

Supplementary information

Obesity, Bone Loss, and Periodontitis: The Interlink

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Table S1. Obesity and periodontitis systematic reviews and meta-analyses search strategies.

Database (Start date)	Search strategies (Search end date: March 31, 2022)
PubMed (1946)	(((((Obesity [MeSH Terms]) OR (obese)) OR (overweight)) AND (((Periodontitis [MeSH Terms]) OR (Chronic Periodontitis [MeSH Terms])) OR (periodontal disease))) AND (Systematic review OR review OR overview OR meta-analysis)
EMBASE (1974)	(exp "obesity"/ or exp "obese patient"/) AND (exp "periodontitis"/ or exp "chronic periodontitis"/ or exp "periodontal disease"/) AND (exp "review"/ or exp "systematic review"/ or exp "meta analysis"/ or overview.mp.)
Web of Science (1956)	((TS=(obesity)) OR TS=(obese)) AND (((TS=(periodontitis)) OR TS=(chronic periodontitis)) OR TS=(periodontal disease)) AND (((TS=(review)) OR TS=(systematic review)) OR TS=(meta analysis)) OR TS=(overview))

Table S2. Assessment of methodological quality by Risk of Bias in Systematic Reviews (ROBIS) tool concerning systematic reviews and meta-analyses mentioned.

Authors, year	Phase 1	Phase 2			Phase 3	
	Assessing relevance	1. Study eligibility criteria	2. Identification and selection of studies	3. Data collection and study appraisal	4. Synthesis and findings	Risk of bias in the review
<i>Periodontitis and obesity</i>						
Chaffee <i>et al.</i> 2010 [12]	Yes	Low	Low	Low	High ¹	High ¹
Suvan <i>et al.</i> 2011 [13]	Yes	Low	Low	Low	Unclear ²	Unclear ²
de Moura-Grec <i>et al.</i> 2014 [14]	Yes	Low	Low	High ^c	Unclear ²	High ^{2,3}
Keller <i>et al.</i> 2015 [20]	Yes	Low	Low	High ^c	High ⁴	High ^{3,4}
Li <i>et al.</i> 2015 [15]	Yes	Low	Low	Low	Low	Low
Nascimento <i>et al.</i> 2015 [16]	Yes	Low	Low	Low	Low	Low

Nascimento <i>et al.</i> 2016 [17]	Partial	Low	Low	Low	Low	Low
Martens <i>et al.</i> 2017 [18]	Yes	Low	Low	Low	High ⁵	High ⁵
Martinez-Herrera <i>et al.</i> 2017 [21]	Yes	Low	Low	High ³	High ⁴	High ^{3, 4}
Khan <i>et al.</i> 2018 [22]	Yes	Low	Low	Low	High ⁴	High ⁴
Foratori-Junior <i>et al.</i> 2022 [19]	Yes	Low	Low	Low	Low	Low
<i>Periodontitis GCF cytokines and obesity</i>						
Akram <i>et al.</i> 2015 [114]	Yes	Low	Low	Low	Low	Low
<i>Exercise intervention adjunct periodontal therapy</i>						
Gerber <i>et al.</i> 2016 [146]	Yes	Low	Low	Low	High ⁴	High ⁴
Ramseier <i>et al.</i> [154]	Yes	Low	Low	Low	High ⁴	High ⁴
<i>Bone mineral density and obesity</i>						
Turcotte <i>et al.</i> 2021 [5]	Yes	Low	Low	Low	Low	Low

¹ Heterogeneity of included studies is considerable with 13 of 28 primary studies rated with high risk of bias and were not addressed in the synthesis.

² Robustness of the findings is not secured because funnel plot or sensitivity analyses were not attempted.

³ Risk of bias (or methodological quality) not assessed using appropriate criteria.

⁴ ROBIS Domain 4.4, 4.5, and 4.6 were not addressed in the systematic review concern without meta-analysis (i.e. between study variation-heterogeneity, funnel plot/sensitivity analysis, bias — publication bias data not available).

⁵ 6 of 7 included studies did not report periodontal disease definition, the synthesis may not appropriately reflect any similarity in outcomes while potential heterogeneity was considerable and not addressed.