

Quality Resource Guide

Discussing Bruxism and its Treatment with the Dental Patient

Author Acknowledgements

RACHEL KEARNEY, RDH MS

Division of Dental Hygiene
College of Dentistry
The Ohio State University
Columbus, Ohio

Ms. Kearney has no relevant financial relationships to disclose.

Educational Objectives

Following this unit of instruction, the dental staff member should be able to:

1. Define bruxism.
2. Describe the cause of bruxism.
3. List the signs and symptoms of bruxism.
4. Discuss treatment options for bruxism.
5. List strategies for communicating about clinical findings and treatment options with patients.

MetLife designates this activity for **1.0 continuing education credits** for the review of this Quality Resource Guide and successful completion of the post test.

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Originally published August 2018. Updated and revised March 2022. Expiration date: March 2025.

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What is bruxism?

Bruxism, or the grinding or clenching of teeth, is a condition that was reported as early as 600 BC with reports of men gnashing their teeth.¹ Bruxism is defined as a repetitive jaw-muscle activity characterized by clenching or grinding of the teeth and/or by bracing or thrusting of the mandible.² Bruxism can occur during the day (awake bruxism) or during sleep (sleep bruxism). In sleep bruxism, patients with the most severe symptoms are more likely to have bruxism during the rapid eye movement (REM) state of sleep.³ Bruxism is common among women, men and children. Bruxism is more prevalent in women than in men.⁴ Up to 30% of adults report bruxism, with awake bruxism disclosed more frequently than sleep bruxism.⁵ Up to 40% of children experience bruxism, with the prevalence of decreasing as a child gets older.⁶ Many patients are not aware that they have bruxism; therefore, it is important to discuss bruxism during visits where signs and/or symptoms are identified. Early intervention can lead to prevention of dental problems and improved oral health. This Quality Resource Guide was prepared for the dental office staff and will provide a brief overview of the etiologies of and treatments for bruxism followed by guidelines for discussing bruxism with patients.

What causes Bruxism?

Bruxism does not have one sole cause. Initially, it was believed that bruxism was caused by orofacial anatomy and occlusal problems, but more recently psychological factors, sleep responses and neurotransmitters are found to have a stronger role in the causes of bruxism. When a person with specific personality characteristics is under stress he/she are more likely to develop bruxism.⁷ Patients who consume alcohol, coffee and use tobacco are more likely to have bruxism.⁸ There is little evidence to support that other drug use is associated with bruxism.⁹ Patients with GERD (gastro-esophageal reflux disorder) are at higher risk for sleep bruxism than those who do not have GERD.¹⁰ Bruxism has also been shown to be, in part, related to genetic influences.¹¹ Second-hand smoke exposure and sleep disturbances have strong associations with bruxism in children.⁶

Signs and Symptoms of Bruxism

There are several clinical signs and symptoms of bruxism. Often patients do not know they have bruxism so it is important to discuss these signs and symptoms with all patients, not just those who report grinding and/or clenching (grinding is often times heard audibly while clenching is silent). One way to bring up the topic is to ask a patient on the medical history or exam form if they clench or grind their teeth.¹²

It is important to note that tooth wear alone is not a reliable indicator of bruxism.⁵ Intraoral signs of bruxism (**Table 1**) may include wear facets, fractured teeth or restorations, abfraction or loose teeth, indentations along the side of the tongue or tori/exostoses.^{12,13} Periodontal changes may also be evident including a widening of the periodontal ligament, mobility and recession.¹² The existence of these intraoral findings may indicate bruxism, but their presence does not give a definitive diagnosis as each may be caused by other conditions.

Patients who are bruxing may report temporomandibular disorders (TMD) symptoms, including soreness or tenderness in the muscles of the jaw, particularly the masseter and lateral/medial pterygoids. They may also describe noises in the temporomandibular joint.¹¹ The exact relationship between bruxism and TMD is unknown.⁵ Children do not experience the same relationship between bruxism and TMD.¹⁴ Adult patients often have headaches associated with bruxism, though children do not typically have headaches related to the condition.¹⁵

Diagnosing bruxism requires a multifaceted approach including evaluating a patient's psychosocial behaviors, intra and extra oral findings, and their reporting of other symptoms. Polysomnography or electromyography, which measure the activity of the jaw muscles, must be used to definitively diagnose bruxism.^{16,17}

Treatment for Bruxism

There is not a standard treatment for bruxism. Many dentists take several approaches to treatment, which include dental treatments, behavioral treatment and medical treatments (**Table 2**).

Table 1 - Signs & Symptoms of Bruxism

<p>Intraoral</p> <ul style="list-style-type: none"> Wear facets on teeth Fractured teeth or restorations Abfraction Loose teeth Indentations on tongue Tori or exostoses
<p>Extraoral</p> <ul style="list-style-type: none"> Soreness of jaw muscles Noises in temporomandibular joint Headaches

Table 2 - Treatment Options for Bruxism

<p>Self-Care</p> <ul style="list-style-type: none"> Ice or heat jaw muscles Avoid hard chewy foods/chewing gum Stretching exercise
<p>Behavioral Treatment</p> <ul style="list-style-type: none"> Biofeedback Hypnosis Psychotherapy Sleep hygiene Meditation Stress Reduction
<p>Dental Treatment</p> <ul style="list-style-type: none"> Occlusal splint
<p>Medical Treatment</p> <ul style="list-style-type: none"> Medications (muscle relaxers, benzodiazepines) Botulinum toxin

Self Care

Patients can do some things at home that may help alleviate symptoms or prevent bruxism. Patients with sore jaw muscles may apply ice or heat to muscles. Stretching exercises for the face, neck and shoulders may also help alleviate muscle pain. Choosing to eat a soft diet and avoiding foods that require a lot of chewing may be helpful. Patients with bruxism should avoid chewing gum.

Occlusal Splints

One common treatment recommended for patients with bruxism is an occlusal splint, sometimes called an occlusal guard or night guard (if worn at night). An occlusal splint is made of acrylic and sits over the mandibular or maxillary occlusal surfaces. Patients who brux with no associated tooth wear often wear occlusal splints as a preventive measure. Occlusal splints are definitely indicated for patients with bruxism who also have tooth wear.⁷ Occlusal splints are shown to reduce the wear of the teeth but have not been shown to eliminate bruxism.¹⁸

Behavioral Treatment

Because bruxism can be related to stress and personality traits, another approach to treatment is through behavior modification. One type of behavioral approach uses biofeedback involving the use of auditory or visual feedback. It requires the use of electromyography and has shown mixed results. Other behavioral approaches that can be considered are meditation, hypnosis, psychotherapy, stress reduction and sleep hygiene.⁷ Evidence-based sleep hygiene recommendations include avoiding caffeine, nicotine, and alcohol; regular exercise; managing stress; reduce bedroom noise; and regular sleep timing.¹⁹

Medical Treatment

Medications such as muscle relaxers, benzodiazepines, and beta-blockers have been used to treat bruxism with mixed results. These

medications may cause drowsiness and should only be used for a short period of time.¹² There is not enough evidence to support medications as a long-term strategy for the treatment of bruxism.²⁰

Clinicians have recently started using botulinum toxin to treat bruxism. Botulinum toxin (Botox[®]) is injected locally into the masseter and/or temporalis muscle to create temporary muscle paralysis.¹⁹ Several studies show that those receiving botox injections experience significantly reduced pain related to bruxism.^{20,21} It should be noted that botulinum toxin lasts only up to 19 weeks and would be a treatment that requires frequent applications.²¹ The literature on botulinum toxin as a treatment for bruxism is sparse and many of the studies use small sample sizes. Clinicians should approach this treatment cautiously.²²⁻²⁴

While the body of evidence related to the treatment of bruxism is growing, there are very few high-quality studies that evaluate the effectiveness of various treatments. Lobbezoo et al. proposed a “triple-P” approach: Plates, Pep talk and Pills.⁷ ‘Plates’ refer to the use of occlusal splints to protect the teeth. ‘Pep talk’ refers to counseling and behavioral approaches to modify stressors. ‘Pills’ refer to pharmacologic treatment with benzodiazepines. This approach is supported by others who also note that bruxism is not just a dental problem but often involves psychological and sleep conditions that may be best managed in an interdisciplinary manner.^{7,12}

Discussing Bruxism with Patients

Bruxism is thought to be highly underreported by patients since many patients do not know that they have bruxism until a dental care provider helps them discover the issue.² Patients may or may not disclose that they have signs and symptoms of bruxism. A clinician’s first step is to ask patients

about clenching and grinding when taking the medical and dental histories. Follow-up questions may include asking about pain in the jaw muscles and/or headaches. When the examination is performed it should include palpation of the jaw muscles and questions about tenderness in the region.¹²

When communicating with patients about bruxism it is important to keep in mind some basic principles of communication. Using non-technical terminology is essential in communication with most patients. For example, when describing bruxism one should refer to the masseter and pterygoid muscles as “jaw muscles”. When a patient is diagnosed as having bruxism it is not only appropriate to let them know the proper term for their condition but to also include a simple description of the condition without dental jargon.

Do not overcomplicate treatment options for patients. It is important to describe each treatment option thoroughly and allow the patient to make an educated decision. Below are frequently asked questions about bruxism with responses that may assist in preparing for discussions with patients regarding bruxism.

Summary

Bruxism is defined as a repetitive jaw-muscle activity characterized by clenching or grinding of the teeth and/or by bracing or thrusting of the mandible.² This can occur when awake or during sleep. The diagnosis and treatment options for bruxism are numerous and require a medical and dental history questionnaire, clinical examination, and discussion with the patient about health behaviors. The most common way to treat bruxism is with an occlusal splint, counseling and education, and medications. Bruxism is a complex condition that affects the teeth and jaw and can require an interdisciplinary approach to alleviate.

Frequently Asked Questions About Bruxism

1. My partner says I grind my teeth at night? Is that a problem?

Yes, it is problematic. Grinding your teeth at night is a common condition called bruxism. Bruxism can happen when awake or during sleep. It can cause wear or damage to the teeth and cause jaw pain or tenderness.

2. The dentist says I have bruxism? What is that?

Bruxism is a condition where one clenches their jaw or grinds their teeth together. Bruxism can happen while you are awake or while you are asleep. Common signs and symptoms of bruxism are tooth wear, sore jaw muscles and headaches.

3. My jaw hurts in the morning when I wake up? What could be going on?

You may be clenching or grinding your teeth during the night, a condition called bruxism. The muscles of the jaw contract and bruxism can cause pain in the jaw muscles.

4. I have a lot of wear on my teeth, what causes that?

Tooth wear may be caused by multiple factors; clenching or grinding the teeth, misalignment in the way the teeth bite together are a couple examples. A clinical evaluation will help us determine the cause of the tooth wear.

5. I am worried that clenching and grinding are destroying my teeth, what can I do?

There are several treatment options for clenching and grinding of the teeth. One option is to make a plastic guard for you to wear. It is designed to help protect the teeth. Depending on your signs and symptoms other treatment might be needed.

6. How can I try and stop clenching and grinding my teeth?

Incorporating relaxation and meditation can help to prevent teeth clenching and grinding.

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1. Bruxism can be defined as:

- a. wear on teeth.
- b. repetitive jaw muscle activity that clenches or grinds teeth.
- c. muscle soreness in the jaw.
- d. pain in the temporomandibular joint.

2. Bruxism is more prevalent in:

- a. men.
- b. women.
- c. the elderly.

3. Of the following situations, which is most likely to increase a patient’s risk for bruxism?

- a. Having a Class I occlusion
- b. Undergoing orthodontic treatment
- c. Having a high-stress lifestyle
- d. Being a woman

4. Why is it important to ask patients about clenching or grinding of the teeth?

- a. Most patients are not aware of clenching or grinding.
- b. A high percentage of men clench and grind their teeth.
- c. It can cause sleep apnea.
- d. It is the most common dental disease.

5. Signs and symptoms of bruxism are?

- a. Smoking, nail biting, gum chewing
- b. Snoring, waking in sleep, restlessness
- c. Tooth mobility, tooth wear, headache
- d. Linea alba, tongue indentations, tongue thrusting

6. The effect of Botox® in treating bruxism lasts:

- a. weeks.
- b. 10 weeks.
- c. 19 weeks.
- d. the effect is permanent

7. Occlusal splints work to treat bruxism by:

- a. Reducing wear on teeth
- b. Alleviating pain in masseter muscle
- c. Orthodontically moving teeth
- d. Reducing stress during sleep

8. Intraoral signs of bruxism may include:

- a. Muscle soreness
- b. Headaches
- c. Tooth wear
- d. Noises in the jaw when opening and closing

9. The goal of an occlusal splint for a patient with bruxism is:

- a. Prevent tooth wear
- b. Stop the patient from bruxing
- c. Realign the occlusion
- d. Increase muscle activity

10. Which lifestyle habit puts a patient at higher risk for bruxism?

- a. Intense exercising
- b. Smoking
- c. Eating disorders
- d. Good sleep hygiene

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