

SnoreSolutions

Breathing Related Sleep Disorders

The Latest News on Airway Orthotic Therapy

Dr. John S. Viviano SnoreSolutions@aol.com

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Snoring, Pregnancy-Induced Hypertension and Growth retardation of the Fetus

Franklin et al. conducted this study in Umea, Sweden (CHEST 2000 Jan; 117(1):137-141). This retrospective, cross-sectional, consecutive case series study involved 502 women with singleton pregnancies and was intended to study the relationship between snoring and pregnancy-induced hypertension and growth retardation of the fetus.

The authors main findings were:

- The incidence of snoring during the last week of pregnancy was almost 6-fold that reported before pregnancy.
- The incidence of Hypertension was over 2-fold for snorers as compared to non-snorers.
- The incidence of Preclampsia was 2 1/2-fold for snorers as compared to non-snorers.
- An Apgar score ≤ 7 was more common in infants born to habitual snorers.
- The incidence of growth retardation (defined as small for gestational age of birth) of the fetus was almost 3-fold in infants born to snoring mothers in comparison to infants born to non-snoring mothers.
- Habitual snoring was independently predictive of Hypertension and growth retardation.

The authors concluded that "Snoring is common in pregnancy and is a sign of pregnancy-induced hypertension. Snoring indicates a risk of growth retardation of the fetus."

These findings indicate that as much as 1/4 of pregnancies may fall into a category of concern.

For these individuals, a relatively inexpensive, short term oral appliance could be worn at bedtime. This appliance works by repositioning and holding the mandible several millimetres forward of its centric position. The net result is dilation and splinting of the airway thus eliminating snoring and sleep apnea. Assuming the incidence of snoring and apnea would eventually return to the pre-pregnancy levels, most of the women would only need to wear the appliance as indicated by the existence of snoring or witnessed apneas. If snoring and apnea persisted after the pregnancy, a sleep study may be indicated in order to determine objectively the efficacy of the oral appliance to adequately treat the apnea.



A light look at Oral Appliances

SnoreSolutions Hi-lights

- Airway Orthotics
80 % effective for moderate levels of Apnea
- Oral Appliance Therapy 86-90% long term compliance
- Snoring indicates risk of growth retardation of fetus
- 200,000 motor vehicle accidents per year may be sleep related

News Flash!

Yoshida et al. Effects of a Mandibular Advancement Device for the Treatment of Sleep Apnea Syndrome and Snoring on Respiratory Function and Sleep Quality. CRANIO: 2000:18:2.

Yoshida's study involved 256 patients and both pre and post Polysomnograms. In keeping with current Oral Appliance Therapy study results, he found that the Apnea / Hypopnea Index decreased significantly. But of special interest to me is that he found a 90 % patient compliance after 2 1/2 years of wear. Patient compliance is necessary for treatment success.

Undiagnosed Sleep Disorders are a Threat to Our Safety

The U.S. Department of Transportation has estimated that up to 200,000 motor vehicle accidents per year may be sleep-related.

One of every five drivers admits to having fallen asleep at least once behind the wheel, and 69% of motorists report drowsiness while driving.

The U.S. National Transportation Safety Board found that nearly one-third of all fatal-to-driver traffic accidents had sleepiness as their probable cause. The NTSB investigated 107 single-vehicle accidents in which the driver survived and discovered that 58% were related to fatigue--with 18% of the drivers admit-

ting they had fallen completely asleep. The drivers in this sample had obtained only 5.5 hours of sleep during their preceding sleep periods: 2.5 hours less than the average reported by truckers with non-fatigue related accidents.

One British study found that 16-20% of all police-reported motor vehicle accidents were sleep-related.

Sleep-related highway crashes caused 1.55 deaths/week in another British study, versus none in accidents caused by heart attacks or convulsions while driving. Such was attributed to these being high-velocity crashes, typically occurring on free-ways, without driver awareness of impair-

Sleepy Drivers Make Our Roads Unsafe!

Evaluation of Variable Mandibular Advancement Appliance for Treatment of Snoring and Sleep Apnea

Pancer et al. published this study in CHEST 1999; 116:1511-1518. The study, conducted on 134 patients with a baseline Apnea / Hypopnea Index of 37 ± 28 , found a significant reduction from 44 ± 28 to 12 ± 15 events/hour. There were also similar dramatic improvements in number of arousals, Epworth scores and bedpartners assessment regarding snoring. At baseline, 96% were judged to snore loudly "often" or "always" by their bedpartners, whereas only 2% were judged so while using the Oral Appliance. A follow-up clinical assessment in 121 patients found that 86% of the patients were still wearing their appliance after approximately one year of nightly use.

Dr. John S. Viviano obtained his B.Sc. and D.D.S from U of T and has practiced in Mississauga since 1985. He maintains a special interest in the treatment of Snoring, Sleep Apnea, and Breathing Related Sleep Disorders. He is a member of the American Sleep Disorders Association and Sleep Wake Disorders Canada. He is both a member of and credentialed by the certifying board of the Sleep Disorders Dental Society and he is also a member of and has lectured on behalf of the Canadian and Ontario Dental Associations and other organizations regarding the treatment of Snoring, Sleep Apnea and Patient Management Strategies. Dr. Viviano utilizes various appliance designs including trial appliances in his conservative treatment of Snoring, Sleep Apnea, and Breathing Related Sleep Disorders.



Snoring loudly "often" or "always" down from 96% to 2% with Oral Appliance Therapy

Conservative Treatment for Snoring-Sleep Apnea and Breathing Related Sleep Disorders
General, Family and Cosmetic Dentistry

Michael Angelo's Market Place
1-4099 Erin Mills Parkway
Mississauga, Ontario, L5L 3P9

Phone: 905-820-3200
Fax: 905-820-9346
email: SnoreSolutions@aol.com
Web Site: SnoreSolutions.com