IAPD
International Association of Paediatric Dentistry

Management of Bruxism in Children

Foundational Articles and Consensus Recommendations

References

Casazza E, Giraudeau A, Payet A, Orthlieb JD, Camoin A. Management of idiopathic sleep bruxism in children and adolescents: A systematic review of the literature. Arch Pediatr. 2022 Jan;29(1):12-20. doi: 10.1016/j.arcped.2021.11.014

de Oliveira Reis L, Ribeiro RA, Martins CC, Devito KL. Association between bruxism and temporomandibular disorders in children: A systematic review and meta-analysis. Int J Paediatr Dent. 2019 Sep;29(5):585-595. doi: 10.1111/ipd.12496.

Kammer PV, Moro JS, Soares JP, Massignan C, Phadraig CMG, Bolan M. Prevalence of tooth grinding in children and adolescents with neurodevelopmental disorders: A systematic review and meta-analysis. J Oral Rehabil. 2022 Jun;49(6):671-685. doi: 10.1111/joor.13315

Lobbezoo F, Ahlberg J, Raphael KG, Wetselaar P, Glaros AG, Kato T, et al. International consensus on the assessment of bruxism: report of a work in progress. J Oral Rehabil. (2018) 45:837–44. doi: 10.1111/joor.12663

Manfredini D, Restrepo C, Diaz-Serrano K, Winocur E, Lobbezoo F. Prevalence of sleep bruxism in children: a systematic review of the literature. J Oral Rehabil. 2013 Aug;40(8):631-42. doi: 10.1111/joor.12069.

Restrepo C, Gómez S, Manrique R. Treatment of bruxism in children: a systematic review. Quintessence Int. 2009 Nov-Dec;40(10):849-55. PMID: 19898717.

Restrepo-Serna C, Winocur E. Sleep bruxism in children, from evidence to the clinic. A systematic review. Front Oral Health. 2023 May 11;4:1166091. doi: 10.3389/froh.2023.1166091. PMID: 37252006; PMCID: PMC10213965.

Ribeiro-Lages MB, Martins ML, Magno MB, Masterson Ferreira D, Tavares-Silva CM, Fonseca-Gonçalves A, Serra-Negra JM, Maia LC. Is there an association between dental malocclusion and bruxism? A systematic review and meta-analysis. J Oral Rehabil. 2020 Oct;47(10):1304-1318. doi: 10.1111/joor.12971. Epub 2020 Apr 21. PMID: 32246486.

Rodrigues JA, Azevedo CB, Chami VO, Solano MP, Lenzi TL. Sleep bruxism and oral health-related quality of life in children: A systematic review. Int J Paediatr Dent. 2020 Mar;30(2):136-143. doi: 10.1111/ipd.12586

Background

Bruxism is a repetitive jaw-muscle activity characterized by clenching or grinding of the teeth and/or by bracing or thrusting of the mandible mainly during sleep and sometimes when awake. The aetiology of bruxism is multifactorial and includes biological, psychosocial, and lifestyle factors. Suggested risk factors include anxiety, depression, and stress as well as breathing disorders and gastroesophageal reflux disease. The reported prevalence of awake bruxism and sleep bruxism in children and adolescents is highly variable between studies (3.5-40.6%), with a commonly described decrease with age, irrespective of gender. The evidence is currently insufficient for definitive conclusions about the impact of sleep or awake bruxism on oral health related quality of life in children.

There may be increased prevalence, especially of awake bruxism, in children with attention-deficit hyperactivity disorder, autism spectrum disorder, cerebral palsy, or Down syndrome. There is no evidence supportive of an association between sleep bruxism and psychosocial factors in children younger than five years of age. However, a significant association appears to be present in children between 6 and 11 years of age and in adolescents between 12 and 17 years of age. Bruxism is not associated with the presence of any malocclusions evaluated. Tooth wear is not significantly associated with the frequency of sleep bruxism in children in the mixed dentition.

IAPD Consensus Recommendations

1. Diagnosing bruxism includes taking a thorough history of the presenting complaints, medical history, psychological and emotional disturbances clinical examination, and possible further assessment of muscle activity. **(Consensus-based recommendation; Global agreement: 98%)**

2. Minimum criteria for a diagnosis of bruxism include reported tooth grinding or clenching, with abnormal tooth wear and or bruxism-related sounds or muscle discomfort. **(Consensus-based recommendation; Global agreement: 100%)**

3. It is suggested clinicians include asking about a history of gastro-oesophageal reflux disease (GERD) when assessing wear that appears or doesn't appear to be related to bruxism. **(Consensus-based statement; Global agreement: 98%)**

4. The clinical examination should include: **a)** assessment of the muscles of mastication for any tenderness, **b)** TMJ movements or tenderness, **c)** mouth opening and **d)** the teeth (none-physiological and abnormal wear patterns, fractured teeth or restorations and any sensitivity due to possibly exposed dentine). The upper airway may be assessed using - radiographs after consultation with an ENT specialist. **(Consensus-based recommendation; Global agreement: 96%)**

5. A case-by-case approach, considering the specificities presented by each young patient, seems to be the most appropriate management. As described and discussed in the existing literature, this may include an occlusal splint, rapid palatal expansion, cognitive-behavioural therapy and/or the proprioceptive approach or no need for any active treatment. **(Consensus-based recommendation; Global agreement: 93%)**

6. If the history indicates a medical diagnosis associated with the bruxism and possible tooth wear, then the management should include a referral to the family physician or paediatrician with appropriate information about the signs and symptoms observed, and a request for their advice. **(Consensus-based recommendation; Global agreement: 96%)**

7. Presently, there is not enough evidence to support pharmacological management of sleep bruxism in children and adolescents. **(Consensus-based recommendation; Global agreement: 93%)**

8. A family dentist may consider referring a child with bruxism and tooth wear to a paediatric dentist for advice if they are unsure of the diagnosis and management. **(Consensus-based statement; Global agreement: 98%)**

How to cite: IAPD Foundational Articles and Consensus Recommendations: Bruxism, 2024. http://www.iapdworld.org/2024_02_bruxism.