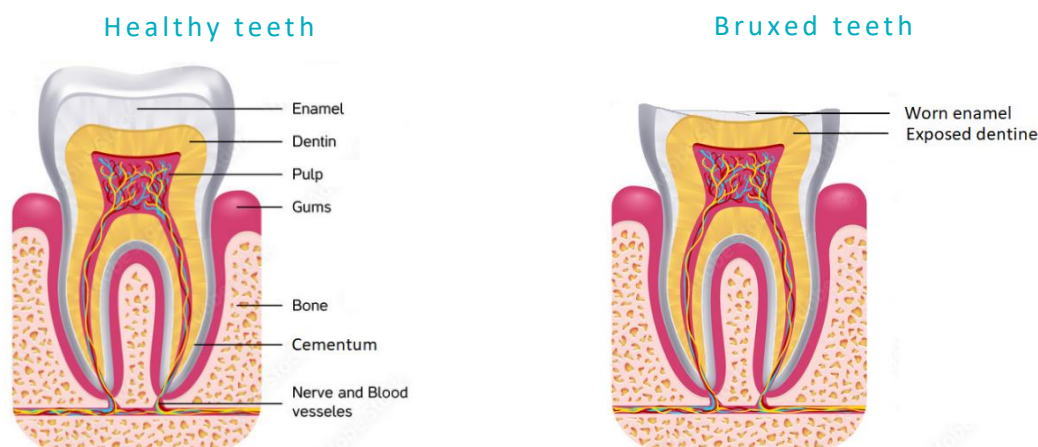


BRUXISM

Bruxism is excessive clenching or grinding of the teeth that is not a part of normal chewing movements. It can lead to excessive wear on the teeth and may cause permanent damage to the teeth and jaw joints. Excessive clenching and grinding of the jaws are not healthy actions. In some adults and children, clenching and grinding may occur during the day or at night. During sleep, they have no conscious control over this excessive clenching and grinding.



The hard enamel layer protects the tooth. If enamel is badly damaged due to bruxism and the dentine is exposed, the tooth is at risk. If the pulp (which contains nerves and blood vessels) is damaged and becomes infected, the tooth will die. Root canal treatment will be needed to save the tooth.

Severely bruxed teeth are often sensitive to heat and cold, painful and discoloured once the dentine is exposed.

Causes of bruxism

The causes of bruxism are still being studied.

A combination of physical and psychological factors are believed to contribute to bruxism, including:

- physical stress such as illness, nutritional deficiencies or dehydration, particularly in children
- psychological stress, anxiety and tension in adults and children
- studies have shown that night bruxism is a sleep disorder and may be related to sleep apnoea
- other abnormal anatomy of the teeth or jaws (including “high spots” on fillings) that can cause an improper occlusion (also called “bite”) and lead to bruxism behaviour.

The signs and symptoms of bruxism

The signs and symptoms of bruxism vary according to the nature, frequency, duration and strength of excessive clenching and grinding. Signs and symptoms may include:

- pain in the teeth and sensitivity to heat and cold
- chronic facial pain with tension headaches, caused by intense muscle contraction; jaw clenching
- the noise (noticed by partners, friends or relatives) that occurs as the teeth are ground together
- flattened and worn tooth surfaces, which may reveal the underlying yellow dentine layer
- microfractures of the tooth enamel
- broken or chipped teeth
- fractures of fillings, crowns or other restorations
- loose teeth with possible damage to the tooth sockets
- stiffness and pain in the jaw joint muscles; this can cause restricted opening and difficulty in chewing. Sometimes, the temporomandibular joint (TMJ or jaw joint) may suffer damage that is slow to heal.
- TMJ pain or clicking; earache
- Limited mouth opening.

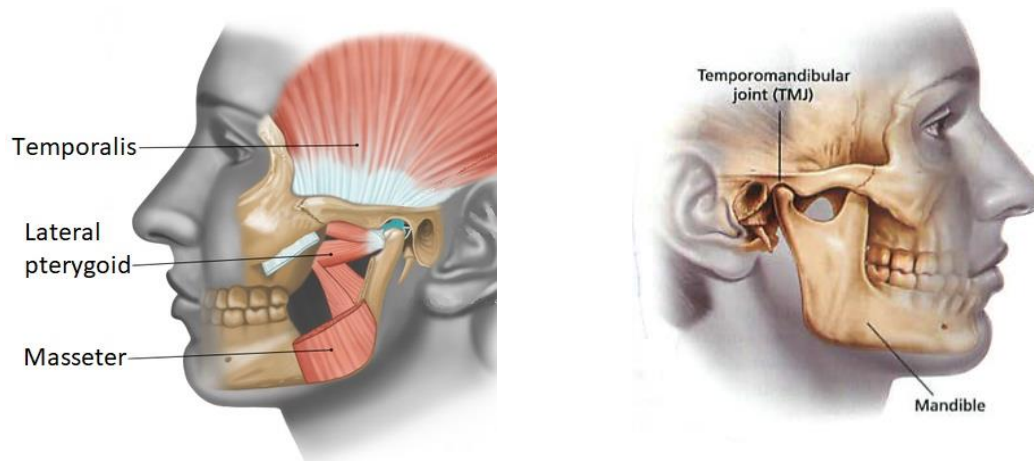
The variation in signs and symptoms reflects the strength of clenching and grinding involved in bruxism.

People who clench their teeth tightly may experience tension-related headaches but may have little or no damage to the teeth or jaw joint.

Those who experience severe grinding may have damaged teeth and jaw joint problems. People with mild tooth grinding may have worn tooth surfaces but no jaw joint pain or tooth sensitivity. They may not realise that they have bruxism.

Muscle Groups

Three of the main muscle groups that are associated with bruxism are shown in the illustration (Below). The temporalis and masseter muscles bring the jaws together. The lateral pterygoid muscles move the jaw from side to side.



The temporalis, masseter and lateral pterygoid muscles of the jaw contribute to clenching and grinding actions.

Bruxism may affect the temporomandibular joint, causing significant discomfort or pain.

Before treatment

Your dentist needs to know your medical history to plan the best treatment. Fully disclose any health problems you may have had. Tell the dentist if you have had:

- allergy or bad reaction to antibiotics, anaesthetics, or other medicines
- previous treatment related to bruxism or jaw surgery
- psychological distress or psychiatric illness

Give the dentist a list of ALL medicines you are taking or have recently taken. Include medicines prescribed by your family doctor and those bought “over the counter” without prescription.

Diagnosis of bruxism

Accurate diagnosis is important to ensure the correct treatment, your dentist will diagnose your condition based on clinical examination and your medical and dental history. The dentist may note:

- the location of the pain, stiffness or soreness
- range of jaw movement
- any noises in the jaw joint
- your bite, tooth wear and movement of teeth.

To assist diagnosis, your doctor may recommend:

- plaster moulds of your teeth to see if your bite is correctly balanced
- an X-ray examination
- for some patients, completion of a questionnaire and pain diagram to assess how your symptoms affect your quality of life.

Treatment of bruxism

If your dentist suspects that you have general health problems, he or she may recommend an examination by a medical practitioner.

Your dentist may recommend counselling, stress management or relaxation methods for stress-related causes of bruxism.

Treatment aims to:

- Remove the causes of bruxism
- Change the behaviour that causes bruxism
- Repair the damage that bruxism often causes

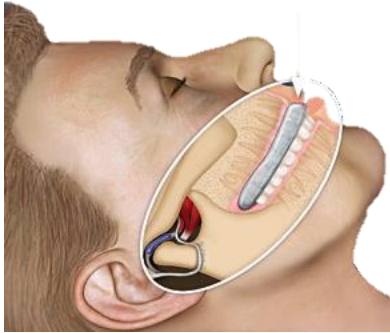
Your dentist may prescribe:

- Painkillers for muscular facial pain, headaches and jaw joint pain
- Muscle relaxant medication to help relax the jaw muscles.

Changing bruxism behaviour

Therapy aims to achieve changes in behaviour by teaching the patient how to rest the mouth.

- An occlusal splint (also called a night guard) is an option for someone with mild to severe grinding behaviour. Worn at night, the splint is made from moulded hard plastic that fits over the upper or lower teeth. It prevents further wear of the tooth surfaces.
- Biofeedback is a treatment option for people who primarily clench their teeth during the day. Biofeedback techniques use electronic monitors to measure tension in the jaw muscles. People use the monitors to learn how relax their muscles and reduce tension. Newer biofeedback techniques are under development to treat night-time clenching.
- Patients with severe tooth grinding problems often use a combination of splint and biofeedback techniques.
- Some patients may require muscle relaxant tablets at night.



An occlusal splint may be recommended to protect upper and lower teeth. To increase comfort and effectiveness, it is custom-made to suit each person's own teeth and bite.

Repair of damage to teeth

Treatment may be necessary to repair damaged teeth. Dental fillings, crowns or inlays can replace damaged tooth surfaces. Root canal treatment may be required where tooth fractures extend into the pulp. In extreme cases, extraction of badly damaged teeth may be the only option.

Partial dentures, dental bridges or dental implants can replace missing teeth. Orthodontic treatment can realign misplaced and crooked teeth.