Electronic Supplementary Material (ESI) for Food & Function.

PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review Identify the report as a systematic review and a meta-analysis.	1
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist. The abstract includes objective, research design and methods, results, and conclusion	2-3
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge. Described in the Introduction	4-6
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses. Stated in the Introduction	4-6
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses. The inclusion and exclusion criteria for this review and meta analysis were listed in the Methods 2.2 study selection	7-8
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. Information sources were listed in Methods 2.2 Identification of relevant studies, which conducted electronic search in PubMed, Embase, Web of Science and CNKI library from studies published between January 1970 and July 2022. As shown in the Methods 2.1. Identification of relevant studies.	6
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used. The search strategy included keywords, as shown in the Methods 2.1. Identification of relevant studies	6-7
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. Two independent researchers (Z. S. and F. C.) conducted electronic search. After deleting duplicate results, two investigators (Q. X. and B. X.) firstly scanned the titles and abstracts from studies independently. The full text was obtained independently by the other two investigators (Y. W. and K. L.). Differences were decided by a third investigator (A. C.). Duplicates were removed by filters used in the retrieval process. As shown in the Methods 2.1. Identification of relevant studies and 2.2. Study selection	6-7
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. For studies that fulfilled the inclusion criteria, two investigators (W. C. and K. L.) extracted relevant subjects and intervention characteristics. As shown in the Methods 2.3. Data extraction	8
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were 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. All outcomes for all studies were listed. In total, the results including the outcomes of 12 FBG, 11 HbA1c, and 5 FBI were reported from 12 individual treatment arms. As shown in the Methods 2.3. Data extraction, Table 1 and Supplemental Table S1	8
	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.	8

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		All other variables were listed partially. As shown in the Methods 2.3. Data extraction, Table 1 and Supplemental Table S1	
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. According to Cochrane risk of bias tool, the methodological quality of the included studies was assessed by two authors (C. C. and W. C.) independently. Any discrepancy was resolved after consultation with a third reviewer (A. C.). As shown in the Methods 2.4. Quality assessment	8
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. A random-effects model was used for calculation of the effect size. Effect size consisted of weight mean difference (WMD) and 95% CI (confidence intervals) between the outcomes of the intervention and control groups using the generic inverse-variance random effects model. As shown in Methods 2.5. Statistically analysis	9-10
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)). Changes from baseline to endpoint were used for the analysis of FBG, HbA1c, and FPI. As shown in the Methods 2.5. Statistical analysis.	9-10
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions. As shown in the Methods 2.5. Statistical analysis.	9-10
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses. Changes from baseline to endpoint were used for the analysis of FBG, HbA1c, and FPI. As shown in the Methods 2.5. Statistical analysis.	9-10
	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. The whole process of statistical analyses was carried out using the Review Manager 5.4 software. A random-effects model was used for calculation of the effect size. Effect size consisted of weight mean difference (WMD) and 95% CI (confidence intervals) between the outcomes of the intervention and control groups using the generic inverse-variance random effects model. As shown in the Methods 2.5. Statistical analysis	9-10
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression). Subgroup analyses were used to evaluate the impact of some certain factors, which were performed according to the following variables: physical condition (healthy or non-healthy), duration time (< 8 weeks or ≥ 8 weeks), baseline FBG (≤ 6.1 mmol/L or > 6.1 mmol/L), intervention type (MLE or ML (including tea and powder)). As shown in the Methods 2.5. Statistical analysis	10
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results. Sensitivity analysis was used to recalculate its effect by deleting each study., which assessed the source of heterogeneity. As shown in the Methods 2.5. Statistical analysis	10
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases). Using the Cochrane risk of bias tool. The following domains were considered: random sequence generation, allocation concealment, blinding (participants and investigators), incomplete outcome data, selective outcome reporting, and other sources of bias. Each category was judged as high risk of bias, unclear risk of bias, or low risk of bias, based on the available information, and was presented in the included studies. We defined a study as having an overall high risk of bias, if it was judged as having a high risk in at least one out of six domains (we did not consider the item “other source of bias”). Low risk of bias was assigned if a study scored as low risk in all the six domains. Otherwise, we considered the study at unclear risk of bias. As shown in Methods 2.4. Quality assessment	8
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome. GRADE guidance, As shown in the Methods 2.6. Grading the certainty of evidence for major comparisons and outcomes	10-11

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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 diagram. As shown in the Results 3.1. Study selection and Figure 1	11, 41
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded. As shown in the Results 3.1. Study selection	11
Study characteristics	17	Cite each included study and present its characteristics. As shown in the Results 3.2. Characteristics of the eligible studies	11
Risk of bias in studies	18	Present assessments of risk of bias for each included study. Risk of bias for each included study was determined using the Cochrane risk of bias tool. As shown in the Results 3.3. Quality assessment and Figure 2	12 and 42
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. All outcomes for each study were shown using structured tables and forest plots. As shown in Table 2, Figure 3, and Supp. Table S1	40 and 43
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies. Bias of analysis needs to be achieved by Begg's test and Egger's test. In this paper, we used the Review Manager 5.4 software, not the State software. So, we did not get the bias of analysis by using Review Manager 5.4 software.	
	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. As shown in the Results 3.3. Intervention effects, Table 2, Figure 3	12-17, 40, 43
	20c	Present results of all investigations of possible causes of heterogeneity among study results. As shown in the Results 3.3. Intervention effects.	12-17
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results. AS shown in the Results 3.3. Intervention effects, Supplemental Table S2	12-17
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed. Bias of analysis needs to be achieved by Begg's test and Egger's test. In this paper, we used the Review Manager 5.4 software, not the State software. So, we did not get the bias of analysis by using Review Manager 5.4 software.	
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed. As shown in the Results 3.3. Intervention effects.	12-17
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence. As shown in Paragraphs 1 and 2 from the Discussion	18-20
	23b	Discuss any limitations of the evidence included in the review. As shown in Paragraphs 2 from the 5. Strengths, limitations and implications	23
	23c	Discuss any limitations of the review processes used. As shown in Paragraphs 2 from the 5. Strengths, limitations and implications	23-24

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	23d	Discuss implications of the results for practice, policy, and future research. As shown in Paragraphs 3 from the 5. Strengths, limitations and implications	24
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. Title: Effect of mulberry leaf or mulberry leaf extracts on glycemic traits: A systematic review and meta-analysis. This network meta-analysis has been registered at www.crd.york.ac.uk/PROSPERO as CRD42022379199, and the current status is on the review ongoing.	
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared. www.crd.york.ac.uk/PROSPERO	
	24c	Describe and explain any amendments to information provided at registration or in the protocol. Nothing	
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review. This work was supported by China Agriculture Research System of MOF and MARA, and Science and Technology Innovation Team of Hunan Province. As shown in Acknowledgement.	25
Competing interests	26	Declare any competing interests of review authors. No potential conflict of interest was reported by the authors.	25
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. Template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	

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