



By DR. TOM FLASS AND BRITTANY COBURN NP-C

A FUNCTIONAL MEDICINE APPROACH TO HEALTH

Pillar #2 Sleep

In our last article, we kicked off the Six Pillars series with a brief discussion of nutrition. As you recall, the **Six Pillars of Health** are the fundamental lifestyle factors that determine lifespan (how long you live) and healthspan (how long you can avoid major diseases). They include:

1. Nutrition
2. Sleep
3. Exercise
4. Mental Health and Stress Management
5. Connection and Community
6. Sunlight, Nature and Environment

Sleep issues and insufficient sleep are an epidemic in our country, and we are paying the price for it. Think you don't need more than a few hours of sleep? Think again. Stubborn weight loss or pre-diabetes? Could be poor sleep. Hormones out of whack? Take a look at your sleep. Worried about Alzheimer's or heart disease? You better get your sleep dialed in. Tired and brain fog all the time? You get the pattern.

In fact, you would be hard pressed to find an area of human health that isn't impacted by sleep, or lack thereof. Why is it so important? Sleep is far more than a few hours that your body gets to chill out at night. There are specific cycles and stages of sleep during which vital processes occur that are absolutely necessary to have a healthy body and brain. This is what differentiates between sleep and rest. To have restful, restorative sleep you need to go through all 4 stages of sleep to complete 1 full sleep cycle: 2 stages of Light (non-REM) Sleep, then

a stage of Deep (delta wave) Sleep, then a stage of REM Sleep. Each full cycle lasts 90-120 minutes and people should go through 4-6 cycles per night. For the math whizzes out there, that means a bare minimum of 6-7 hours of sleep is required, and potentially upwards of 9+ hours for some folks, even more for kids! Sleep requirements vary by age and are listed below, but it is worth noting that teens need more sleep (8-10 hours nightly) and are among the most under slept members of our society.

Infants: 12-16 hours
Toddlers: 11-14 hours
School age: 9-12 hours
Teens: 8-10 hours
Adults: 7 hours minimum

Sleep deficiency especially in teens is no joke and is being linked to the mental health crisis we are seeing in today's youth. Rising rates of anxiety, depression and suicide may be linked to poor sleep quantity and quality. It very well may be contributing to the high rates of ADHD as well as the obesity and type 2 diabetes epidemics. Even a few weeks of poor sleep can make a person insulin resistant and on the road to pre-diabetes. Good sleep for kids and adults must be a non-negotiable top priority if we want to have good physical and mental health.

When we look at what goes on during delta wave and REM sleep, we can see why it is so important to the brain especially! Deep delta wave sleep is when the brain "takes out the trash" and gets rid of unwanted debris and substances that can be toxic to brain cells. It is also the most restorative stage where the body repairs itself and rebuilds and strengthens the immune system. REM sleep appears to be important for memory formation and consolidation.

Being unconscious and sleeping are two different things. This is why both alcohol and even certain sleep medications that render a person unconscious without achieving delta wave or REM sleep are so dangerous long term. You might not be awake, but without those important sleep stages, you lose all the benefits of a good restful night's sleep and your risk for the other consequences of sleep deprivation actually go up.

Sleep researchers like Matthew Walker PhD caution against the powerful "sedative hypnotic" prescription sleep drugs, or even Benadryl (common in OTC sleep medications). These medications (often used with alcohol) are bad news for your brain when used regularly.

So what can you do to safely improve your sleep (or your kids sleep)?

#1- Improve your Sleep Hygiene. Multiple factors in your environment can impact the quality of your sleep. Avoid caffeine after noon. Some may need to avoid it after 9am or quit entirely if they are a slow caffeine metabolizer. Develop a sleep ritual, that may include some relaxing tea, a hot bath or shower as part of a wind down time before bed. At night, the bedroom should be cool, quiet and DARK. Turn down the heat at night to 65. Turn down the lights in the evening. Excessive light, especially blue light from TV, computer, and our electronic devices can interfere with sleep. Get the TV and computer out of the bedroom. Don't bring your devices in bed with you. Try using red lights in the evening and/or wearing blue light blocking glasses to help transition to sleep. Another important factor with setting your "sleep clock" is to be exposed to bright, full spectrum light first thing in the morning. Optimally this is sunlight, but the full spectrum "happy lights" also known as SAD lights in the morning can also help set your sleep/wake cycle.

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#2 Get screened for sleep apnea if there is any concern based on excessive snoring, abnormal breathing patterns when asleep, unexplained chronic fatigue or headaches. Talk to your PCP about a sleep study at home or a sleep center as a screening for sleep apnea. Sleep apnea increases risk of heart attack, Alzheimer's, and type 2 diabetes to name a few so proper screening is well worth it. There are several potential treatments including CPAP and mandibular advancement devices (MADs) that can be life changing and potentially lifesaving.

#3 Exercise earlier in the day can dramatically improve the quality of your sleep. 'Nough said.

#4 Incorporate mindfulness exercises, sleep meditations, or CBT-I (Cognitive Behavioral Therapy for Insomnia). Especially for busy brains that have a hard time shutting off, these techniques and tools can change the way your brain works to be more conducive to sleep. Multiple programs and apps are available.

#5- Supplements and Herbs: Although not for everyone, some nutritional supplements and herbs can be helpful for sleep. Start with 200-300 mg magnesium as glycinate, citrate or threonate in the evening that can act as a muscle relaxer and boost the calming neurotransmitter GABA. The herbs ashwagandha, valerian, chamomile, passionflower, and lemon balm can also boost the body's production

of GABA and may help with sleep quality and can be taken as capsules, liquid extracts or tea (watch out for microplastics in certain tea bags!). Some people get help from a few milligrams of the sleep hormone melatonin or take the serotonin/melatonin precursor compound called 5-HTP. For those stressed-out folks, a supplement called phosphatidylserine may help reduce the stress hormone cortisol in the evening, making sleep a bit easier. As always, check with your PCP to make sure these are safe for you.

Make sleep a priority for you and your kids. It is one of the wisest investments you can make for your health.

Check out our recent podcasts about sleep and the other Six Pillars of Health on *"The Aware Families Podcast"* found wherever podcasts are hosted. If you have health concerns and are looking for a more holistic balanced approach, come see us at Functional Medicine Associates of Montana. (www.functionalmedassociates.com)

Tom Flass MD is a gastroenterologist who practices Functional Medicine and Integrative Gastroenterology.

Brittany Coburn NP-C is a family nurse practitioner practicing Functional Family Medicine with a special interest in hormones and women's health.



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Tom Flass MD

Brittany Coburn NP-C

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195 Commons Loop Suite D
Kalispell, MT 59901

(406) 501-6570



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