



PRISMA 2020 Checklist

| Section and Topic | Item # | Checklist item | Location where item is reported |
|-------------------------|--------|--|---|
| TITLE | | | |
| Title | 1 | Identify the report as a systematic review. | Page Number: 1 Line Number: 1 Section and Paragraph: title page; 1 |
| ABSTRACT | | | |
| Abstract | 2 | See the PRISMA 2020 for Abstracts checklist. | Page Number: 1 Line Number: 2 Section and Paragraph: title page; 3 |
| INTRODUCTION | | | |
| Rationale | 3 | Describe the rationale for the review in the context of existing knowledge. | Page Number: 2 Line Number: 13 Section and Paragraph: Introduction ; 2 |
| Objectives | 4 | Provide an explicit statement of the objective(s) or question(s) the review addresses. | Page Number: 2 Line Number: 24 Section and Paragraph: Introduction ; 3 |
| METHODS | | | |
| Eligibility criteria | 5 | Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses. | Page Number: 3 Line Number: 5 Section and Paragraph: MATERIALS AND METHODS Selection of studies; 1 |
| Information sources | 6 | Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted. | Page Number: 3 Line Number: 5 Section and Paragraph: MATERIALS AND METHODS; Sources of data; 1 |
| Search strategy | 7 | Present the full search strategies for all databases, registers and websites, including any filters and limits used. | Page Number: 3 Line Number: 5 Section and Paragraph: MATERIALS AND METHODS; Sources of data; 1 and 2 |
| Selection process | 8 | Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process. | Page Number: 3 Line Number: 5 Section and Paragraph: MATERIALS AND METHODS Selection of studies; 1 |
| Data collection process | 9 | Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process. | Page Number: 3 Line Number: 5 Section and Paragraph: MATERIALS AND METHODS; Sources of data; 1 and 2 |
| Data items | 10a | List and define all outcomes for which data were sought. Specify whether all results that were | Page Number: 5 |



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| | | compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect. | Line Number: 7 Section and Paragraph: Assessment of study quality; 1 |
| | 10b | List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information. | Page Number: 5 Line Number: 7 Section and Paragraph: Assessment of study quality; 1 |
| Study risk of bias assessment | 11 | Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process. | Page Number: 5 Line Number: 17 Section and Paragraph: Risk of bias in included studies, 1 |
| Effect measures | 12 | Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results. | Page Number: 5 Line Number: 17 Section and Paragraph: Risk of bias in included studies, 1 |
| Synthesis methods | 13a | Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)). | Page Number: 4 Line Number: 16 Section and Paragraph: Extraction of data; 2 |
| | 13b | Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions. | Page Number: 5 Line Number: 17 Section and Paragraph: Risk of bias in included studies, 1 |
| | 13c | Describe any methods used to tabulate or visually display results of individual studies and syntheses. | Page Number: 5 Line Number: 17 Section and Paragraph: Risk of bias in included studies, 1 |
| | 13d | Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used. | Page Number: 5 Line Number: 17 Section and Paragraph: Risk of bias in included studies, 1 |
| | 13e | Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression). | Page Number: 5 Line Number: 7 Section and Paragraph: Assessment of study quality; 1 |
| | 13f | Describe any sensitivity analyses conducted to assess robustness of the synthesized results. | Page Number: 5 Line Number: 17 Section and Paragraph: Risk of bias in included studies, 1 |
| Reporting bias assessment | 14 | Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases). | Page Number: 5 Line Number: 17 Section and Paragraph: Risk of bias in included studies, 1 |
| Certainty assessment | 15 | Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome. | Page Number: 4 Line Number: 16 Section and Paragraph: Extraction of data; 1 |
| RESULTS | | | |
| Study selection | 16a | Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow | Page Number: 6 |



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| | | diagram. | Line Number: 3 Section and Paragraph: Results; Outcomes of the search; 1 |
| | 16b | Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded. | Page Number: 6 Line Number: 3 Section and Paragraph: Results; Outcomes of the search; 1 |
| Study characteristics | 17 | Cite each included study and present its characteristics. | Page Number: 6 Line Number: 12 Section and Paragraph: Results; The study's characteristics; 1,2,3,4 |
| Risk of bias in studies | 18 | Present assessments of risk of bias for each included study. | Page Number: 7 Line Number: 23 Section and Paragraph: Characteristics of the interventions; 1,2,3,4,5,6 |
| Results of individual studies | 19 | For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots. | Page Number: 9 Line Number: 19 Section and Paragraph: Interventional effects; 1-9 |
| Results of syntheses | 20a | For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies. | Page Number: 6 Line Number: 12 Section and Paragraph: Results; The study's characteristics; 1,2,3,4 |
| | 20b | Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect. | Page Number: 6 Line Number: 12 Section and Paragraph: Results; The study's characteristics; 1,2,3,4 |
| | 20c | Present results of all investigations of possible causes of heterogeneity among study results. | Page Number: 7 Line Number: 23 Section and Paragraph: Characteristics of the interventions; 1,2,3,4,5,6 |
| | 20d | Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results. | Page Number: 6 Line Number: 12 Section and Paragraph: Results; The study's characteristics; 1,2,3,4 |
| Reporting biases | 21 | Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed. | Page Number: 7 Line Number: 23 Section and Paragraph: Characteristics of the interventions; 1,2,3,4,5,6 |



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| Certainty of evidence | 22 | Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed. | Page Number: 6 Line Number: 3 Section and Paragraph: Results; Outcomes of the search; 1 |
| DISCUSSION | | | |
| Discussion | 23a | Provide a general interpretation of the results in the context of other evidence. | Page Number: 13 Line Number: 4 Section and Paragraph: Discussion; 1,2 |
| | 23b | Discuss any limitations of the evidence included in the review. | Page Number: 13 Line Number: 24 Section and Paragraph: Discussion; 3 |
| | 23c | Discuss any limitations of the review processes used. | Page Number: 14 Line Number: 25 Section and Paragraph: Discussion; 4 |
| | 23d | Discuss implications of the results for practice, policy, and future research. | Page Number: 14 Line Number: 25 Section and Paragraph: Discussion; 5 |
| OTHER INFORMATION | | | |
| Registration and protocol | 24a | Provide registration information for the review, including register name and registration number, or state that the review was not registered. | Page Number: 17 Line Number: 16 Section and Paragraph: Dissemination; 1 |
| | 24b | Indicate where the review protocol can be accessed, or state that a protocol was not prepared. | Page Number: 17 Line Number: 16 Section and Paragraph: Declarations: Dissemination; 1 |
| | 24c | Describe and explain any amendments to information provided at registration or in the protocol. | Page Number: 17 Line Number: 16 Section and Paragraph: Declarations: Dissemination; 1 |
| Support | 25 | Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review. | Page Number: 16 Line Number: 4 Section and Paragraph: Declarations: Funding, 1 |
| Competing interests | 26 | Declare any competing interests of review authors. | Page Number: 16 Line Number: 7 Section and Paragraph: Declarations: Declaration of conflicting interests 1 |
| Availability of data, code and other materials | 27 | Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review. | Page Number: 16 Line Number: 1 Section and Paragraph: Declarations: Availability of data and material;1 |



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From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71
For more information, visit: <http://www.prisma-statement.org/>

Article information: <https://dx.doi.org/10.21037/apm-22-215>

*As the checklist was provided upon initial submission, the page number/line number reported may be changed due to copyediting and may not be referable in the published version. In this case, the section/paragraph may be used as an alternative reference.