

ARTIGOS SOBRE BRUXISMO

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Influence of Experimental Esophageal Acidification on Sleep Bruxism: a Randomized Trial.

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The aim of this cross-over, randomized, single-blinded trial was to examine whether intra-esophageal acidification induces sleep bruxism (SB). Polysomnography with electromyogram (EMG) of masseter muscle, audio-video recording, and esophageal pH monitoring were performed in a sleep laboratory. Twelve healthy adult males without SB participated. Intra-esophageal infusions of 5-mL acidic solution (0.1 N HCl) or saline were administered. The frequencies of EMG bursts, rhythmic masticatory muscle activity (RMMA) episodes, grinding noise, and the RMMA/microarousal ratio were significantly higher in the 20-minute period after acidic infusion than after saline infusion. RMMA episodes including SB were induced by esophageal acidification. This trial is registered with the UMIN Clinical Trials Registry, UMIN000002923. Abbreviations: ASDA, American Sleep Disorders Association; EMG, electromyogram; GER, gastroesophageal reflux; LES, lower esophageal sphincter; NREM, non-rapid eye movement; REM, rapid eye movement; RMMA, rhythmic masticatory muscle activity; SB, sleep bruxism; SD, standard deviation; UES, upper esophageal sphincter.

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Nocturnal awakening with headache and its relationship with sleep disorders in a population-based sample of adult inhabitants of São Paulo City, Brazil

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Abstract

Our aim was to estimate the prevalence of nocturnal awakening with headache (NAH) in the population of São Paulo City according to gender, age (20–80 years old) and socioeconomic classes and its relationship to sleep disorders, sleep parameters, anxiety, depression, fatigue, life quality and obesity. We used a population-based survey with a representative three-stage cluster sample. Questionnaires and scales were applied face-to-face, and polysomnography was performed in 1101 volunteers, aged 42 ± 14 years, 55% women. The complaint of NAH occurring at least once a week had a prevalence of 8.4%, mostly in women, obese subjects and those aged 50–59 years-old. We observed associations of NAH with insomnia, restless leg syndrome (RLS), nightmares and bruxism, but not obstructive sleep apnea syndrome. In a logistics regression model, risk factors for NAH were female gender, odds ratio (OR) (95% confidence interval [CI]) 4.5 (2.8–7.3); obesity, OR 1.9 (1.1–3.3); age between 50 and 59 years, OR 2.4 (1.2–4.7); severe anxiety, OR 8.1 (3.6–18.1); RLS, 2.7 (1.2–5.6); and nightmares, 2.2 (1.3–3.7). Our study shows that NAH was highly prevalent in the population of São Paulo and suggests that this phenomenon has specific characteristics with specific risk factors: obesity, RLS and nightmares.

Bruxism is associated with nicotine dependence: a nationwide finnish twin cohort study.

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Objectives: To investigate the association of **smoking** with **bruxism** while controlling for genetic and environmental factors using a co-twin-control design. Especially, the role of nicotine dependence was studied in this context. **METHODS:** The material derives from the Finnish Twin Cohort consisting of 12,502 twin individuals who responded to a questionnaire in 1990 (response rate of 77%). All were born in 1930–1957, the mean age being 44 years. The questionnaire covered 103 multiple choice questions, 7 dealing with tobacco use and 22 with sleep and vigilance matters, including perceived **bruxism**. In addition, a subsample derived from the Nicotine Addiction Genetics Finland Study containing 445 twin individuals was studied. **RESULTS:** In age- and gender-controlled multinomial logistic regression, both monthly and rarely reported **bruxism** associated with both current cigarette **smoking** (odds ratio [OR] = 1.74 and 1.64) and former cigarette **smoking** (OR = 1.64 and 1.47). Weekly **bruxism** associated with current **smoking** (OR = 2.85). Current smokers **smoking** 20 or more cigarettes a day reported weekly **bruxism** more likely (OR = 1.61–1.97) than those **smoking** less. Among twin pairs (N = 142) in which one twin was a weekly bruxer and the cotwin a never bruxer, there were 13 monozygotic pairs in which one twin was a current smoker and the other twin was not. In all cases, the bruxer was the smoker ($p = .0003$). Nicotine dependence associated significantly with **bruxism**. **Conclusions:** Our twin study provides novel evidence for a possible causal link between tobacco use and **bruxism** among middle-aged adults. Nicotine dependence may be a significant predisposing factor for **bruxism**.

Urinary levels of catecholamines among individuals with and without sleep bruxism.

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INTRODUCTION: Sleep bruxism (SB) is characterized by repetitive and coordinated mandible movements and non-functional teeth contacts during sleep time. Although the etiology of SB is controversial, the literature converges on its multifactorial origin. Occlusal factors, smoking, alcoholism, drug usage, stress, and anxiety have been described as SB trigger factors. Recent studies on this topic discussed the role of neurotransmitters on the development of SB. **OBJECTIVE:** Thus, the purpose of this study was to detect and quantify the urinary levels of catecholamines, specifically of adrenaline, noradrenaline and dopamine, in subjects with SB and in control individuals. **MATERIALS AND METHODS:** Urine from individuals with SB (n = 20) and without SB (n = 20) was subjected to liquid chromatography. The catecholamine data were compared by Mann-Whitney's test ($p \leq 0.05$). **RESULTS:** Our analysis showed higher levels of catecholamines in subjects with SB (adrenaline = 111.4 microg/24 h; noradrenaline = 261,5 microg/24 h; dopamine = 479.5 microg/24 h) than in control subjects (adrenaline = 35,0 microg/24 h; noradrenaline = 148,7 microg/24 h; dopamine = 201,7 microg/24 h). Statistical differences were found for the three catecholamines tested. **CONCLUSION:** It was concluded that individuals with SB have higher levels of urinary catecholamines.

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Risk factors associated with incidence and persistence of signs and symptoms of temporomandibular disorders.

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OBJECTIVE: To analyze whether gender, self-reported bruxism, and variations in dental occlusion predicted incidence and persistence of temporomandibular disorder (TMD) during a 2-year period. **MATERIAL AND METHODS:** The study population comprised 280 dental students at Umeå University in Sweden. The study design was that of a case-control study within a 2-year prospective cohort. The investigation comprised a questionnaire and a clinical examination at enrolment and at 12 and 24 months. Cases (incidence) and controls (no incidence) were identified among those without signs and symptoms of TMD at the start of the study. Cases with 2-year persistence of signs and symptoms of TMD were those with such signs and symptoms at all three examinations. Clinical registrations of baseline variables were used as independent variables. Odds ratio estimates and 95% confidence intervals of the relative risks of being a case or control in relation to baseline registrations were calculated using

logistic regression analyses. RESULTS: The analyses revealed that self-reported **bruxism** and crossbite, respectively increased the risk of the 2-year cumulative incidence and duration of temporomandibular joint (TMJ) signs or symptoms. Female gender was related to an increased risk of developing and maintaining myofascial pain. Signs of mandibular instability increased the risk of maintained TMD signs and symptoms during the observation period. CONCLUSION: This 2-year prospective observational study indicated that self-reported **bruxism** and variations in **dental** occlusion were linked to the incidence and persistence of TMJ signs and symptoms to a higher extent than to myofascial pain.

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