WAKE-UP CALL

FROM THE AMERICAN SLEEP APNEA ASSOCIATION

SUMMER/FALL 2007

ASAA A.W.A.K.E. NETWORK NEWS

Ann Pickett, coordinator of **Dallas, Ga., A.W.A.K.E.**, raised $1,000 to help fund the American Sleep Apnea Association Research Fund. She held several events, including a bowl-a-thon, to reach that goal. Mrs. Pickett challenges other A.W.A.K.E. coordinators to match her group's contribution…. **A.W.A.K.E. of Austin** was the first group to supply a sleep apnea patient with a machine and mask donated by ResMed through the ASAA's CPAP Assistance Program. Five other groups currently participate in the program — **CHS A.W.A.K.E.** in Hamilton, N.J.; **A.W.A.K.E. in Central Pennsylvania** in Hershey; **Northern Michigan Hospital A.W.A.K.E.** in Petoskey, Mich.; **Night Owls** in Yuma, Ariz.; and **Puget Sound Sleepers** in Bellingham, Wash…. The July meeting of **A.W.A.K.E. on the Bay** in Marinette, Wis., was a moving experience, with a program on "Starting an Exercise Program" that got people out of their seats and doing just that…. Is it time to get moving toward the sleep lab? At the June meeting of **Southwest Mississippi A.W.A.K.E.** in McComb, Miss., the topic was "When Is Another Sleep Study Necessary? The speaker was Phil Pheiss of the ResMed Corp…. You're not getting older, you're getting – oh, well. At the May meeting of **East Texas A.W.A.K.E.** in Tyler, Texas, Dr. Raymond Perkins discussed "Sleep As We Grow Older." (Hint: It doesn't get better.) Also in May, **Quincy A.W.A.K.E.** in Illinois had a creative program, with representatives from Home Depot demonstrating various devices, such as room-darkening shades and air cleaners, that are conducive to better sleep….

A.W.A.K.E. - ALERT, WELL, AND KEEPING ENERGETIC

TAKING A BITE OUT OF OSA

Oral Appliances Provide an Alternative Therapy

"I'm not snoring anymore," Dr. Elliott Alpher would be told by patient after patient. But the Washington, D.C. dentist didn't pay much attention to these reports.

A specialist in the treatment of cranio-facial pain, a complex and recalcitrant problem requiring delicate realignments of the jaw, his concern was that his patients stop hurting. That they stopped snoring after he fitted them with a dental appliance was, to him, a minor benefit.

"For years, I'd been making these gadgets for my patients," Dr. Alpher recounts. "And they would tell me they'd stopped snoring, and I'd say, 'That's nice.' I just didn't make the connection."

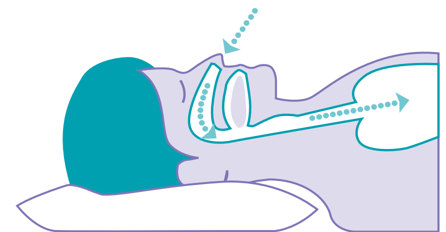
The connection came in the form of Canadian dentist L. Wayne Halstrom, a pioneer in the use of oral appliances for the treatment of sleep-disordered breathing. The two men were delivering simultaneous lectures in a hall at a dental convention, and as Dr. Alpher casually eavesdropped on Dr. Halstrom's speech, he realized the significance of what his patients had been telling him: that, however inadvertently, he was alleviating their obstructive apneas.

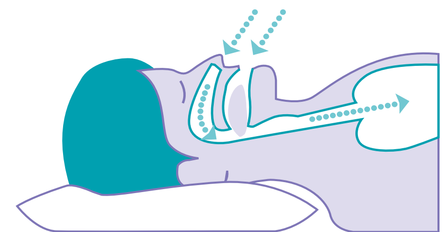
The men ended up talking until dawn, with Dr. Halstrom — the man who invented the "Silencer" oral appliance — giving Dr. Alpher an intensive tutorial on the relationship between snoring and sleep apnea, and how both could be affected by repositioning the jaw.

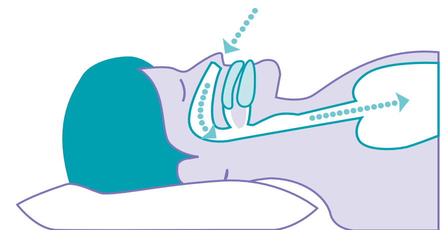
"The jaw?" you might be wondering. "Isn't sleep apnea caused by a blockage in the back of the throat? What does the jaw have to do with it?"

It's not quite as simple as the foot bone being connected to the ankle bone, but the lyrics of that old hymn are illustrative. In this

Taking a Bite Out of OSA, *continued on p. 2*



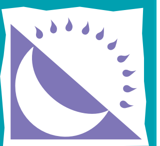




Normal breathing during sleep (top); a blocked airway (middle); normal breathing restored with a dental device (bottom).

INSIDE

Letter From The Director . . . . p. 2
Ask the Doctor . . . . p. 2
News From Washington . . . . p. 3
ASAA in Brief . . . . p. 4



A LETTER FROM EDWARD GRANDI

I am pleased to announce that the American Sleep Apnea Association has received a generous grant from the pharmaceutical company Cephalon to remake our educational video, "What is Sleep Apnea?" The original video, created in 1994 in VHS format, has provided an introduction to the condition for thousands of people. The new version will be an update on the technology used to treat sleep apnea, and will be available on DVD.

Since conference season began in the spring, the association has participated in five medical meetings: those of the American Thoracic Society (ATS), the Associated Professional Sleep Societies (APSS), the American Society of Anesthesiologists (ASA), the American College of Chest Physicians (ACCP), and the American Public Health Association (APHA).

At the anesthesiology meeting, we distributed our latest Patient Education Bulletin, on "CPAP in Hospital." The issue of anesthesia for OSA patients has moved to the forefront of the Society's safety concerns, and our new material will be a useful educational tool.

A highlight of the ACCP meeting was an educational session presenting the results of the consensus conference held last year (and reported in the Fall 2006 WAKE-UP CALL) on providing continuity of care for the OSA patient.

We are fortunate to have Board members who contribute their time to help staff the booth in the exhibit hall. This year we were especially fortunate in that a number of association members also volunteered, spending several hours handing out materials and talking with health care professionals about sleep apnea.

The volunteers also enjoyed the opportunity to explore the exhibit hall, speaking with the various CPAP manufacturers. If you are interested in volunteering at a future medical conference, please let me know and watch for the schedule of meetings in a future issue of the newsletter.

In November, the ASAA held its annual board meeting. We devoted the meeting to a brain-storming session based on the management theories of Jim Collins, author of "Good to Great." I'll be writing on my blog about how we plan to use his ideas to take the association to the next level.

This is the last WAKE-UP CALL before 2007 comes to an end. If you haven't completed your charitable contributions for the year, please consider making an additional gift of money or appreciated securities to the American Sleep Apnea Association. Your extra donation of $25 will help us continue to expand the assistance we provide to those desperate for answers about OSA. ■

ASK THE DOCTOR

Q If you develop a heart arrhythmia that may have been caused by sleep apnea, will the arrhythmia go away with the use of a CPAP machine or will medication be needed to correct it?

Gary Hoffman
Houston, Texas

A Arrhythmias are fairly common in people with Obstructive Sleep Apnea, and in most cases – but not all – they do improve with CPAP treatment.

The most common is the relatively benign sinus arrhythmia, where the atrial rhythm slows down and speeds up with the apneas. Atrial fibrillation or flutter is also seen. Ventricular tachycardia or fibrillation is rare and very serious, and requires aggressive intervention by a cardiologist. There are no generally accepted guidelines for the management of less severe arrhythmias in OSA patients. Most physicians will treat the OSA and assess the effect of treatment on the arrhythmias.

If they persist, or there is evidence of an underlying heart condition, a cardiologist should be consulted. (The majority of patients with central apnea do have cardiovascular disease, and require a cardiologist's care.)

While one might think that arrhythmias are caused by sleep apnea, it may be that sleep apnea just makes them more apparent earlier in life.

Kingman Strohl, M.D.
Case Western Reserve University
Cleveland, Ohio

WAKE-UP CALL welcomes questions from readers, and will publish them as space permits. Letters may be edited for length and clarity. We regret that it is not possible to provide personal replies to all questions.

Taking a Bite Out of OSA, *continued from p. 1*

case, the hyoid bone, a small protrusion in the rear of the lower jaw, or mandible, supports the muscles of the tongue. When the mandible is pulled forward, so is the tongue.

And since the collapse of the tongue over the pharynx is an important component of the pathophysiology of Obstructive Sleep Apnea, altering the position of the jaw — and hence the tongue — can help keep the airway open.

"The airway is like a flexible straw," explains Dallas-based dentist W. Keith Thornton, inventor of the Thornton Adjustable Positioner appliance (TAP®). "When you're awake, there's enough muscular tension to keep it straight. But when you're asleep and your mouth falls open, you get a kink in the straw, and air can't get through."

"It's like the straw is stuck in a thick milkshake," he continues, using an apt simile for the desperate sucking for air that is the nightly experience of people with sleep apnea.

Basically, there are two ways to keep the airway open. You can either blow air into it to inflate it like a balloon (the principle behind CPAP) or you can move the jaw forward, preventing the tongue and, to some extent, other tissue from blocking the throat.

Devices that move the jaw forward are known as MADs, short for Mandibular Advancement Devices. The FDA has approved about 20 of these. They are typically custom-made acrylic appliances, similar to athletic mouth guards in that they snap over the upper and lower dental arches, but with metal hinges that allow the lower jaw to be eased forward. Some, such as the TAP®, permit the patient to control the degree of advancement.

It has long been recognized that such appliances have a place in the treatment of OSA, though precisely delimiting that place has not been easy. In 1995 — shortly after the first generation of MAD's received FDA approval — the American Sleep Disorders Association, after reviewing the limited data then available, outlined scenarios in which their use was appropriate.

A decade later, with considerably more information to go on, the renamed American Academy of Sleep Medicine modified and clarified its position in a new set of practice parameters, which were

published in the February, 2006 issue of the journal Sleep. (The article can be downloaded from the American Academy of Dental Sleep Medicine web site, at www.aadsm.org.)

In these revised guidelines, the AASM endorsed the use of oral appliances as a first-line treatment for moderate (an Apnea-Hypopnea Index of 15-30) as well as mild (5-15) Obstructive Sleep Apnea. In an even more radical position, the Academy acknowledged the patient's right to choose, stating that "oral appliances are indicated for use in patients with mild to moderate OSA who *prefer* [emphasis added]" them to CPAP.

Does this mean you should toss your CPAP onto a bonfire, and head off to your friendly family dentist for an oral appliance? The answer to the first part of the question is "probably not;" to the second, "definitely not."

The AASM endorsement does not mean that oral appliances are as beneficial as CPAP treatment. Judging the two therapies strictly in terms of their effect on the Apnea-Hypopnea Index, oral appliances do not measure up.

While properly calibrated CPAP therapy can reduce the AHI to zero, patients treated with oral appliances will still experience apneic episodes. Though the numbers are disputed, a realistic expectation is that oral appliance therapy will result in a 50 percent reduction in the AHI (interestingly, an outcome similar to what is seen in UPPP surgery).

Reducing the number of nightly apneas by half may well be sufficient to greatly reduce or eliminate the daytime manifestations of sleep apnea, such as fatigue, difficulty focusing, and irritability. But the residual apneas, with their accompanying oxygen desaturation, might still take a cumulative toll on the cardiovascular system.

Factor in CPAP non-compliance, however, and you get a different calculus. Someone using CPAP for a few hours every other night may, over the course of a week, experience significantly more apneas than someone wearing an oral appliance all night, every night. And needless to say, someone who doesn't use anything will continue to suffer short- and long-term consequences.

In sum, if your OSA is mild to moderate, you've not been able to tolerate CPAP (or are convinced you would not be able to), and your teeth and gums are in good shape, a dental device could be appropriate for you.

In addition, an oral appliance might deserve a place in your medicine cabinet even if you are a successful CPAP user. Traveling with CPAP can be extremely challenging, especially by plane, so the lightweight, highly portable device can serve you well when you're on the road.

So how do you acquire one, assuming you meet the criteria? As stated above, the fact that it's a dental device does not mean that you can turn to the nearest dentist, even if he or she has taken a course in fitting appliances. "There are an awful lot of unqualified people making devices," Dr. Alpher cautions.

You need to get your appliance from one of the comparatively few dentists qualified in dental sleep medicine. The web site of the American Academy of Dental Sleep Medicine can help you find a dentist in your area.

Locating a dentist is not the first step, however. Dentists do not diagnose sleep apnea, so your initial consultation will be with a sleep doctor, who will refer you for a sleep study that will determine whether you do in fact have OSA and how severe it is, which in turn will determine whether you should consult a sleep dentist.

Even after you begin working with a dentist, your doctor will stay involved in your treatment, ordering follow-up sleep studies as needed and monitoring your health status.

One last thing if you're considering a dental device. Though you certainly won't look your best wearing a CPAP mask, and some people experience facial irritation, CPAP won't permanently alter your physiognomy. The same cannot necessarily be said of oral appliances.

Dr. Alpher and others state categorically that a properly fitted device can be worn indefinitely with no problems, but there is evidence that bite changes may occur over time. This is not necessarily serious — someone with an overbite might be pleased with the result — but it is something to be aware of before you open wide. ■

NEWS FROM WASHINGTON

In response to the lobbying effort of the **National Sleep Awareness Roundtable (NSART)**, of which the ASAA is a member, the **House Appropriations Committee** approved a bill that authorized $1 million in funding for the **Centers for Disease Control and Prevention (CDC)** to gather data on sleep and sleep disorders. The **Senate Appropriations Committee**, however, did not endorse the expenditure, though its report acknowledged the importance of sleep research.

After consideration by a conference committee made up of members of both the House and the Senate, the House version was submitted as part an appropriation bill governing 2008 funding for the Departments of Labor, Education, and Health and Human Services. On Nov. 13, President Bush vetoed the appropriation bill.

As this issue of the WAKE-UP CALL goes to press, it is not known what will be the outcome of this crucial initiative. Thanks to all who advocated for the additional funding through our Legislative Action Center (www.sleepapnea.org/advocacy). Please continue to visit the site to stay up to date on this measure and what you can do to help.

In the last issue of the WAKE-UP CALL, we reported that the **Centers for Medicare and Medicaid Services (CMS)** were considering a request to modify their opposition to the use of unattended monitoring for the diagnosis of sleep apnea. During the public comment period, the ASAA submitted the opinion of its Board of Directors. The ASAA's official position on this long-debated issue is one of qualified support for home studies, provided that they are carried out in accordance with best medical practices

On Sept. 12, CMS held a **Medicare Coverage Advisory Committee (MCAC)** meeting. ASAA Executive Director Edward Grandi was present at the meeting and offered testimony, a copy of which is available on the association's web site. In December, CMS will issue a ruling. We will report on their decision on our web site and in the next issue of the newsletter. ■

ASAA IN BRIEF

The **American Thoracic Society (ATS)** held its annual meeting in San Francisco in May. As it has at the previous two meetings, the American Sleep Apnea Association enlisted a patient to speak at a sleep symposium. This year Ruth Kwitko Lym shared her experience of sleep apnea with the assembled physicians. Dean Dizikes and Rob Flandermayer helped at the booth.

The exhibit halls at the medical conferences are always interesting, particularly at the ATS show, which draws physicians and researchers from around the world. Many of them stopped by to learn what the ASAA is doing to help doctors help their patients.

The annual meeting of the **Associated Professional Sleep Societies (APSS)** is the most important medical conference the ASAA attends. At this conference, sleep clinicians, researchers, and technologists come together to hear presentations on the latest findings in sleep medicine. The ASAA was out in full force at the June meeting, with volunteers Liz Johns, Robert and Jean Knapp, Lionel Greenberg, Bob Maurer, and Jack Stubler.

At the APSS meeting, the association convenes its Industry Roundtable, the corporate supporters of the ASAA. The association traditionally presents a speaker who can brief the Roundtable on an aspect of sleep medicine that is outside the mainstream of practice. This year, the speaker was Susheel Patil, a physician from Johns Hopkins Hospital who has done extensive work on the use of critical pressure (Pcrit) for determining sleep apnea severity.

Something new this year: The ASAA's Dave Hargett and Edward Grandi led a discussion group of sleep technologists on improving patient adherence through the support-group model.

In October, Ed Grandi attended the **American Society of Anesthesiologists (ASA)** meeting for the first time. The interest in sleep apnea among the anesthesiologists who gathered in San Francisco was very high, as demonstrated by the crowds at the sessions on OSA. Many of the doctors applauded the ASAA's Patient Education Bulletin on "CPAP in Hospital: Checklist for Patients." ■

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