**Supplementary Table 1.** PRIOR checklist.

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| --- | --- | --- | --- |
| **Section**Topic | **#** | **Item** | **Location reported** |
| **TITLE** |  |
| Title | 1 | Identify the report as an overview of reviews. | Page 1 |
| **ABSTRACT** |  |
| Abstract | 2 | Provide a comprehensive and accurate summary of the purpose, methods, and results of the overview of reviews. | Page 2 |
| **INTRODUCTION** |  |
| Rationale | 3 | Describe the rationale for conducting the overview of reviews in the context of existing knowledge. | Page 3 |
| Objectives | 4 | Provide an explicit statement of the objective(s) or question(s) addressed by the overview of reviews. | Page 4 |
| **METHODS** |  |
| Eligibility criteria | 5a | Specify the inclusion and exclusion criteria for the overview of reviews. If supplemental primary studies were included, this should be stated, with a rationale. | Page 4 |
| 5b | Specify the definition of ‘systematic review’ as used in the inclusion criteria for the overview of reviews. | Page 4 |
| Information sources | 6 | Specify all databases, registers, websites, organizations, reference lists, and other sources searched or consulted to identify systematic reviews and supplemental primary studies (if included).Specify the date when each source was last searched or consulted. | Page 5 |
| Search strategy | 7 | Present the full search strategies for all databases, registers and websites, such that they could be reproduced. Describe any search filters and limits applied. | Table S2 |
| Selection process | 8a | Describe the methods used to decide whether a systematic review or supplemental primary study (if included) met the inclusion criteria of the overview of reviews. | Page 5 |
| 8b | Describe how overlap in the populations, interventions, comparators, and/or outcomes of systematic reviews was identified and managed during study selection. | Table 5 |
| Data collection process | 9a | Describe the methods used to collect data from reports. | Page 6 |
| 9b | If applicable, describe the methods used to identify and manage primary study overlap at the levelof the comparison and outcome during data collection. For each outcome, specify the method used to illustrate and/or quantify the degree of primary study overlap across systematic reviews. | Page 6 |
| 9c | If applicable, specify the methods used to manage discrepant data across systematic reviews during data collection. | Page 6 |
| Data items | 10 | List and define all variables and outcomes for which data were sought. Describe any assumptions made and/or measures taken to identify and clarify missing or unclear information. | Page 6 |
| Risk of bias assessment | 11a | Describe the methods used to *assess* risk of bias or methodological quality of the included systematic reviews. | Page 6 |
| 11b | Describe the methods used to *collect* data on (from the systematic reviews) and/or *assess* the risk of bias of the primary studies included in the systematic reviews. Provide a justification for instances where flawed, incomplete, or missing assessments are identified but not re-assessed. | Page 6 |
| 11c | Describe the methods used to *assess* the risk of bias of supplemental primary studies (if included). | Page 6 |
| Synthesis methods | 12a | Describe the methods used to summarize or synthesize results and provide a rationale for the choice(s). | Page 6 |
| 12b | Describe any methods used to explore possible causes of heterogeneity among results. | Page 6 |
| 12c | Describe any sensitivity analyses conducted to assess the robustness of the synthesized results. | Not applicable |
| Reporting bias assessment | 13 | Describe the methods used to *collect* data on (from the systematic reviews) and/or *assess* the risk of bias due to missing results in a summary or synthesis (arising from reporting biases at the levels of the systematic reviews, primary studies, and supplemental primary studies, if included). | Page 6 |
| Certainty assessment | 14 | Describe the methods used to *collect* data on (from the systematic reviews) and/or *assess* certainty (or confidence) in the body of evidence for an outcome. | Page 5 |
| **RESULTS** |  |
| Systematic review and supplemental primary study selection | 15a | Describe the results of the search and selection process, including the number of records screened, assessed for eligibility, and included in the overview of reviews, ideally with a flow diagram. | Page 5 |
| 15b | Provide a list of studies that might appear to meet the inclusion criteria, but were excluded, with the main reason for exclusion. | Table S3 |
| **Section**Topic | **#** | **Item** | **Location reported** |
| Characteristics of systematic reviews and supplemental primary studies | 16 | Cite each included systematic review and supplemental primary study (if included) and present its characteristics. | Page 7 |
| Primary study overlap | 17 | Describe the extent of primary study overlap across the included systematic reviews. | Page 7 |
| Risk of bias in systematic reviews, primary studies, andsupplemental primary studies | 18a | Present assessments of risk of bias or methodological quality for each included systematic review. | Table S4 |
| 18b | Present assessments (*collected* from systematic reviews or *assessed* anew) of the risk of bias of the primary studies included in the systematic reviews. | Table S4 |
| 18c | Present assessments of the risk of bias of supplemental primary studies (if included). | Table S4 |
| Summary or synthesis of results | 19a | For all outcomes, summarize the evidence from the systematic reviews and supplemental primary studies (if included). If meta-analyses were done, present for each the summary estimate and its precision and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect. | Pages 7-9 |
| 19b | If meta-analyses were done, present results of all investigations of possible causes of heterogeneity. | Pages 7-9 |
| 19c | If meta-analyses were done, present results of all sensitivity analyses conducted to assess the robustness of synthesized results. | Not applicable |
| Reporting biases | 20 | Present assessments (*collected* from systematic reviews and/or *assessed* anew) of the risk of bias due to missing primary studies, analyses, or results in a summary or synthesis (arising from reporting biases at the levels of the systematic reviews, primary studies, and supplemental primarystudies, if included) for each summary or synthesis assessed. | Table S4 |
| Certainty of evidence | 21 | Present assessments (*collected* or *assessed* anew) of certainty (or confidence) in the body of evidence for each outcome. | Pages 7-9 |
| **DISCUSSION** |  |
| Discussion | 22a | Summarize the main findings, including any discrepancies in findings across the included systematic reviews and supplemental primary studies (if included). | Page 9 |
| 22b | Provide a general interpretation of the results in the context of other evidence. | Pages 9-12 |
| 22c | Discuss any limitations of the evidence from systematic reviews, their primary studies, and supplemental primary studies (if included) included in the overview of reviews. Discuss any limitations of the overview of reviews methods used. | Page 12 |
| 22d | Discuss implications for practice, policy, and future research (both systematic reviews and primary research). Consider the relevance of the findings to the end users of the overview of reviews, e.g., healthcare providers, policymakers, patients, among others. | Page 13 |
| **OTHER INFORMATION** |  |
| Registration and protocol | 23a | Provide registration information for the overview of reviews, including register name and registration number, or state that the overview of reviews was not registered. | Page 4 |
| 23b | Indicate where the overview of reviews protocol can be accessed, or state that a protocol was not prepared. | Page 4 |
| 23c | Describe and explain any amendments to information provided at registration or in the protocol. Indicate the stage of the overview of reviews at which amendments were made. | Page 4 |
| Support | 24 | Describe sources of financial or non-financial support for the overview of reviews, and the role of the funders or sponsors in the overview of reviews. | Page 13 |
| Competing interests | 25 | Declare any competing interests of the overview of reviews' authors. | Page 13 |
| Author information | 26a | Provide contact information for the corresponding author. | Page 1 (title page) |
| 26b | Describe the contributions of individual authors and identify the guarantor of the overview of reviews. | Page 13 |
| Availability of data and other materials | 27 | Report which of the following are available, where they can be found, and under which conditions they may be accessed: template data collection forms; data collected from included systematic reviews and supplemental primary studies; analytic code; any other materials used in the overview of reviews. | Page 13 |

**Supplementary Table 2.** Search strategy including the key terms and the queries for databases (August 14, 2023).

|  |  |
| --- | --- |
| PubMed | #1 "Diet"[Title/Abstract] OR "intake\*"[Title/Abstract] OR "food\*"[Title/Abstract] OR "beverage\*"[Title/Abstract] OR "vitamin\*"[Title/Abstract] OR "supplement\*"[Title/Abstract] OR "Dietary Supplements"[Title/Abstract] OR "dietary"[Title/Abstract] OR "nutrition"[Title/Abstract] OR "nutrient"[Title/Abstract] OR "supplementation"[Title/Abstract] OR "consumption"[Title/Abstract] OR "sport supplements"[Title/Abstract] OR "Minerals"[Title/Abstract] OR "Diet"[MeSH Terms] OR "Food"[MeSH Terms] OR "Dietary Supplements"[MeSH Terms] OR "Beverages"[MeSH Terms] OR "Vitamins"[MeSH Terms] OR "Minerals"[MeSH Terms]#2 burn[Title/Abstract] OR "burn injury"[Title/Abstract] OR "thermal injury"[Title/Abstract]#3 "Meta-Analysis"[Title/Abstract] OR "meta-analyses"[Title/Abstract] OR "Meta-Analysis"[Title/Abstract] OR "meta-analyze"[Title/Abstract] OR "Systematic Review"[Title/Abstract] OR "Systematic Review"[Publication Type] OR "Systematic Reviews as Topic"[MeSH Terms] OR "Meta-Analysis as Topic"[MeSH Terms] OR "Meta-Analysis"[Publication Type]#4 #1 AND #2 AND #3 |
| Web of Sciences | #1 TS=(diet) or TS=(intake) or TS=(food\*) or TS=(diet) or TS=(beverage\*) or TS=(vitamin\*) or TS=(supplement\*) or TS=(dietary) or TS=(consumption) or TS=(nutrition) or TS=(nutrient) or TS=("sport supplements") or TS=(supplementation) or TS=(minerals) or TS=("dietary supplement\*") or TS=("nutritional supplement\*")#2 TS=(burn) or TS=(ibs) or TS=("burn injury") or TS=("thermal injury") #3 TS=("Meta-Analysis") or TS=("meta-analyses") or TS=("meta-analyze") or TS=("Systematic Review")#1 AND #2 AND #3 |
| Scopus | #1 ( TITLE-ABS-KEY ( nutrition ) OR TITLE-ABS-KEY ( diet ) OR TITLE-ABS-KEY ( dietary ) OR TITLE-ABS-KEY ( food\* ) OR TITLE-ABS-KEY ( beverage\* ) OR TITLE-ABS-KEY ( consumption ) OR TITLE-ABS-KEY ( minerals ) OR TITLE-ABS-KEY ( vitamin\* ) OR TITLE-ABS-KEY ( "dietary supplement\*" ) OR TITLE-ABS-KEY ( "sport supplement" ) OR TITLE-ABS-KEY ( "nutritional supplement\*" ) OR TITLE-ABS-KEY ( nutrient ) OR TITLE-ABS-KEY ( supplementation )#2 ( TITLE-ABS-KEY ( burn ) OR TITLE-ABS-KEY ( "burn injury" ) OR TITLE-ABS-KEY ( "thermal injury" ) #3 ( TITLE-ABS-KEY ( "meta-analysis" ) OR TITLE-ABS-KEY ( "meta-analyses" ) OR TITLE-ABS-KEY ( "meta-analyze" ) OR TITLE-ABS-KEY ( "systematic review" ) OR TITLE-ABS-KEY ( "systematic reviews as topic" ) OR TITLE-ABS-KEY ( "meta-analysis as topic" ) )#1 AND #2 AND #3 |

**Supplementary Table 3.** Excluded studies with reason (N=9).

|  |  |
| --- | --- |
| 1. Evaluating the safety and efficacy of intraoperative enteral nutrition in critically ill burn patients: a systematic review and meta-analysis
 | Different study design |
| 1. The effect of dietary and supplementation of Omega-3 and Omega-6 fatty acids on healing of skin, gastrointestinal and diabetic wounds
 | Not interested outcome |
| 1. Systemic wound care: a meta-review of cochrane systematic reviews
2. Vitamin C in the Management of Burn Patients: A Systematic Review of the Risks and Benefits
3. Vitamin C in critically ill patients: An updated systematic review and meta-analysis
4. The effects of honey compared to silver sulfadiazine for the treatment of burns: A systematic review of randomized controlled trials
 | Not interested intervention |
| 1. Evidence-Based Nutritional Interventions in Wound Care
 | Systematic review without meta-analysis |
| 1. The effects of honey compared to silver sulfadiazine for the treatment of burns: A systematic review of randomized controlled trials
2. Immunonutrition as an adjuvant therapy for burns
 | Duplicate |
| 1. Honey in the treatment of burns: a systematic review and meta-analysis of its efficacy
 | Full-text was not available |

**Supplementary Table 4.** GRADE evidence table for the effect of nutritional interventions in burn patients.

| **Certainty assessment** | **№ of patients** | **Effect** | **Certainty** |
| --- | --- | --- | --- |
| **№ of studies** | **Study design** | **Risk of bias** | **Inconsistency** | **Indirectness** | **Imprecision** | **Other considerations** | **[intervention]** | **[comparison]** | **Relative(95% CI)** | **Absolute(95% CI)** |
| **Early enteral nutrition** |
| **Overall mortality** |
| 4 | randomised trials | not serious | not serious | not serious | seriousa | none | 15/146 (10.3%)  | 32/128 (25.0%)  | RR 0.36(0.19 to 0.68) | **160 fewer per 1,000**(from 203 fewer to 80 fewer) | ⨁⨁⨁◯Moderate |
| **Length of hospital stay** |
| 3 | randomised trials | not serious | not serious | not serious | seriousb | none | 63 | 47 | - | MD **15.3 day lower**(20.4 lower to 10.2 lower) | ⨁⨁⨁◯Moderate |
| **Sepsis** |
| 3 | randomised trials | not serious | not serious | not serious | seriousc | none | 12/132 (9.1%)  | 33/115 (28.7%)  | RR 0.23(0.11 to 0.45) | **221 fewer per 1,000**(from 255 fewer to 158 fewer) | ⨁⨁⨁◯Moderate |
| **Pneumonia** |
| 3 | randomised trials | not serious | seriousd | not serious | seriouse | none | 18/132 (13.6%)  | 29/115 (25.2%)  | RR 0.49(0.14 to 1.63) | **129 fewer per 1,000**(from 217 fewer to 159 more) | ⨁⨁◯◯Low |
| **Combined immunonutrition** |
| **Overall mortality** |
| 1 | randomised trials | not serious | not serious | seriousf | seriousg | none | 2/12 (16.7%)  | 0/11 (0.0%)  | RR 4.62(0.25 to 86.00) | **0 fewer per 1,000**(from 0 fewer to 0 fewer) | ⨁⨁◯◯Low |
| **Length of hospital stay** |
| 2 | randomised trials | serioush | not serious | seriousi | seriousj | none | 35 | 29 | - | MD **3.36 day higher**(4.38 lower to 11.1 higher) | ⨁◯◯◯Very low |
| **Glutamine** |
| **Overall mortality** |
| 6 | randomised trials | not serious | not serious | not serious | seriousk | none | 105/693 (15.2%)  | 115/706 (16.3%)  | RR 1.02(0.79 to 1.30) | **3 more per 1,000**(from 34 fewer to 49 more) | ⨁⨁⨁◯Moderate |
| **Length of hospital stay** |
| 10 | randomised trials | not serious | seriousd | not serious | seriousl | none | 207 | 209 | - | MD **6.23 day lower**(9.53 lower to 2.94 lower) | ⨁⨁◯◯Low |
| **Overall infection** |
| 6 | randomised trials | not serious | not serious | not serious | seriousm | none | 145/686 (21.1%)  | 158/698 (22.6%)  | RR 0.81(0.64 to 1.03) | **43 fewer per 1,000**(from 81 fewer to 7 more) | ⨁⨁⨁◯Moderate |
| **Wound infection** |
| 2 | randomised trials | not serious | not serious | seriousi | seriousn | none | 5/39 (12.8%)  | 13/42 (31.0%)  | RR 0.42(0.17 to 1.07) | **180 fewer per 1,000**(from 257 fewer to 22 more) | ⨁⨁◯◯Low |
| **Ventilation day** |
| 3 | randomised trials | not serious | not serious | not serious | seriouso | none | 636 | 646 | - | MD **1.38 day higher**(0.76 lower to 3.53 higher) | ⨁⨁⨁◯Moderate |
| **Branched-chain amino acids** |
| **Overall mortality** |
| 1 | randomised trials | not serious | not serious | seriousf | seriousp | none | 5/10 (50.0%)  | 2/10 (20.0%)  | RR 2.40(0.63 to 9.96) | **280 more per 1,000**(from 74 fewer to 1,000 more) | ⨁⨁◯◯Low |
| **Length of hospital stay** |
| 1 | randomised trials | not serious | not serious | seriousf | seriousq | none | 10 | 10 | - | MD **4 day higher**(27.6 lower to 35.6 higher) | ⨁⨁◯◯Low |
| **Fish oil** |
| **Overall mortality** |
| 7 | randomised trials | not serious | not serious | not serious | seriousr | none | 26/160 (16.3%)  | 29/156 (18.6%)  | RR 0.95(0.59 to 1.54) | **9 fewer per 1,000**(from 76 fewer to 100 more) | ⨁⨁⨁◯Moderate |
| **Length of hospital stay** |
| 6 | randomised trials | seriouss | not serious | not serious | serioust | none | 150 | 146 | - | MD **1.85 day lower**(8.67 lower to 4.97 higher) | ⨁⨁◯◯Low |
| **Sepsis** |
| 2 | randomised trials | not serious | not serious | seriousi | seriousu | publication bias strongly suspected v | 13/81 (16.0%)  | 20/78 (25.6%)  | RR 0.66(0.30 to 1.43) | **87 fewer per 1,000**(from 179 fewer to 110 more) | ⨁◯◯◯Very low |
| **Pneumonia** |
| 7 | randomised trials | not serious | not serious | not serious | seriousw | none | 52/166 (31.3%)  | 73/161 (45.3%)  | RR 0.68(0.44 to 1.06) | **145 fewer per 1,000**(from 254 fewer to 27 more) | ⨁⨁⨁◯Moderate |
| **Wound infection** |
| 4 | randomised trials | not serious | seriousx | not serious | seriousy | publication bias strongly suspected z | 48/118 (40.7%)  | 53/113 (46.9%)  | RR 0.82(0.49 to 1.36) | **84 fewer per 1,000**(from 239 fewer to 169 more) | ⨁◯◯◯Very low |
| **Ventilation day** |
| 4 | randomised trials | not serious | seriousaa | not serious | seriousab | none | 124 | 120 | - | MD **2.11 day lower**(5.03 lower to 0.82 higher) | ⨁⨁◯◯Low |
| **Ornithine α-ketoglutarate** |
| **Overall mortality** |
| 2 | randomised trials | serioush | not serious | seriousi | seriousac | none | 9/56 (16.1%)  | 7/39 (17.9%)  | RR 9.92(0.36 to 2.37) | **1,000 more per 1,000**(from 115 fewer to 246 more) | ⨁◯◯◯Very low |
| **Length of hospital stay** |
| 1 | randomised trials | serioush | not serious | seriousf | seriousad | none | 32 | 16 | - | MD **4.21 day lower**(18.8 lower to 10.4 higher) | ⨁◯◯◯Very low |
| **Trace elements** |
| **Overall mortality** |
| 5 | randomised trials | not serious | not serious | not serious | seriousae | none | 3/67 (4.5%)  | 11/94 (11.7%)  | RR 0.47(0.15 to 1.54) | **62 fewer per 1,000**(from 99 fewer to 63 more) | ⨁⨁⨁◯Moderate |
| **Length of hospital stay** |
| 3 | randomised trials | not serious | not serious | not serious | seriousaf | none | 21 | 21 | - | MD **8.96 day lower**(24.8 lower to 6.96 higher) | ⨁⨁⨁◯Moderate |

**CI:** confidence interval; **MD:** mean difference; **RR:** risk ratio

#### Explanations

a. Serious imprecision since the optimal information size was not met (274 participants with 47 events). Downgraded.

b. Optimal information size was not meet. The effect size (WMD: -15.3) surpassed the minimal clinically important difference for LOS (MCID: -14.05), but the upper bound of the 95%CI overlapped the MCID for LOS (95%CI: -20.4, -10.2). Downgraded.

c. Serious imprecision since the optimal information size was not met (247 participants with 45 events). Downgraded.

d. Serious inconsistency since I2 = 64%. Downgraded.

e. Serious imprecision since the optimal information size was not met (247 participants with 47 events). Downgraded.

f. Serious indirectness since only one study was available. Downgraded.

g. Serious imprecision since the optimal information size was not met (23 participants with 2 events). Downgraded.

h. Serious risk of bias since one study had a high risk of bias. Downgraded.

i. Serious indirectness since only 2 studies were available. Downgraded.

j. Optimal information size was not met. The effect size (WMD: 3.36) surpassed the minimal clinically important difference for LOS (MCID: -10.1). Downgraded.

k. Serious imprecision since the optimal information size was not met (1399 participants with 220 events). Downgraded.

l. Optimal information size was not met. The effect size (WMD: -6.23) surpassed the minimal clinically important difference for LOS (MCID: -7.1). Downgraded.

m. Serious imprecision since the optimal information size was not met (1384 participants with 303 events). Downgraded.

n. Serious imprecision since the optimal information size was not met (81 participants with 18 events). Downgraded.

o. Optimal information size was met. The effect size (WMD: 1.38) surpassed the minimal clinically important difference for ventilation day (MCID: -7.65). Downgraded.

p. Serious imprecision since the optimal information size was not met (20 participants with 7 events). Downgraded.

q. Optimal information size was not met. The effect size (WMD: -4) surpassed the minimal clinically important difference for LOS (MCID: -14.5). Downgraded.

r. Serious imprecision since the optimal information size was not met (316 participants with 55 events). Downgraded.

s. Serious risk of bias since 3 studies had a high risk of bias. Downgraded.

t. Optimal information size was not met. The effect size (WMD: -1.85) surpassed the minimal clinically important difference for LOS (MCID: -12). Downgraded.

u. Serious imprecision since the optimal information size was not met ( 159 participants with 23 events). Downgraded.

v. Serious publication bias since P Egger = 0.03 and there was asymmetry in the funnel plot. Downgraded.

w. Serious imprecision since the optimal information size was not met ( 354 participants with 105 events). Downgraded.

x. Serious inconsistency since I2 = 55%. Downgraded.

y. Serious imprecision since the optimal information size was not met (231 participants with 101 events). Downgraded.

z. Serious publication bias since P Egger = 0.008 and there was asymmetry in the funnel plot. Downgraded

aa. Serious inconsistency since I2 = 76%. Downgraded.

ab. Optimal information size was not met. The effect size (WMD: -2.11) surpassed the minimal clinically important difference for ventilation day (MCID: -5.82). Downgraded.

ac. Serious imprecision since the optimal information size was not met (95 participants with 16 events). Downgraded.

ad. Optimal information size was not met. The effect size (WMD: -4.21) surpassed the minimal clinically important difference for LOS (MCID: -5.75). Downgraded.

ae. Serious imprecision since the optimal information size was not met (161 participants with 14 events). Downgraded.

af. Optimal information size was not met. The effect size (WMD: -8.96) surpassed the minimal clinically important difference for LOS (MCID: -11.8). Downgraded

**Supplementary Table 5.**  Methodological quality of included systematic reviews using AMSTAR 2.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, year (ref.)** | **Q1** | **Q2** | **Q3** | **Q4** | **Q5** | **Q6** | **Q7** | **Q8** | **Q9** | **Q10** | **Q11** | **Q12** | **Q13** | **Q14** | **Q15** | **Q16** | **Quality of evidence** |
| Kurmis et al., 2015 (1) | Yes | Yes | Yes | PY | Yes | No | PY | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes | No | Low |
| Lin et al., 2013 (2) | Yes | No | Yes | PY | No | No | PY | No | No | Yes | Yes | No | No | Yes | No | Yes | Critically low |
| Mortada et al., 2023 (3) | Yes | Yes | Yes | PY | Yes | Yes | PY | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | High |
| Marik & Zaloga, 2018 (4) | Yes | PY | Yes | PY | No | No | Yes | PY | Yes | No | Yes | Yes | No | Yes | No | Yes | Critically low |
| Ortiz-Reyes et al., 2023 (5) | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | High |
| Pham et al., 2019 (6) | Yes | No | Yes | PY | Yes | Yes | Yes | PY | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Critically low |
| Pu et al., 2018 (7) | Yes | No | Yes | PY | Yes | Yes | PY | PY | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Critically low |
| Siritientong et al., 2022 (8) | Yes | PY | Yes | PY | Yes | Yes | PY | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | High |
| Tan et al., 2014 (9) | Yes | Yes | Yes | PY | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | High |
| Yue et al., 2023 (10) | Yes | Yes | Yes | PY | Yes | Yes | PY | PY | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | High |
| Zanten et al., 2015 (11) | Yes | No | Yes | PY | Yes | Yes | Yes | Yes | No | Yes | Yes | No | No | Yes | Yes | Yes | Critically low |

ref, reference; PY, partially yes. Q1:Did the research questions and inclusion criteria for the review include the components of PICO?, Q2: 2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?; Q3, Did the review authors explain their selection of the study designs for inclusion in the review?; Q4, Did the review authors use a comprehensive literature search strategy?; Q5, Did the review authors perform study selection in duplicate?; Q6, Did the review authors perform data extraction in duplicate?; Q7, Did the review authors provide a list of excluded studies and justify the exclusions?; Q8, Did the review authors describe the included studies in adequate detail?; Q9, Did the review authors use a satisfactory technique for assessing the risk of bias?; Q10, Did the review authors report on the sources of funding?; Q11, Did the review authors use appropriate methods for statistical combination of results?; Q12, Did the review authors assess the potential impact of RoB in individual studies on the results?; Q13, Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?; Q14, Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity?; Q15, Did the review authors carry out an adequate investigation of publication bias?; Q16, Did the review authors report any potential sources of conflict of interest?

**Supplementary references**

1. Kurmis R, Greenwood J, Aromataris E. Trace element supplementation following severe burn injury: A systematic review and meta-Analysis. Journal of Burn Care and Research. 2016;37(3):143-59.

2. Lin JJ, Chung XJ, Yang CY, Lau HL. A meta-analysis of trials using the intention to treat principle for glutamine supplementation in critically ill patients with burn. Burns : journal of the International Society for Burn Injuries. 2013;39(4):565-70.

3. Mortada H, Alhindi N, Abukhudair A, Alanazi S, AlSahli A, Arab K. The Effects of Glutamine Supplementation on Reducing Mortality and Morbidity among Burn Patients: A Systematic Review and Meta-analysis of Randomized Controlled Trials. JPRAS open. 2023;35:6-17.

4. Marik PE, Zaloga GP. Immunonutrition in critically ill patients: A systematic review and analysis of the literature. Intensive care medicine. 2008;34(11):1980-90.

5. Ortiz-Reyes L, Lee ZY, Chin Han Lew C, Hill A, Jeschke MG, Turgeon AF, et al. The Efficacy of Glutamine Supplementation in Severe Adult Burn Patients: A Systematic Review with Trial Sequential Meta-Analysis. Critical care medicine. 2023;51(8):1086-95.

6. Pham CH, Fang M, Vrouwe SQ, Kuza CM, Yenikomshian HA, Gillenwater J. Evaluating the safety and efficacy of intraoperative enteral nutrition in critically ill burn patients: a systematic review and meta-analysis. Journal of Burn Care & Research. 2020;41(4):841-8.

7. Pu H, Doig GS, Heighes PT, Allingstrup MJ. Early enteral nutrition reduces mortality and improves other key outcomes in patients with major burn injury: A meta-analysis of randomized controlled trials. Critical care medicine. 2018;46(12):2036-42.

8. Siritientong T, Thet D, Buangbon M, Nokehoon P, Leelakanok N, Methaneethorn J, et al. Nutritional Support with Omega-3 Fatty Acids in Burn Patients: A Systematic Review with Meta-Analysis of Randomized Controlled Trials. Nutrients. 2022;14(14).

9. Tan HB, Danilla S, Murray A, Serra R, El Dib R, Henderson TO, et al. Immunonutrition as an adjuvant therapy for burns. The Cochrane database of systematic reviews. 2014;2014(12):Cd007174.

10. Yue HY, Wang Y, Zeng J, Jiang H, Li W. Enteral glutamine supplements for patients with severe burns: A systematic review and meta-analysis. Chinese Journal of Traumatology - English Edition. 2023.

11. van Zanten AR, Dhaliwal R, Garrel D, Heyland DK. Enteral glutamine supplementation in critically ill patients: a systematic review and meta-analysis. Critical care (London, England). 2015;19(1):294.