



CAUSES AND PATHOPHYSIOLOGY

The suggested causes of SB includes anxiety, very brief, intense awakenings from sleep, sensitivity to brain chemicals (neurotransmitters such as dopamine and serotonin) but so far very little comprehensive explanation is available. Anxiety is seen as a trigger or an exacerbating factor. The role of neurotransmitters, such as dopamine, is less clear than originally suggested. Antidepressants such as serotonin selective reuptake inhibitors or SSRIs are known to exacerbate grinding. In the past, dental occlusion (bad tooth contact) was seen as a major factor in SB. Now, its role is less prominent in the literature and is more related to overall oral habits, anxiety and sometimes insomnia. Although no genetic marker has been yet found, except for serotonin, in monozygotic twins (identical twins) SB is highly prevalent. Moreover, SB persists in 86% of twins in adulthood in comparison to 35% in non-twins.

MANAGEMENT

Because Sleep Bruxism is a recurrent pathology, patients shouldn't expect a total relief.

Assuming there are no other medical problems, the management of SB includes behavioral-cognitive strategies (e.g., relaxation), physiotherapy and oral splint (hard acrylic or soft rubber device) to prevent tooth damage. Among advice given to patients, we also recommend:

- Avoid smoking in the evening
- Avoid excess alcohol intake
- Avoid sleeping on your back (supine position)
- No noise or computer or TV in the bedroom

Tablets of acetaminophen combined with methocarbamol or cyclobenzaprine (prescription required) could be administered at bedtime to decrease muscle pain and increase relaxation during periods of intense SB. In more severe cases, specialists prescribe clonazepam or clonidine on a short-term basis.

Botox injections, a muscle contraction blocker, have been used with some SB patients but the lack of controlled studies reduces specialists' enthusiasm for its use as a safe and effective recommendation. If teeth of SB patients are sensitive to cold, application of Sodium Fluoride-Pot Nitrate paste (available at the drug store) may reduce this secondary problem. No pharmacological treatment is officially recognized to treat SB.



Société Canadienne
du Sommeil



Canadian Sleep
Society

Sleep Bruxism (Teeth Grinding)

DEFINITION AND
CONSEQUENCES

RECOGNITION AND DIAGNOSIS

CAUSES AND
PATHOPHYSIOLOGY

MANAGEMENT

Gilles Lavigne, DMD, MSc, FRCD(c)
Professor of Dentistry and Psychiatry,
Université de Montréal
Luc Gauthier, DMD, MSc., F.A.P.F.
Guest speaker, Université de Montréal
www.canadiansleepsociety.com

Atlantic Sleep Centre
Saint John Regional Hospital
506-648-6178



DEFINITION AND CONSEQUENCES

Sleep Bruxism (SB) has been described as the gnashing or grinding of the teeth during sleep. It is also associated with jaw clenching.

The consequences of SB are tooth destruction, headache, orofacial and jaw joint (temporomandibular joint, TMJ) pain, plus disruption of family sleep by the irritating noise induced by tooth grinding.

PREVALENCE

Sleep Bruxism is reported by 8% of the adult population and close to 14% of children have been reported by their parents to grind their teeth a few times per week. A clear decline of SB is noted with age. In teenagers the prevalence is 8% declining to 3% in those persons 60 years of age and older.

RECOGNITION AND DIAGNOSIS

The diagnosis is based on a history of hearing tooth grinding by a family member or friend, the presence of tooth wear/damage, orofacial-joint pain and/or fatigue upon awakening, increased jaw muscle size (hypertrophy).

A final diagnosis for severe and persistent cases is possible only through an overnight sleep study (polysomnography) with a video recording since SB has to be distinguished from rapid muscle twitches in the jaw area (oromandibular myoclonies), tooth tapping, grunting, sleep talking, snoring, etc. to eliminate the presence of concomitant respiratory disorders (as sleep apnea) or the rare case of neurological diseases (e.g. sleep epilepsy, movements during REM sleep).

Home audio-video recording is an alternative to identify the presence or absence of grinding sounds. In this situation a standard video recording at low speed is used along with a black light to increase video contrast.



ADDITIONAL PATIENT BROCHURES BY SLEEP EXPERTS

- **Dental Appliances**
- **Sleep in Aging**
- **Sleep Bruxism**
- **Drowsy Driving**
- **Insomnia**
- **Human Circadian Rhythms**
- **Strategies for Night Shift Workers**
- **Narcolepsy and Cataplexy**
- **Dreams and Nightmares**
- **Obstructive Sleep Apnea**
- **Patient Guide to Sleep Studies**
- **Positional Therapy for Obstructive Sleep Apnea Children**
- **Restless Legs Syndrome**
- **Sleep and Post-Traumatic Stress Disorder**
- **Normal Sleep**

Please note that the content of these brochures are copyrighted by Canadian Sleep Society, unless otherwise indicated. Rev 15/05/2020

The Canadian Sleep Society is a national organization committed to improving sleep for all Canadians through: support for research, promotion of high quality clinical care, education of professionals and the public, and advocacy for sleep and sleep disorders medicine.

For more information visit www.canadiansleepsociety.com or email info@css-scs.ca

Canadian Sleep Society



Société Canadienne du Sommeil

Sleep On It

National Campaign SLEEP ON IT!

This Canadian public health campaign is about sleep. It explains everything you need to know about sleep and it offers solutions to members of the public who suffer from sleep disorders.

For more information: www.sleeponitcanada.ca

