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QUARTER THREE 2023 VOLUME 32 / NUMBER 03



# Managing Sleep Problems in People With Long COVID

By Regina Patrick, RPSGT, RST

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# Advanced Sleep Titration eWorkbook

Designed as a complimentary resource to the AAST Advanced Sleep Titration e-Learning Course, the eWorkbook covers the same five topical areas as the online course:

- Anatomy and Physiology
- CPAP and BPAP Titration Guidelines
- Adaptive Servo Ventilation (ASV)
- Noninvasive Positive Pressure Ventilation (NPPV)
- Average Volume Assured Pressure Support Auto EPAP (AVAPS-AE)

Purchase the *Advanced Sleep Titration eWorkbook* in the AAST Learning Center





#### THE OFFICIAL PUBLICATION OF AAST

# ABOUT A2Zzz

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Share your expertise with colleagues in the profession of sleep technology by submitting an original article to  $A_z Zzz$ . To propose an article topic or to get more information, send an email to editorial@aastweb.org.

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# **AAST THANKS ITS PRESTIGE PARTNERS**















Quarter Three 2023



# **Membership Renewals Coming Soon**

With the fall season officially here, we are looking ahead to membership renewal season. In October, members who are due to renew their AAST membership for 2024 will be receiving communications with steps on how to renew. As a reminder, all 2023 year-long memberships will expire on Dec. 31, 2023. In order to maintain access to AAST education and resources for all of 2024, you must renew your membership by Dec. 31, 2023.

# Access Your Free Continuing Education Credits

Don't forget to take advantage of the remaining monthly and quarterly free CEC opportunities this year.\* Delivered directly to your inbox, AAST makes it easy for you to access the education you need to succeed. Be sure to claim the two free CECs from this issue of  $A_zZzz$  by taking the self-assessment in the Learning Center!

## **Career Center Resources to Know**

For members, the <u>AAST Career Center</u> is much more than a job board. Whether you're looking to take the next step in your professional journey or keep your resume in tip-top shape, the Career Center is your one-stop shop. AAST members can take advantage of other Career Center features including coaching and reference checking.



# Celebrating 45 Years of AAST

AAST turns 45 in 2023 and we're celebrating! Kicking off with STAW 2023, we have a full

year planned of celebrations, thank yous, looks back, special offerings and more.

# Get Ready for STAW 2023

Sleep Technologists Appreciation Week (STAW) 2023 is just around the corner! Taking place Oct. 22-28, join us for a weeklong celebration in which we applaud the accomplishments made in the sleep field this past year.

In the coming weeks, keep an eye on the <u>STAW event page</u> for celebration ideas.

# Prepare for RST and RPSGT Recertification

For many, recertification is right around the corner. Make sure that you know what is required to maintain your credential(s) and what continuing education credits (CECs) are accepted. Learn more about recertification requirements by visiting the Board of Registered Polysomnographic Technologists (BRPT) and American Board of Sleep Medicine (ABSM) websites.

Be sure to visit AAST's <u>Learning Center</u> for more resources to assist you in preparing for registry or certification examinations and recertification as well.

\*Please note that CEC-earning potential is contingent on when membership begins.





# President's Message

# **A Chapter of Thanks**

By Laree J. Fordyce, RPSGT, RST, CCRP, CCSH, FAAST

With the seasons changing, it's time again for our association to close one chapter and start another as my time as president comes to an end. It's been an honor to serve AAST and its passionate members. I'm immensely proud of the progress we've made during my tenure, and I'd like to take a moment to reflect on the journey we've embarked on together these past two years.

# Advanced Our Education Offerings

AAST continues to expand its educational offerings to bring the latest research, techniques and updates to members and the sleep community. I look back at these past two years and am happy to see that we've been able to launch a number of educational initiatives, including the

Fundamentals of EKG <u>module series</u> and <u>workbook</u>, the Fundamentals of Virtual Patient Monitoring <u>module series</u> and <u>workbook</u>, along with multiple eBooks.

We have also learned from several quality webinar presenters brought to you by the Education Advisory Committee and hosted in person CCSH Designated Education Program Workshops in Chicago to offer small-scale, one-and-a-half day events for sleep-care professionals.

I look forward to seeing additional offerings launch this fall and in 2024, including the Adult Scoring Rules comprehensive review of the AASM PSG Scoring Criteria module series and workbook. AAST is also working to bring you a State of AI and Auto Scoring in Sleep Medicine module series funded by EnsoData.

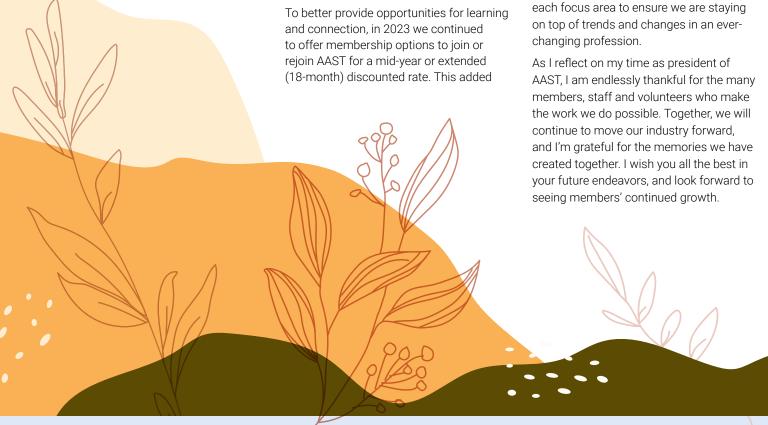
# Improved Member Experience

flexibility allows our community to tailor their membership experience to their professional needs.

Earlier this year, we also launched a new website and learning center with refreshed looks and improved functionality to provide better ease-of-use for our members. Additionally, the AAST blog transitioned to *The Sleep Scene*, providing articles and *A<sub>2</sub>Zzz* content in one place.

# Determined How to Move Our Association Forward

In April of 2022, AAST hosted the AAST Workforce Summit, and subsequently released a paper highlighting the collectively agreed upon focus areas for building upon next steps to position the sleep profession as a leader in the health care space. The AAST Board and I continue to work towards achieving the goals of each focus area to ensure we are staying on top of trends and changes in an everchanging profession.



# **Instructions for Earning Credit**

AAST members who read  $A_zZzz$  and claim their credits online by the deadline can earn 2.00 AAST Continuing Education Credits (CECs) per issue, for up to 8.00 AAST CECs per year. AAST CECs are accepted by the Board of Registered Polysomnographic Technologists (BRPT) and the American Board of Sleep Medicine (ABSM).

To earn AAST CECs, carefully read the entirety of the Q3 issue of  $A_2Zzz$  and claim your credits online in the Learning Center. You must go online to claim your credits by the deadline of **Dec. 31, 2023**. After the successful completion of the learning assessment, your certificate will be available in the My CEC Portal acknowledging the credits earned.

#### COST

The  $A_zZzz$  continuing education credit offering is an exclusive learning opportunity for AAST members only and is a free benefit of membership.

#### STATEMENT OF APPROVAL

This activity has been planned and implemented by the AAST Board of Directors to meet the educational needs of sleep-care professionals. AAST CECs are accepted by the Board of Registered Polysomnographic Technologists (BRPT) and the American Board of Sleep Medicine (ABSM). Individuals should only claim credit for the issues they read in full and evaluate for this educational activity.

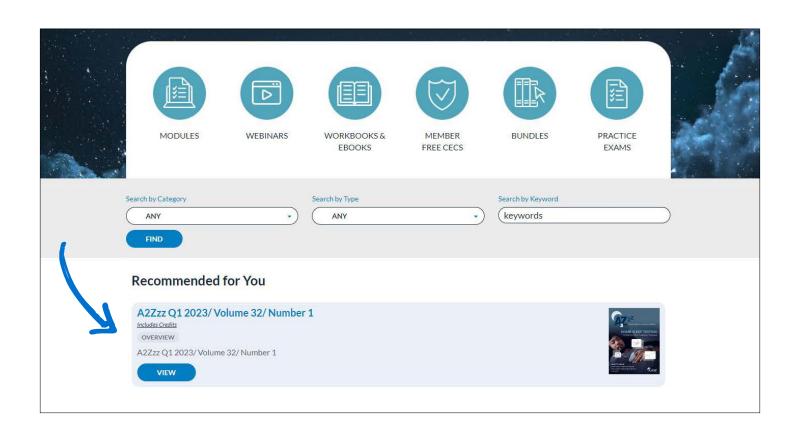
# STATEMENT OF EDUCATIONAL PURPOSE & OVERALL EDUCATIONAL OBJECTIVES

 $A_2Zzz$  provides current sleep-related information that is relevant to sleep-care professionals. The magazine also informs readers about recent and upcoming activities of AAST.  $A_2Zzz$  should benefit readers in their practice of sleep or in their management and administration of a sleep disorders center.

# READERS OF A<sub>2</sub>ZZZ SHOULD BE ABLE TO DO THE FOLLOWING:

- Analyze articles for information that improves their understanding of sleep, sleep disorders, sleep studies and treatment options
- Interpret this information to determine how it relates to the practice of sleep care and medicine
- Decide how this information can improve the techniques and procedures that are used to evaluate sleep disorders patients and treatments
- Apply this knowledge in the practice of sleep care and medicine

You must go online to claim your CECs by the deadline of **Dec. 31, 2023**.





n 2019, information regarding a fast-spreading atypical pneumonia-like illness began to be reported. The cause of the illness was a virus, now called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). In February 2020, the World Health Organization (WHO) officially named the disease caused by the virus as "coronavirus disease 2019" or more simply, "COVID-19." Its symptoms can be nonexistent, mild, moderate or severe and can manifest as a sore throat, congestion or runny nose, cough, diarrhea, fatigue, fever or chills, headache, muscle or body aches, nausea or vomiting, diarrhea, loss of taste or smell, shortness of breath or difficulty breathing, and chest pain or pressure. After recovering from the infection, approximately 40%-90% of people continue to have persistent symptoms or develop new symptoms such as "brain fog" (i.e., difficulty concentrating, confusion or forgetfulness) and changes in taste and smell that last for many months to years.<sup>2</sup> When symptoms persist for three months or more after recovery from COVID-19, a person is considered to have "long COVID." Long COVID tends to affect people who have had severe COVID-19 but can affect people who recover from milder cases as well. People with long COVID frequently report problems with insomnia, although other sleep problems have been reported such as hypersomnia and sleep-disordered breathing (e.g., obstructive sleep apnea [OSA]).<sup>2-4</sup> However, sleep disorders are an overlooked problem in people with long COVID and little data exists with regard to managing sleep problems in this group.

### **About COVID-19**

SARS-CoV-2 enters the body primarily through the respiratory tract. Spike protein on the surface of SARS-CoV-2 attaches to the angiotensin-converting enzyme 2 (ACE2) receptor, which exists on the cells of organs such as the respiratory tract, heart, neurons and endothelium (i.e., inner lining) of blood vessels. After the virus interacts with the ACE2 receptor, it enters a host cell, replicates and causes the cell to release new viruses. This viral release destroys the host cell and causes the release of inflammatory chemicals (e.g., cytokines and chemokines) associated with cellular injury. Viral-related injury to central nervous system and respiratory system tissues may contribute to sleep problems after SARS-CoV-2 infection.<sup>5</sup> For example, viral-damage to the thalamus, brain stem and respiratory center in the brain may contribute to abnormal sleep-wake behaviors and sleep-disordered breathing, and viral-damage to the lungs may contribute to breathing problems associated with long COVID.

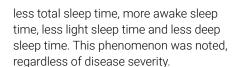
# COVID-19-Related Sleep Studies: What They Uncovered

Most research studies investigating sleep problems in people who recovered from COVID-19 have used surveys, which assess participants' subjective perceptions of their sleep rather than using objective data to assess sleep problems. Thus, the data may not fully reflect what is actually occurring in people with long COVID and sleep problems. For example, a person may underestimate or overestimate the amount of time needed to fall asleep.

To counteract this drawback, Mekhael et al. $^3$  used an objective method — a wireless wearable wristband manufactured by Biostrap (Bradbury, California) — to collect sleep data of people with and without long COVID. The wristband was a photoplethysmography (PPG)-based device, which emitted specific wavelengths of light onto the skin. Light reflected from the skin was detected by a photodiode and used to measure blood vessel volume changes occurring with each heartbeat. This information was then used to determine heart rate, heart rate variability (i.e., variations in time between heartbeats), respiratory rate and oxygen saturation.

The sleep patterns of patients with a history of COVID and individuals who had never had the disease were compared. Sleep staging was based on heart rate variability rather than on electroencephalography (EEG) signals, and the stages were divided into "awake sleep" (i.e., the first stage of non-rapid eye movement [NREM] sleep), "light sleep" and "deep sleep."

Mekhael found that sleep architecture was altered in patients with a history of COVID. Compared to individuals without a history of COVID-19, patients with long COVID had



# Long COVID, Insomnia and Managing Sleep

Patients with long COVID often complain of insomnia. In general, treating insomnia typically involves the use of sleep-inducing medications (e.g., benzodiazepines, barbiturates and hypnotics) and to a lesser extent cognitive behavioral therapy for insomnia (CBT-i). However, patients with insomnia, including patients with long COVID, often do not feel improvement with medication alone.

Identifying risk factors for poor sleep during and after contracting COVID-19 may be beneficial in alleviating insomnia and poor sleep after infection. Research has indicated that insufficient sleep or sleep disruption has a negative impact on disease severity and treatment outcomes.<sup>34</sup> Therefore, improving the sleep hygiene of patients with COVID-19 (e.g., reducing noise or light exposure, use of chronotherapy), including during hospitalization, may be helpful in improving treatment outcomes and reducing the effects of long COVID.

Early recognition by clinicians of sleep dysfunction in patients with long COVID and implementing multidisciplinary interventions may be beneficial. However, in clinical practice, general practitioners have insufficient information with regard to recognizing and managing sleep problems in patients with long COVID.6 Guezguez and colleagues<sup>6</sup> suggest that unnecessary pharmacological prescriptions to treat insomnia and other sleep disorders could potentially be avoided if more general practitioners had information regarding sleep disorders in patients with long COVID and if a multidisciplinary team consisting of, for example, general practitioners and sleep specialists were utilized.

For patients with long COVID who struggle with insomnia, an alternative to

sleep-inducing medications may be melatonin, which is a sleep-inducing hormone that improves sleep onset and is typically used to treat circadian rhythm disorders. Melatonin and melatonin receptor agonist drugs (e.g., ramelteon) are believed to reduce respiratory problems via their anti-inflammatory and immune-enhancing effects, <sup>4,7</sup> which may also improve sleep quality. In addition, melatonin and melatonin receptor agonists may be beneficial in alleviating other symptoms of long COVID such as brain fog and pain. <sup>8</sup> However, the use of melatonin to treat sleep problems in people with long COVID has not been studied extensively and additional research would need to be conducted to know more.

# Integrative Medicine: A New Approach to Sleep Management

Integrative medicine may be a promising approach in treating sleep problems in people with long COVID. Integrative medicine focuses on treating the whole person rather than just alleviating symptoms. Thus, a treatment plan may involve pharmacological and nonpharmacological therapies to address different aspects of a patient's symptoms.

In a recent paper, Roth and colleagues<sup>9</sup> described their experience in successfully using an integrative health approach to treat two patients with long COVID. Their approach combined traditional medical management (e.g., drug therapy), nonpharmacological approaches (e.g., meditation) and behavioral and lifestyle changes (e.g., exercise).

Their first patient was a 48-year-old woman who recovered from a mild COVID-19 infection but had lingering symptoms of migraine headache, nonexertional shortness of breath without wheezing, episodic chest pain and palpitations, panic attacks and fatigue. She had been taking metoprolol for hypertension before contracting COVID-19, and in response to her lingering symptoms, her primary care physician recommended albuterol for shortness of breath, ibuprofen — as needed — for migraine headaches and alprazolam for anxiety. In their integrative approach, Roth's team prescribed a nasal steroid (fluticasone), amitriptyline for migraine, a lower dose of metoprolol, escitalopram for anxiety and referred her for psychotherapy. She was also prescribed a five-minute breathing meditation exercise and a daily 30-minute walk. At the one-month follow-up, she reported an improvement in her symptoms and the resolution of her shortness of breath. Palpitations and episodic headache and fatigue also improved.

The second patient was a woman who had recovered from COVID-19 seven months earlier. She had lingering symptoms of anosmia (i.e., total or partial loss of the sense of smell) and dysgeusia (i.e., impaired sense of taste), loss of appetite, a 20-pound unintentional weight loss, joint pain, brain fog and extreme fatigue. She also reported symptoms of excessive daytime sleepiness and snoring at night, for which she was referred for a sleep study. She was diagnosed with severe OSA and treated with continuous positive airway pressure (CPAP). She was also prescribed meloxicam (a nonsteroidal anti-inflammatory drug) and turmeric (a spice) to alleviate joint pain, a daily 30-minute walk and a high-calorie meal plan. At the three-month follow-up, she reported that her symptoms were gradually improving and she had stopped losing weight. She still experienced intermittent fatigue and cognitive deficits, but they were less frequent.

# Conclusion

Scientists are not sure why long COVID occurs. Reasons for long COVID that have been suggested are:  $^9$ 

- A chronic low level of inflammation in the brain, heart, muscle and nerve tissues.
- An autoimmune condition in which the body makes antibodies that attack the brain.
- Dysfunction of ACE2 receptors in the heart and lungs.
- A hypercoagulable state and endothelial dysfunction, which cause widespread immune response dysregulation.
- Decreased blood flow to the brain because of autonomic nervous system abnormalities.
- An undetectable reservoir of an infectious or noninfectious virus that continues to trigger an immune response.

# Sleep Hygiene Tips for Individuals With Long COVID

People with long COVID should foster habits that maintain consistent sleep—wake times, for example:<sup>2,6</sup>

- Create a sleeping environment that is conducive to sleep (i.e., comfortable environmental temperature, free of excessive lighting and noise);
- Maximize exposure to daylight, particularly morning light, to enhance daytime wakefulness;
- Avoid or reduce nighttime exposure to artificial lighting, including light emitted by phones, computers and/ or television;
- Maintain a healthy diet and diet habits (e.g., avoid eating caffeinecontaining foods before sleep);
- Get regular exercise (ideally outdoors and early in the day to get maximum light exposure);
- Engage in calming activities before going to bed such as reading a book or listening to music.

Individuals with long COVID and insomnia should avoid:

- Going to bed when not tired, which can cause a person to associate bed with wakefulness rather than sleep;
- Watching the clock while in bed at night, which can add to anxiety about "not getting enough sleep" and worsen insomnia:
- Participating in strenuous activity before bedtime, which can delay sleep onset;
- Eating a large meal before going to bed, which can delay sleep onset; and
- Playing video games or watching videos in bed, which can delay sleep onset.

More information is needed regarding the relationship between long COVID and sleep disorders; a better understanding of this relationship will allow more effective management of the overall health of patients with lingering symptoms of the infection. Additionally, a treatment approach that involves the input of several types of clinicians such as general practitioners and sleep professionals could potentially allow sleep problems in patients with long COVID-19 to be recognized and treated earlier, which could potentially reduce symptoms of long COVID. lacksquare

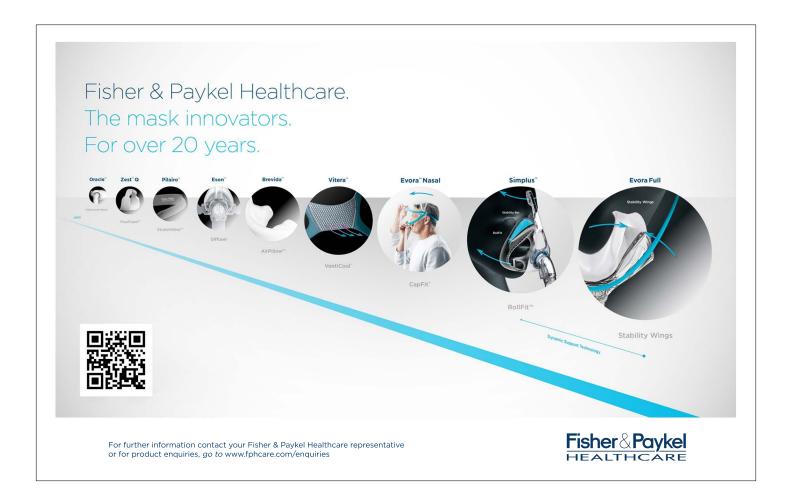


**REGINA PATRICK, RPSGT, RST,** has been in the sleep field for more than 30 years. She is also a freelance writer/editor.

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# What Are You Waiting for?

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# The Impact of Sound on Sleep

By Colton Wiggins, MSML, BBA-HCM, RRT-SDS, RPSGT

Southerners can sleep through anything as long as they have their fan on — at least that's the stereotype associated with anyone living in the southern part of the United States. It may be a generalization, but I can attest from personal experience that unless I have my box fan on, I don't seem to sleep well.

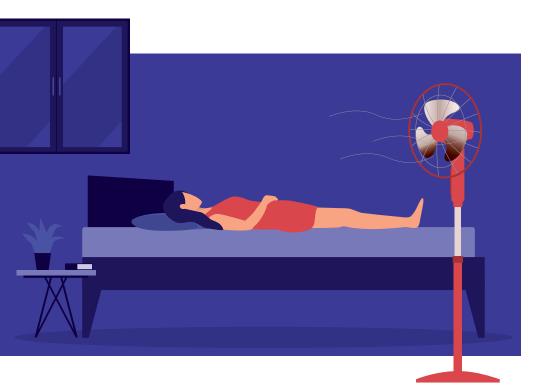
Many people depend on white noise as a sleep aid and the reasoning is simple — our lives are filled with noises and sounds. From traffic to loud neighbors and distant trains passing by, there are a lot of abrupt noises that can keep us from entering into deep, consistent sleep. The question isn't simply whether white noise is beneficial or not. Rather, it's what the effect of sound on our sleep hygiene is.

Have you ever wondered why we use more noise (white or brown) to cancel out the bothersome sounds in our lives? Wouldn't it be ideal to reduce all noise instead of using one noise to block out the rest? In this article, we'll look into noise pollution, white noise and the impact that both have on sleep hygiene.

# What Is Noise Pollution?

Noise is an unwanted or disturbing sound.<sup>1</sup> In 1990, a law called the 1990 Clean Air Act Amendments was passed that added a new subchapter to Title IV — which was originally about acid deposition control — to include specific verbiage about noise pollution. The shortened version of this amendment established the guidelines and authority the Environmental Protection Agency (EPA) follows regarding violations of excessive noise.

Noise pollution is more than just negative or annoying sounds associated with our environment, however. With regards to personal health, noise induced hearing loss (NIHL) is the most commonly correlated health effect, though it isn't the only one.<sup>1</sup>



Imagine you come home from working a long night shift, get cleaned up, turned out the lights, turned on a fan or sound machine, put on your continuous positive airway pressure (CPAP) machine and shut your eyes only to hear the blaring sound of your overzealous neighbor cranking up their obnoxiously loud lawnmower just when you were about to doze off. Not only does your blood pressure rise due to frustration, you now have a prolonged sleep onset, and arguably do not get a good quality day's sleep. This leads to increased fatigue and drowsiness as you prepare for your shift the following night, and is a prime example of the effects of noise pollution on one's sleep hygiene.

## What Is White Noise?

Entering white noise into a search engine produces an almost inconceivable amount of research, articles and forums discussing the pros and cons of it. The great debate on whether white noise is good or bad can be found in almost every online search result, and inadvertently, most results share alternatives to consider that are comparatively better for your sleep health.

The first order of business is for sleep-care professionals to have an agreed-upon definition of white noise. White noise is defined as a specific noise that contains all the frequencies of sound that we can hear. The reason for this name being that the collection of certain frequencies is associated with a specific color, depending on the frequency ranges. Therefore, similar to how white light includes all the colors on the spectrum, white noise contains all the frequencies of sound that we can hear. Some people describe white noise as having a similar sound to static from a television or radio.2 In contrast, black noise is the absence of sound.

In the Sleep Quality Survey 2022,3 68% of participants utilized some sort of noise as

# There seemed to be a strong correlation between where someone lives and the level of noise pollution affecting them.

a sleep aid. From playing music, using white noise machines or even sleep applications on their mobile device, the widespread use of noise to help sleep is astonishing. But why is that?

As mentioned before, we live noisy lives — even at home. A study in BMC Public Health<sup>4</sup> found that 11.9% of participants (5,775) reported noise disturbance in general at home, with noise being worse for participants who rented apartments and or lived above the ground floor. There seemed to be a strong correlation between where someone lives and the level of noise pollution affecting them. This is also interesting because it shows a possible correlation between the increased use of white noise devices associated with the living conditions of individuals of varying socioeconomic statuses and geographical locations.<sup>5</sup> Further research may support the theory of a possible disparity of individuals affected by increased noise pollution dependent on these factors.

# Is it the Sounds of Sleep or Just Noise?

Is white noise healthy? Is it a placebo or a science-based sleep aid option? Do sounds affect one sleep stage differently than another? Is the effect of sound on the body more widespread than just sleep? Well, the number of pages that I would have to write to convey that information in an academically proficient way would be more than you are willing to read in a single sitting. However, I will say this: white noise is arguably beneficial in masking unwanted sound or noise in our environment due to it covering a wide range of frequencies. While it may help mask the problem, it is not the best solution to addressing noise pollution.

The best solution is to find ways to reduce one's environmental noise so that they are not dependent on white noise to get truly restful sleep. Therefore, I encourage everyone to seek out ways to get a good night's sleep by doing research on alternatives to reducing noise in your life. Whether you incorporate the use of earplugs, add insulation to your walls or roof, move to a quieter neighborhood or have a heart-to-heart with your overzealous lawn-mowing neighbor, make sure you are listening to your body and listening for the sounds of sleep.



#### COLTON WIGGINS, MSML, BBA-HCM, RRT-SDS, RPSGT, is

a dually registered and licensed health care professional in the fields of respiratory therapy and sleep medicine. In his short career of seven years, Colton has been an item writer for the National Board for Respiratory Care (NBRC)'s Sleep Disorders Specialty (SDS) exam for two consecutive years and spearheaded the development and accreditation for one of only two Commission on Accreditation of Allied Health Education Programs (CAAHEP)

accredited sleep technology schools in Louisiana. He also serves as secretary for the Louisiana Academy of Sleep Medicine (LASM) and is a member of the AAST Editorial Committee. His passion is being there for others through passionate educating, purposeful development and hands-on training of future sleep technology and respiratory professionals. Colton is also a musician and director, having over a decade of experience playing and leading musical ensembles in churches throughout Louisiana.

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# Who We Are

The AAST Continuing Education Credit (CEC) Program provides educational providers and sleep center managers the opportunity to apply for and award AAST-CECs to students and participants with an approval process through the AAST Continuing Education Accreditation Committee.

- Committed to assuring that approved programs meet requirements essential to maintaining and increasing a sleep professional's knowledge and skills in the rapidly evolving sleep field
- The CEC Accreditation Committee reviews educational applications for live, in-person events and online/e-Learning educational formats for AAST-CECs
- CECs earned through AAST-approved educational opportunities will be accepted by the Board of Registered Polysomnographic Technologists (BRPT) for RPSGT, CPSGT and CCSH recertification

- Educational Providers who submit a program for review can take advantage of highlighting their approved educational programs on the AAST CEC Calendar, which reaches 2,500+ Members
- Attendees, both AAST members and Non-Members, can claim their official AAST Continuing Education Credit Certificate through the AAST site



# Sleep Hygiene: Practicing What You Preach

By Geoff Eade, RPSGT, CCSH

One of the most important factors for a restful night is the practice of good sleep habits. From a patient perspective, sleep habits, however, are often overlooked, being sidelined by focus on identifying and treating sleep disorders. Similarly, sleep-care professionals tend to overlook their own sleep habits, which can cause unexpected and unneeded challenges during their work shifts. This brief article is intended to be a reminder to check sleep habits to ensure a good night's rest for both your patients and yourself — the sleep professional.

Consider the following scenario: A sleep professional goes into the sleep lab, sets up a patient and titrates them perfectly. The patient goes home and tries to acclimate to their positive airway therapy pressure (PAP) therapy. They are able to tolerate the mask and pressure, however they have insomnia and are unable to stay asleep. At their follow-up visit with their sleep-care provider, their compliance data looks decent but shows disrupted sleep and is short on usage hours. They are also still reporting insomnia and fatigue with daytime sleepiness. After further evaluation, it is determined that they have poor sleep hygiene and the patient is given instructions on how to improve their sleep hygiene before being sent home. The patient experiences optimal rest after correcting their sleep habits and being adherent to PAP therapy.

What if those sleep hygiene issues had been addressed early in the process, even as early as the setup stage at the lab? The patient could have had a better experience while attempting to acclimate to PAP therapy.

The effects of poor sleep habits are well known in our industry. Further, disturbed sleep or insufficient sleep has been reported to have adverse effects on the cognitive ability, performance and health of the affected person, highlighting the importance of sufficient and good quality sleep. As sleep professionals, we can get tunnel vision and forget to address the sleep hygiene basics: sleep in a dark, cool room; establish routine bed and wake times; limit electronic exposure before bedtime; the list goes on and on. Therefore, it's important that we form the habit of addressing and resolving poor sleep habits with our patients during all stages of their sleep assessment/testing as poor habits may develop long after diagnosis and treatment.

On the flip side, as we are helping our patients, it's important that sleep-care professionals also practice what we preach about sleep hygiene to our patients. Whether we're feeling sluggish during a shift in the lab or have recently switched from working nights to days, we can use sleep hygiene to assist with daily changes as well as the big adjustments. After all, following good sleep hygiene practices may serve as non-pharmacological treatment against sleep disturbances to some extent and lead us to a road of good sleep health.<sup>1</sup>

For sleep-care professionals, one of the primary habits we may be neglecting yet preaching is a consistent routine for bed and wake times. Sleep disturbances — including a lack of consistent bed and wake times — can significantly impact employee behavior, mental alertness, physical appearance, daytime physiology, emotional condition and health. If you are able, try setting times that work for your schedule and stay in this pattern for a week. If you are unable to, try implementing a turnaround day before your next shift as well as after your last shift as a way to reset your body. Set the example for other sleep-care professionals and your coworkers by being the beacon of good sleep health and being consistent in your practices.

Practicing what you preach can and will go a long way when it comes to sleep hygiene. Not only will patients feel encouraged to establish and follow sleep hygiene best practices,



but sleep professionals will be able to improve their own sleep health, ultimately leading to better patient care.



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# A Technologist's Guide to Performing Sleep Studies

Designed as an introductory resource, the *Technologist's Guide to Performing Sleep Studies* provides step-by-step instructions for collecting sleep study data from patients. It includes sections that cover suggestions for putting the patient at ease, reviewing the patient's symptoms and medications, attaching the sensors, preparing to record, biological calibrations, artifact detection and correction, and documentation.



Purchase A Technologist's Guide to Performing Sleep Studies eBook in the AAST Learning Center

# The Impact of Halloween on Sleep Hygiene

By Ryan Lott, MBA, RPSGT

The light of the day turns to night, and children and adults throughout the US don their costumes — this can only mean one thing: Halloween is here! Primarily celebrated in the United States, for many people, Halloween is a time that we party together with themes such as ghosts, witches, pumpkins, fantasy and more. Some will break out the popcorn and watch their traditional scary movie or horror film and thoroughly indulge in sugary treats of all kinds. While the Halloween holiday brings excitement and fun for those who celebrate, it can also bring with it the possibility of sleep disruption and poor sleep hygiene that might haunt you for many days to come.

# Frightening Sleep Schedules

To knock on the door of Halloween's effects of sleep, let's look closer at sleep deprivation. Though the holiday is only one night, it often lands in the middle of the week, which is not ideal for sleep schedules. A delayed sleep schedule is found to negatively affect daily function and can cause one to have difficulty with concentrating, fatigue and sleepiness.1 Halloween traditions, such as trick-ortreating, and parties often go late into the night — cutting our sleep time short and sleep deprivation to ensues. Even more so, many school schedules start early the next morning, which can lead to impairment in cognition and function in children.2

# **Scary Media**

On Halloween, and even the nights leading up to it, many will turn to watching scary movies to get in the mood for the holiday. What they don't consider is how watching the movie(s), whether that be via a television or mobile device, all day and late into the night can have scary impacts on their sleep schedule.

There are countless studies analyzing the use of media during the day and electronic devices prior to bed and their impact on sleep. Sleep questionnaires in one research study revealed impacts that included sleep-onset latency, nightmares, frequent nighttime arousals, difficulty waking in the morning and daytime somnolence, and said study found these impacts highly correlated to the media that was viewed the previous day.<sup>3</sup> Additional findings in research show that the younger a child consuming the media is, the more severe the sleep disturbances are at night.<sup>4</sup>

Can one movie really have long term effects on sleep for young children and adults? From Jaws to Poltergeist, scary movies are known to cause nightmares, phobias and fears — which can have effect many years from the initial time of viewing. In addition to these possible impacts, we are also exposed to blue light, which can keep you awake or be deleterious on quality of sleep.

# Seasonal Food and Candy

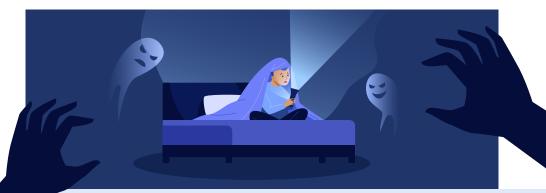
With Halloween comes the influx of sweet treats, especially candy. What many don't realize is that the ghoulish indulgence of sugar during the holiday is directly related to poor sleep.<sup>7</sup>

Eating junk food affects consumers systemically with regard to the piriform cortex in the brain (the part that serves a key role in odor discrimination and the perception of odor) being correlated to a desire to eat more.<sup>8</sup> In eating more junk food, consumers are taking in more and more caffeine, something that is commonly found in chocolate bars, even the minisized ones. Adding to this, the discovery by Ahuwalia et al.<sup>9</sup> who noted that most children 12 years of age and older are more prone to drinking and eating caffeinated foods and drinks—leading to heightened instances of insomnia. We know that caffeine has a half-life of about 4-6 hours,<sup>10</sup> making insomnia prevail well into the night after trick-or-treating hours are over.

# **Enjoying Halloween in Moderation**

After reviewing Halloween and its impact, it is evident that the holiday can have deleterious effects on sleep. And while it's tough to pinpoint which repercussion noted above has the biggest impact on a sleep schedule, there are ways to enjoy the holiday in moderation so that sleep schedules are not severely impacted.

A few tips to consider when enjoying the Halloween holiday. First, remember to maintain a regular sleep schedule by going to bed and waking at a regular time. Second, limit viewing scary media — especially for young children — as it can cause nightmares or sleep disturbances. Finally, be cognizant of sugar and caffeine intake, which can lead to insomnia. In all these, moderation is key. Take care, and happy haunting.





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