

**SLEEP BRUXISM
(Teeth Grinding)**



CANADIAN SLEEP SOCIETY

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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 strident noise induced by tooth grinding.

Prevalence

SB 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. 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.

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 (e.g. Prozac, Paxil, Zoloft) 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 and anxiety.

Although no genetic marker has been found, in monozygotic twins SB is highly prevalent. Moreover, SB persists in 86% of twins in adulthood in comparison to 35% in non-twins.

Management

Following the exclusion of 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

Robaxacet, Tylenol Muscle or Flexeril (prescription required) could be administered at bedtime to decrease muscle pain and increase relaxation during periods of intense SB. In more severe cases, we use Rivotril (Clonazepam: prescription required) 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 our enthusiasm for its use as a safe and effective recommendation.

If teeth of SB patients are sensitive to cold, application of Gel Kam (available at the drug store) may reduce this secondary problem.

Prepared for the CSS by:
Gilles Lavigne, DMD, MSc, FRCD(c)
Professor of Dentistry and Psychiatry,
l'Universite de Montreal