review question / Objective** 1. What is the current evidence concerning magnification on restorative preparation performance? 2. What is the effect of magnification on restorative preparation performance? 3. Is there a difference in dental preparation performances at different magnification levels?

**Background** While the benefits of magnification in dentistry have been well-documented, its impact on restorative tooth preparation is an area that requires more robust scientific evidence.

**Rationale** This study aimed to conduct a scoping review on the effect of magnifying devices (loupe or microscope) on the performance of restorative preparations.

### METHODS

**Strategy of data synthesis** Data were extracted by two authors. When available, data concerning the authors, devices, sample size, methodology, results, and main conclusions were obtained. Missing data or missing information was investigated by contacting the authors of the studies via email. In cases of multiple publications by the same group of authors, data were extracted from only one study.

**Eligibility criteria** The eligibility criteria for inclusion in this scoping review were determined using the PICOS framework. Clinical studies, cohort studies, in vitro studies, and case series.

**Source of evidence screening and selection** The search and selection process was conducted by two independent authors. PubMed/MEDLINE,

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EMBASE, Web of Science, and Scopus databases were searched for relevant articles published until November 2023. There were no restrictions on the date of publication or language. Gray literature was searched using the Literature Report and OpenGrey ([www.opengrey.eu](http://www.opengrey.eu)) databases and ProQuest Dissertations & Theses ([www.theses.com](http://www.theses.com)). Initially, titles and abstracts were analyzed. Then, selected studies were read in full to verify whether they met the eligibility criteria. Disagreements between reviewing authors were resolved through careful discussion. Article reference lists were evaluated (cross-referenced) to identify other potential studies for inclusion. Studies identified by at least one reviewer were included in the selection phase. Cohen's kappa ( $\kappa$ ) was used to evaluate search concordance between the two reviewers.

**Data management** Study characteristics, including sample size and follow-up time, were analyzed using means, standard deviations, and variance. Graphical exploration was used to investigate the geographic distribution of the evidence.

**Language restriction** No language restrictions.

**Country(ies) involved** Brazil.

**Keywords** Magnification; Dental preparations; Microscope; Loupe magnification.

**Contributions of each author**

Author 1 - Fernando de Oliveira.

Author 2 - Vittorio Moraschini.