

BASCD 2023 ABSTRACT #08**The oral health of children with type 1 diabetes: a literature review**

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Background:

The increasing incidence of type I diabetes mellitus (T1DM) has prompted interest in the oral health of paediatric patients with the condition. With newer insulin therapies, sugars are included in those children's diets at levels similar to their peers. There is a need to recognize the oral health conditions impacted by T1DM to inform prevention strategies.

Objectives:

To identify whether children with type 1 diabetes have different oral health outcomes than their peers.

Methods:

An electronic search was performed using PubMed, Cochrane Library, Web of Science, CINAHL, and Lenus, in February 2022. The inclusion criteria were human observational studies, in English or Polish, between 01/2010 and 02/2022, investigating children under 18 years of age, including a comparative group, examining: caries, periodontal disease and salivary alterations (lifestyle-modifiable factors). Narrative evidence synthesis was aided by results tables. Articles were appraised using the Critical Appraisal Skills Programme tool. The search was updated in May 2023.

Results:

Twenty-one case-control studies were identified. Most studies found a positive association between T1DM and periodontal disease. For dental caries, most studies report no association, some describe positive (increased caries) and/or negative (decreased caries) associations. Likewise, for salivary alterations, no precise conclusion can be reached, with an even spread of positive and no association and one report of negative association. One study was identified in the updated search, confirming inconsistent results for caries and salivary alterations.

Conclusion:

The risk of poorer oral health in children with T1DM was found to be increased for periodontal disease and is not proven for dental caries and salivary alterations. It is recommended that children with T1DM receive tailored oral health messages and screening with focus on periodontal disease. The evidence was at high risk of bias, with methodological inconsistencies. Future research should consider study design carefully and implement strategies to improve quality.

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