PRISMA 2009 Checklist

**Reported**

**on page #**

**Section/topic**

**# Checklist item**

**TITLE**

Title

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3, 4

Identify the report as a systematic review, meta-analysis, or both.

**ABSTRACT**

Structured summary

Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria,

participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and

implications of key findings; systematic review registration number.

**INTRODUCTION**

Rationale

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Describe the rationale for the review in the context of what is already known.

Objectives

Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons,

outcomes, and study design (PICOS).

**METHODS**

Protocol and registration

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Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide

registration information including registration number.

Eligibility criteria

Information sources

Search

Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered,

language, publication status) used as criteria for eligibility, giving rationale.

Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify

additional studies) in the search and date last searched.

Present full electronic search strategy for at least one database, including any limits used, such that it could be

repeated.

Study selection

Data collection process

Data items

State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable,

included in the meta-analysis).

10 Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes

for obtaining and confirming data from investigators.

11 List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and

simplifications made.

Risk of bias in individual

studies

12 Describe methods used for assessing risk of bias of individual studies (including specification of whether this was

done at the study or outcome level), and how this information is to be used in any data synthesis.

Summary measures

Synthesis of results

13 State the principal summary measures (e.g., risk ratio, difference in means).

14 Describe the methods of handling data and combining results of studies, if done, including measures of consistency

(e.g., I2) for each meta-analysis.

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Risk of bias across studies

Additional analyses

15 Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective

reporting within studies).

16 Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating

which were pre-specified.

**RESULTS**

Study selection

17 Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at

each stage, ideally with a flow diagram.

Study characteristics

18 For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and

provide the citations.

Risk of bias within studies

Results of individual studies

19 Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).

20 For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each

intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.

Synthesis of results

21 Present results of each meta-analysis done, including confidence intervals and measures of consistency.

22 Present results of any assessment of risk of bias across studies (see Item 15).

Risk of bias across studies

Additional analysis

23 Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).

**DISCUSSION**

Summary of evidence

24 Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to

key groups (e.g., healthcare providers, users, and policy makers).

Limitations

25 Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of

identified research, reporting bias).

Conclusions

26 Provide a general interpretation of the results in the context of other evidence, and implications for future research.

**FUNDING**

Funding

27 Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the

systematic review.

*From:* Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(6): e1000097.

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For more information, visit: **www.prisma-statement.org**.

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