

# Bruxism

## Causes of bruxism

The causes of bruxism are still being studied.

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

- 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
- 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.

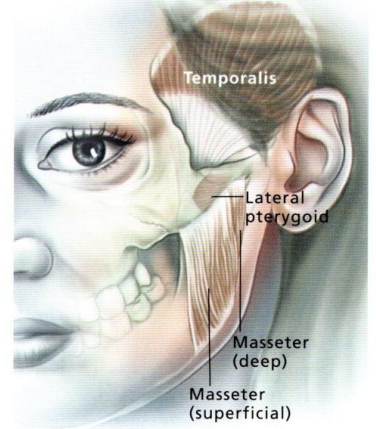
**B**ruxism is excessive clenching or grinding of the teeth that is not a part of normal chewing movements. It can lead to excessive wear on the teeth and may cause permanent damage to the teeth and the jaw joints.

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.

## Muscle groups

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

## Muscle Groups



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

## The signs and symptoms of bruxism

**T**he 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
- 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
- loose teeth with possible damage to the tooth sockets
- stiffness and pain in the jaw joint muscles; this can cause restricted opening and difficult chewing. Sometimes, the temporomandibular joint (TMJ or jaw joint) may suffer damage that is slow to heal. Refer to the ADA patient education pamphlet *Common Disorders of the Jaw Joint*, available from your dentist

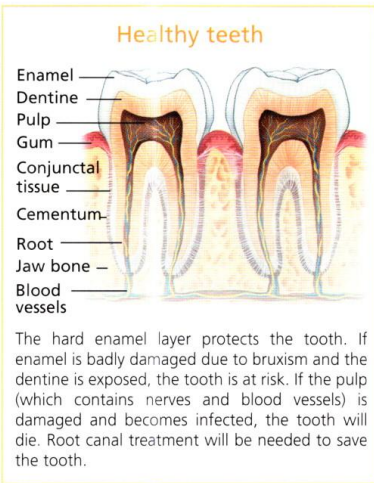
- earache or pain in the jaw joint.

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

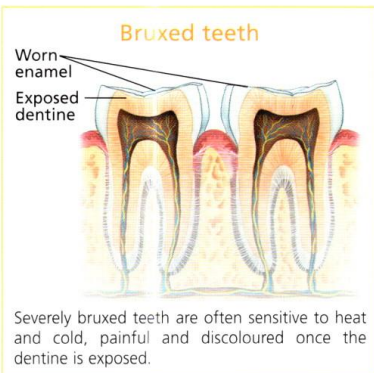
People who clench their teeth tightly may experience tension-related headaches but may have little or no damage to the teeth or jaw joint.

Those who experience severe grinding may have damaged teeth and jaw joint problems.

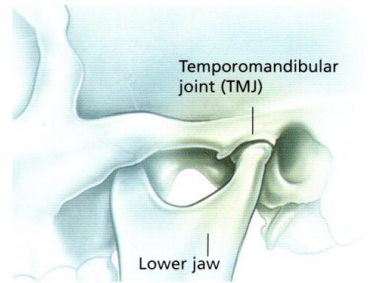
People with mild tooth grinding may have worn tooth surfaces but no jaw joint pain or tooth sensitivity. These individuals may not realise that they suffer from bruxism.



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.



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. Before starting treatment, your dentist will diagnose your condition based on clinical examination and your medical and dental history. The dentist will 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.

## Talk to your Dentist

This pamphlet is a summary of information about bruxism. It does not contain all known facts about bruxism or its treatment, and is not a substitute for advice from your dentist. Read this pamphlet carefully. Some technical terms are used that may require further explanation by your dentist.

**THE DECISION TO HAVE TREATMENT:** A decision about treatment should be made only after discussion with your dentist. Make a decision only when you are satisfied with the information you have received and believe you have been well informed.

Your dentist will be pleased to discuss the benefits, risks and limitations of treatment. A team approach by your dentist and other professionals may be required to treat this sometimes difficult problem.

Fully discuss with your dentist the treatment to be done, the reasons why, and the likely outcome you should expect.

Seek the opinion of another dentist if you are uncertain about the advice you have received. This pamphlet should only be used in consultation with your dentist.

## 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 to relax their muscles and reduce tension. Newer biofeedback tech-

niques 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.

## 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.



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.

## COSTS OF TREATMENT

Your dentist can advise you about treatment costs and coverage by private health insurance. Ask for an estimate of fees and any other costs.

Remember this is only an estimate because the actual treatment may differ from that proposed.

The final cost may be different from the original estimate. Discuss costs before treatment rather than afterwards.

## YOUR DENTIST