The Somnus Odyssey

Wellness Institute for Sleep & Health Newsletter

Gear Up for Health!

We are ready to instill in our community the importance of rejuvenating sleep, enhancing heart health, and nurturing vitality for a holistic approach to well-being. Join us in our call to action!

Featured Topics:

We hope you had a wonderful Thanksgiving !

Community Connections

Attention Healthcare Providers! Spread the word to your patients about an upcoming discussion led by Dr. Patel at the **Camas Public Library** on December 11th at 6 PM! Encourage patients to attend and gain valuable insights and expert tips on sleep-related topics to enhance their well-being.

"Talking Sleep with Dr. Patel" will provide valuable information on healthy sleep habits and address common sleep disorders. This session is tailored to empower patients with knowledge that can positively impact their sleep and overall health.

Social Media Updates

WISH has officially joined TikTok, and we're thrilled to share our expertise on this dynamic platform to enhance the community education on sleep-related topics. We want patients to stay connected, stay informed, and to collaborate on this journey to promote better sleep!

We are diligently expanding our video repository on our YouTube Channel to provide a convenient resource for accessing essential sleep-related information. This platform allows everyone to easily access weekly sleep tips, and other valuable insights on sleep.

http://www.youtube.com/@WISHcares

Sleep Clock Shuffle: After Turning Back the Clock

The biannual transition to daylight saving time (DST) and return to standard time (ST) has been linked to a range of adverse health consequences. Particularly, when changing to DST we see significant sleep disturbances, exacerbation of mental health conditions, impairment in academic and athletic performance in adolescents, and significant consequences of drowsy driving.

The abrupt shift in sleep-wake patterns caused by the time transition can drive symptoms of insomnia, hypersomnia, and/or impaired cognitive function. These sleep disturbances can have a significant impact on daily life, affecting productivity, mood, and overall well-being. Many studies and analyses have demonstrated and quantified the negative impact of the time change, particularly in the spring, including increased hospital admissions, rising need for mental health support (hotlines, appointments, etc.), increased motor vehicle accidents, and even loss of revenue.

The stress and anxiety triggered by the time change not only disrupts sleep quality, but also reduces overall sleep duration. This can have severe and lasting consequences for both physical and mental health. The immune system has a diminished ability to mount an adequate response as there is an increase in the production of pro-inflammatory cytokines. The risk of chronic diseases increases as a result of a similar phenomenon, as well as an imbalance in hormonal energetics. Cognitive function suffers, including memory lapse or loss, concentration difficulty, and impaired decision-making.

Moreover, reduced sleep duration exacerbates the stress response. Chronic elevations in sympathetic hormones give way to rises in cortisol and other long-term stress hormones, resulting in a disruption of the HPA axis. The consequences of this include disruptions in the homeostatic balance of thyroid hormone, growth hormone, and insulin, to name a few. This vicious cycle of irregular pulses of high-energy-producing hormones can trap individuals in a state of chronic stress, making it difficult to break free from the sleep-stress-anxiety loop.

The primary step in tempering this change involves manipulation of external light sources. Light is the major stimulus for governing our circadian rhythm. Optimizing timing, duration, and volume of light exposure can quickly reset the body rhythms to baseline and improve regularity of sleep.

Consistent timing of meals provides another primal trigger to strengthen or 'set' the clock. Exercise can also help regulate the body's natural sleep-wake cycle, making it easier to fall asleep and stay asleep at night.

Cognitive-behavioral therapy (CBT) for insomnia is a highly effective treatment for insomnia that can also help to reduce post-time change stress by aiding in the identification and modification of negative thoughts and behaviors contributing to sleep problems. For example, CBT can help to develop a more relaxing bed-time routine and to learn how to manage anxiety that may be interfering with sleep.

Sleep medicine professionals advocate for the adoption of permanent standard time. This would eliminate the biannual time shifts and their associated health risks and consequences. Additionally, it would allow individuals to adhere to a more natural sleep-wake schedule, promoting better sleep quality and overall well-being.

Citations:
Rishi MA, Ahmed O, Barrantes Perez JH, Berneking M, Dombrowsky J, Flynn-Evans EE, Santiago V, Sullivan SS, Upender R, Yuen K, Abbasi-Feinberg F, Aurora RN, Carden KA, Kirsch DB, Kristo DA, Malhotra RK, Martin JL, Olson EJ, Ramar K, Rosen CL, Rowley JA, Shelgikar AV, Gurubhagavatula I. Daylight saving time: an American Academy of Sleep Medicine position statement. J Clin Sleep Med. 2020 Oct 15;16(10):1781-1784. doi: 10.5664/jcsm.8780. PMID: 32844740; PMCID: PMC7954020.

Specialists' Corner

It is important to note that standard time has been shown to most closely reflect our natural body rhythm. The value of rising by the sun, or gaining exposure to sunlight in the morning hours, has a significant positive physiologic effect (which, in turn, has a rather important psychological impact as well). Some might argue the qualitative benefit of "extra daylight" in the evening, however, this does not bear scientific backing.

Ideally, in preparation for the clock change, at least 3 days prior to 'Spring Forward', and at least 1 day prior to 'Fall Back', one can begin to adjust the clock. Advancing, or 'Spring Forward', confers a higher stress response and is physiologically more difficult to resolve. Incremental changes (20-30 minutes earlier) daily for those 3 days can positively drive the change. The focal point would be the wake time, rather than the bedtime, to slowly inch the circadian rhythm to its target time. The body clock has less difficulty time moving forward ('Falling Back'), and therefore, one day of a 'later' wake time can smooth this transition.

It is always worth asking patients about their difficulties with these transitions, especially those with higher cardiovascular or cerebrovascular risks. Hospital admissions and presentations of heart attack and stroke rise dramatically the day after the clock change (significantly more so in the spring!); preparation for this circumstance could be life-saving.

Beyond the Calories: Addressing Sleep Deprivation in Patients with Obesity

The Alarming Prevalence of Obesity in Washington State and Its Connection to Sleep Deprivation

In 2022, Washington State reported a concerning statistic: 31.7% of the adult population is grappling with obesity, a significant increase compared to the national average of 26.7%. Digging deeper into the data reveals higher prevalence among Native American, Hispanic, and Black populations, shedding light on the complex interplay between health disparities and lifestyle factors.

Sleep Deprivation as a Common Denominator in Obesity

One striking trend emerging from this data is the strong association between inadequate sleep and obesity, affecting both the youth and the elderly. Studies indicate that insufficient sleep is a common denominator in obesity across various age groups. For instance, an eye-opening study focused on children aged 5-6 years found that those with a bedtime before 8 pm reduced their risk of obesity development by a staggering 50%.

Hormonal Imbalances Linked to Sleep Deprivation and Obesity

Delving into the mechanisms behind these connections, researchers have uncovered the impact of short sleep on hormones related to appetite stimulation and metabolic demands. Individuals with abbreviated sleep times exhibit increased levels of ghrelin, the hunger hormone, and decreased levels of leptin, the hormone responsible for satiety. Among others this hormonal imbalance often coincides with elevated caloric intake, shedding light on the intricate relationship between sleep and nutritional habits. Other particularly implicated hormones are thyroid (notoriously causing hypothyroid-like states when sleep deprived), cortisol (increased as a result of chronic stress-response), and growth hormone (a reduction which is related to "slowing" of metabolism).

Nutritional Patterns and Weight Gain

Moreover, nutritional patterns of those with inadequate sleep often demonstrates poor dietary choices and higher caffeine consumption. The accumulation of fat in the neck, a common consequence of weight gain, can lead to upper airway compromise, directly correlating with Obstructive Sleep Apnea (OSA).

Individuals with elevated BMI, a common risk factor for OSA, often exhibit elevated levels of leptin. This relationship is attributed to leptin resistance, a condition in which the body's response to leptin's signaling is impaired. Leptin plays a direct role in stress responses and lipid regulation, all of which contribute to the development and severity of OSA.

Prioritizing Sleep for Overall Health and Well-being

As we unravel these complex relationships, it becomes imperative to highlight the significance of prioritizing sleep, particularly in our youth. The bedtime habits formed during childhood lay the foundation for lifelong patterns, potentially perpetuating generational consequences throughout society. The statewide obesity epidemic serves as a stark reminder that sleep should not be under-prioritized, as it plays a pivotal role in shaping the health trajectories of individuals and communities alike.

In our collective effort to address rising obesity levels nationwide, let us not overlook the fundamental role that sleep plays in the intricate dance of health and well-being. By fostering awareness, education, and a commitment to healthy sleep practices, we can strive towards a healthier and more resilient future for all.

(Continued)

Citations:

Marik PE. Leptin, obesity, and obstructive sleep apnea. Chest. 2000 Sep;118(3):569-71. doi: 10.1378/chest.118.3.569. PMID: 10988169.

Jehan S, Zizi F, Pandi-Perumal SR, Wall S, Auguste E, Myers AK, Jean-Louis G, McFarlane SI. Obstructive Sleep Apnea and Obesity: Implications for Public Health. Sleep Med Disord. 2017;1(4):00019. Epub 2017 Dec 12. PMID: 29517065; PMCID: PMC5836788.

Bruce ES, Lunt L, McDonagh JE. Sleep in adolescents and young adults. Clin Med (Lond). 2017 Oct;17(5):424-428. doi: 10.7861/clinmedicine.17-5-424. PMID: 28974591; PMCID: PMC6301929.

Adult Obesity Prevalence Maps. Overweight & Obesity. CDC. 2023 Nov 21. www.cdc.gov.obesity/data/prevalanence-maps.html. 2023 November.

SyncWell: Orthosomnia

In the sleep world, a new concern is emerging out of ubiquitous health-tracking data. It is characterized by an obsessive focus on sleep-data followed by a relentless pursuit of perfecting these metrics. It is being dubbed 'orthosomnia', and can have a detrimental consequence on an individual's physical and mental well-being.

Orthosomnia manifests in individuals who become fixated on sleep trackers and sleep-related apps, scrutinizing their sleep data to the point of obsession. They may set unrealistic sleep goals, meticulously plan their sleep schedules, and make drastic lifestyle changes in an attempt to achieve optimal sleep. These activities can come at the expense of other activities (social, personal, etc.).

The relentless pursuit of perfect sleep can lead to a vicious cycle of anxiety and sleep deprivation. Individuals with ortho-somnia may become hypervigilant about their sleep patterns, constantly checking their sleep trackers and worrying about achieving a perfect night's sleep. This anxiety can disrupt their sleep, leading to insomnia and daytime fatigue.

In severe cases, orthosomnia can lead to social isolation and a deterioration in quality of life. Individuals may prioritize sleep to the detriment of their social engagements, work responsibilities, and overall well-being.

If patients are exhibiting signs of orthosomnia, seeking professional sleep help is crucial. Cognitive-behavioral therapy (CBT) can be an effective treatment, helping individuals identify and manage their obsessive thoughts and behaviors in order to develop healthy sleep habits.

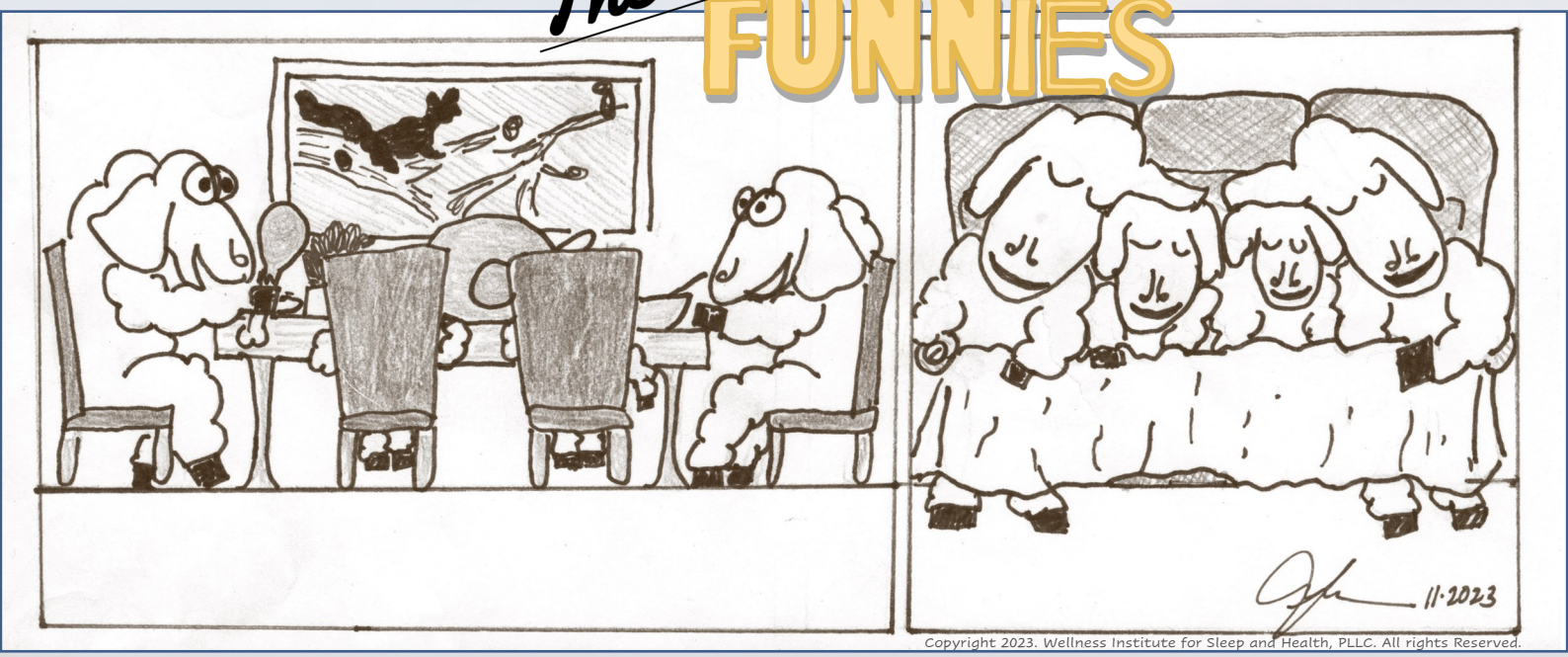
Somnus's December Spotlight

Holiday Splurging on Sleep

Managing Post-Hospital OSA

Citations:
Kelly Glazer Baron, PhD, MPH, Sabra Abbott, MD, PhD, Nancy Jao, MS, Natalie Manalo, MD, and Rebecca Mullen, MS. Orthosomnia: Are Some Patients Taking the Quantified Self Too Far? https://doi.org/10.5664/jcsm.6472. 11/2023

The Sleep FUNNIES



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