

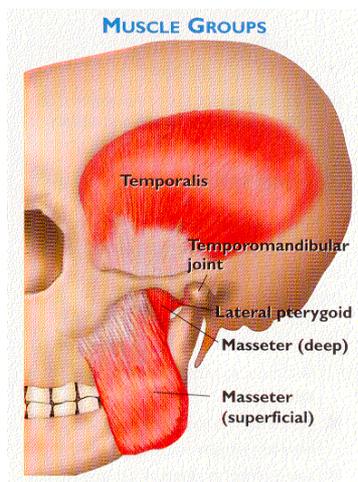
# BRUXISM

**B**ruxism is excessive clenching or grinding of the teeth that is not a part of normal chewing movements. They are not normal, healthy actions of the jaws, and can lead to excessive wear on the teeth, or cause permanent damage to the teeth and the jaw joints. In some adults and children, clenching and grinding may occur during the day or at night. Patients typically have no conscious control over this, particularly when it occurs during sleep.

## THE FUNCTION OF THE JAWS

Three muscle groups are associated with bruxism, as shown in the figure. The temporalis and masseter muscles bring the jaws together. The lateral pterygoid muscles move the jaw from side to side.

The strength of jaw muscles determines the force of tooth grinding. Grinding does not occur if the person is clenched, or if the mouth is open. Slight relaxation of clenched jaws allows grinding movements across the teeth as the jaw can then move forward and sideways.



## THE CAUSES OF BRUXISM

The causes of bruxism are still being studied. A combination of physical and psychological factors are believed to contribute:

- 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
- Abnormal anatomy of teeth or jaws (including "high spots" on fillings) can cause an improper occlusion/"bite" and lead to bruxism behaviour.

People who clench their teeth tightly may experience tension-related headaches, but may have little or no damage to the teeth or jaw joint. Tight clenching alone puts minimal pressure on the 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 teeth sensitivity. These individuals may not even realise that they have bruxism.

## 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 can include:

- Pain in the teeth and sensitivity to heat and cold
- Chronic muscular facial pain with tension headaches, caused by intense muscle contraction
- Noise, sometimes noticed by partners, friends or relatives, that occurs as the teeth are ground together
- Abnormal alignments of the teeth, caused by uneven tooth wear
- Flattened and worn tooth surfaces, which may reveal the underlying dentine layer
- Micro fractures of the tooth enamel, broken or chipped teeth
- Loose teeth with possible damage to the tooth sockets
- Stiffness and pain in the jaw joint (temporomandibular joint/TMJ), causing restricted opening and difficult chewing; sometimes the jaw joint may suffer damage that is slow to heal.
- Earache or pain in the jaw joint.

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

## **BEFORE TREATMENT**

Your dentist needs to know your medical history to plan the best treatment. Tell the dentist if you have had:

An 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.

## **TREATMENT: FINDING AND REMOVING CAUSES OF BRUXISM**

Your dentist will look for localised problems likely to be causing abnormal contact among upper and lower teeth. Your bite may need to be adjusted. If pain is a symptom, your dentist will look for other causes, such as an ear infection or a temporo-mandibular disorder.

Your dentist may prescribe: painkillers for muscular facial pain, headaches and jaw joint pain; or muscle relaxant medication to help relax the jaw muscles.

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: CHANGING BEHAVIOUR THAT CAUSES BRUXISM**

Therapy aims to achieve changes in behaviour by teaching the patient how to rest the mouth. Conscious self-monitoring and attention to daytime habits is important.

An occlusal splint (also called a night guard) is an option for patients with mild to severe grinding behaviour. Worn at night, the splint is custom made from moulded hard plastic that fits over the upper or lower teeth. It prevents further wear of the tooth surfaces and repositions the jaws. Bruxism therapy for patients with pain or symptoms can be difficult and need review and reassessment. 10 - 20% of patients receiving occlusal appliances report no improvement and need to try different therapies. Splints only help or reduce bruxing when actually being worn, they don't "cure" the problem. Some patients may require muscle relaxant tablets at night.

A relatively new treatment being developed for severe bruxism that actually reduces bruxing activity is use of Botox. Injection of Botulinum toxin into the masseter muscle reduces ability to clench and grind, without impairing chewing and talking abilities. Botox is reserved for people who do not have treatment success with splint therapy. Studies have shown no significant side effects, treatment lasts for four to six months.

## **TREATMENT: REPAIR OF DAMAGE DUE TO BRUXISM**

Treatment may be necessary to repair damaged teeth. Dental fillings, crowns or inlays can replace damaged or cracked 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 implants can replace missing teeth. Orthodontic treatment can realign misplaced and crooked teeth.

***Dr Jeremy Keating***

**11 Kings Road, Subiaco WA 6008**

**Phone 9388 1557**

