

Clinical bruxism semantics beyond academic debates: Normo- and patho-bruxism as a new proposal

Bruxism continues to attract unabated attention both in the clinic and in research reflected in publication of numerous original research papers, commentaries and reviews in *Journal of Oral Rehabilitation* (JOR). Clinically, it is still a matter of vivid discussion and opinions to what degree bruxism, for example, can exacerbate periodontal diseases, significantly interferes with occlusal restorations and survival of oral implants, and contributes as a risk factor or aggravates oro-facial musculoskeletal symptoms or sleep apnoea. Many research reports, reviews and expert opinions, published in JOR and elsewhere, have attempted to clarify such questions and look into the physiology and pathophysiology of awake and sleep bruxism. As such, it has been particularly valuable to be guided by consensus reports and commentaries. For example, a simple yet pragmatic definition of bruxism in JOR in 2013 has been cited more than 300 times and downloaded >10 000 times and a subsequent follow-up commentary in 2018 also has potentials to impact the field.^{1,2} Notwithstanding the need for better and operationalised definitions, criteria and recommendations for standardised assessment of bruxism an enigma remains on the word “bruxism” and its daily use in clinical reality.

Most textbook chapters and reviews often will start by the Greek meaning of “bruxism” specifically associated to tooth contacts with a belief of a “forceful” activity damaging tooth structures. Nevertheless, can the bruxism definition include also jaw muscle activity without obvious tooth contacts and/or only light touch as an “oral habit”³? Such issues are not yet resolved. For clinicians, the bruxism semantic debate may cloud the message that bruxism can both be considered a “normal physiological process” which is described as a behaviour^{4,5} and may also, in certain conditions and in some individuals become a risk factor or be associated to signs and symptoms of pathological conditions.^{2,6,7} The main challenge is to have a clear and clinically operational way to separate one from the other, yet no clear or definitive answer is available in part due to lack of standardisation in clinical investigations.^{8,9}

Although perhaps counterintuitive, it could be that some characteristics of jaw muscle activity during sleep (such as sleep bruxism or other) could be beneficial for the homeostasis of oro-facial functions. Bruxism as such may therefore not be always harmful. Potentially, it could be that specific phenotypes of sleep bruxism and jaw muscle activity may concur to open the upper airways.¹⁰⁻¹³ Furthermore, during sleep, jaw muscle activity could also facilitate saliva secretion

to moisture the oral mucosa.^{12,14} Obviously, the characteristics of jaw muscle activities associated with potential “good” bruxism need to be demonstrated and delineated by further research.

So how can we today use the same word “bruxism” when it covers behaviour/physiology and pathophysiology? This may contribute to maintain confusion about the bruxism concept, for a better understanding of the clinical significance of bruxism and best treatment planning.

We propose the following solution to better differentiate between the potential consequence of bruxism and possibly also the underlying psycho-biological mechanisms. **Bruxism either awake or sleep and only associated with normal homeostasis and no signs or symptoms (eg related to pain, insomnia and sleep apnoea) and/or pathological impact on either oral or general health condition could be termed “normo-bruxism.”** Whereas awake or sleep bruxism linked to any type of pathological consequence for the individual could be termed “patho-bruxism” as suggested in a recent book chapter.¹⁵

Instead of unrealistic attempts to “cure” bruxism, the treatment goal could be to control “patho-bruxism” and restore “normo-bruxism.” The prefix may help to better understand and realise that bruxism is a term that covers a wide range of conditions and with different impact on oro-facial and general health. We therefore urge clinicians and researchers involved in bruxism research and education to adapt these new terms with the objective of guiding clinicians to the best practice in managing “bruxism.”

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