

# INPLASY

## Systematic review on the effectiveness and safety of suction-based airway clearance devices for foreign body airway obstruction

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### ADMINISTRATIVE INFORMATION

**Support** - None.

**Review Stage at time of this submission** - Completed but not published.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202410020

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 06 January 2024 and was last updated on 06 January 2024.

### INTRODUCTION

**Review question / Objective** Is there evidence on the effectiveness and safety of suction-based airway clearance devices in foreign body airway obstruction management?

**Condition being studied** Foreign body airway obstruction management in humans.

### METHODS

**Search strategy** Literature search was performed in April 2023 with no language or date restriction. Pubmed, Embase and Web of Science were searched. The following strings were used: Pubmed ((suction-based airway clearance devices) OR (Dechoker)) AND ((foreign body) OR (airway obstruction))  
Embase: ('suction-based airway clearance devices' OR 'Dechoker')

Web of Science: ("suction-based airway clearance devices" OR "Dechoker") AND ("foreign body" OR "airway obstruction").

**Participant or population** Humans (no age restriction).

**Intervention** Use of suction-based airway clearance devices.

**Comparator** Any other (including no comparator).

**Study designs to be included** All types of original studies.

**Eligibility criteria** All studies investigating the use of use of suction-based airway clearance devices for foreign body airway obstruction in humans.

**Information sources** The following three databases were used as information source: Pubmed, Embase and Web of Science.

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**Main outcome(s)** Effectiveness of the use of suction-based airway clearance devices for foreign body airway obstruction management (including success rate and health outcomes).

**Additional outcome(s)** Safety and feasibility of the use of suction-based airway clearance devices for foreign body airway obstruction management.

**Quality assessment / Risk of bias analysis** The quality of randomized trials was evaluated by the Cochrane Risk of Bias Tool, whereas the quality of observational studies by the Newcastle-Ottawa Scale.

**Strategy of data synthesis** Data are descriptively synthesized considering the limited amount of available studies.

**Subgroup analysis** None.

**Sensitivity analysis** None.

**Language restriction** English.

**Country(ies) involved** Italy.

**Other relevant information** Two reviewers independently performed the literature search, data extraction and quality assessment. Controversies were solved by consensus.

**Keywords** airway clearance devices; foreign body; airway obstruction; strategies; clearance; choking; humans; adults; children; infants; evidence.

#### **Contributions of each author**

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