## 12 Ways to Better Sleep

There is a strong probability that after reading this article you will say to yourself, "I know to do all of these things, and I have tried most of them as the months and years go by, and still I don't sleep like I used to!" So, what next? Well, www.yourbestsleeping.com offers ideas for assessing and optimizing the neurochemistry behind why you are not sleeping your best. But before you begin my approach, it is worth a bit of time and effort to change your lifestyle. And it is nice that the cost is free too!

Here are my favorite top twelve pro-sleep lifestyle opportunities:

1) Set a regular sleep/wake cycle that follows the same times every day.

This may change a bit throughout the year as we mammals naturally want to sleep more in the dark hours of the winter and enjoy the long hours of summer. However, try to stay within a tight range.
2) How bright is your room?
"Theirl syndrome" aka "thin eyelid syndrome" or TES. I coined this term lovingly after my wife's consistent complaints of "why is it so bright in here?" when even the dimmest light was on in the room. If you suffer from "TES" or "Theirl Syndrome" there are simple and cost effective solutions: wear an eye mask or purchase room darkening shades. Both can be had for just a few dollars.
3) The benefits of white-noise.

Try a "white noise" source. White noise machines are available at many stores now, are reasonably priced and typically have multiple sound options. Other white noise options include room air filters and humidifiers (very important in drier winter months). Or, if you like total quiet, earplugs may be right for you.
4) Unplug before bed.

Turn off the screen sources at least an hour before bedtime. Computers, TV's, phones etc. all stimulate your sensory system in an excitatory way. Your goal is to find calming or inhibitory sensory stimulation. Many people find reading, listening to classical or nature based music, taking a shower or meditation to be just right for calming their sensory system after being bombarded all day in our busy, digitally wired world. What can you integrate into your pre-bedtime routine that you can both look forward to doing and know that it prepares you for "rest and digest" versus "fight or flight" stress mode?
5) Exercise.

You don't need to go crazy with this. 30-45 minutes, 5 days per week of light cardiovascular exercise (like brisk walking) is all that is needed for many. Be sure that you are doing this exercise during the daytime, as exercising 3 hours before bedtime might elevate excitatory neurotransmitters and hormones that give you energy instead of calming you down.
6) Invest in good bedding, pillows and a quality mattress.

Find a bed and pillow firmness that feels great to you and cover it in sheets that you love to slip in to. The first part of this is tougher than you think. Just because we tend to buy a mattress and stick with it, doesn't mean that it is the best, most comfortable mattress for you. I always pay close attention to mattresses when I travel and take note of my favorites. Most stores will let you try a mattress for 30 days or more too, so be sure to lay on lots of them before you purchase one and be proactive if it inn't right for you. Also, just because you like a softer mattress doesn't mean your sleeping partner does, so keep this in mind and consider separate firmness levels on each side or even separate twin mattresses pushed
together to make a king size. As for the sheets, give me 300+thread count cotton in the summer and cotton flannel in the winter and I am ready for a great night of rest!

## 7) Consider organic bedding.

This is a new concept for most people, but one that is important with the increasing toxin and chemical exposure in our daily lives. Modern foam bedding is often treated with flame retardant sprays. This combination of the foam/synthetic material that is in the bed topping combined with the flame retardants all "off-gassing" throughout the night while you spend a third of your life right against the materials is challenging for many people with chemical sensitivities. If you recently purchased a new mattress and realize that your sleep is of worsening quality, consider both the firmness and what the mattress contains chemically. Lastly, when buying mattresses for children, please invest in an organic mattress and wool mattress cover as their immature immune systems are very easily over burdened by toxic load.
8) Check your diet for gluten and casein sensitivities.

This is a bit of a story line so follow along. Gluten is a protein that is found in the grains wheat, rye, barley, spelt and some oats. Gluten is also very prevalent in the prepared foods so common in our diet, so you have to read labels. Gluten and water = craft glue. Gluten can cause a fair amount of challenges for our intestines because of this last fact. A challenged Gl tract = immune system difficulties because $80 \%$ of our immune system begins with our nasal and mouth mucus membranes/lymphatic tissues (ie: tonsils) and continues down through our entire 30 feet of intestines. Immune challenges are a stressor on our nervous system. Stress on our nervous system contributes to suboptimal sleep. Gluten can also down regulate/inhibit an enzyme called glutamic acid decarboxalase, or GAD. The job of GAD is to convert glutamate (the most powerful and prevalent excitatory neurotransmitter in the brain) into GABA (the most powerful and prevalent inhibitory/calming neurotransmitter in the brain). So, if your gluten sensitivity "turns off" or down regulates your GAD enzyme you end up with lots of glutamate and not as much GABA and you feel overstimulated. Many people have eliminated gluten from their diets and reported not only improved sleep, but also improved mood and better metabolism due to less inflammation and better glutamate to GABA conversion. GABA is very important for feeling calm during the daytime and initiating sleep at night. Almost all prescription sleep medications work through binding to GABA receptors.
Casein is a protein that is found in cow, sheep and goat milk, though it is most prevalent in cow's milk. Again, many prepared foods in our daily diet contain casein, caseinate, milk powder, etc. because it makes food creamy and tasty, so to know it is there you have to read labels. Many people have objective sensitivities to dairy including lactose intolerance(difficulty digesting the sugar in milk) and elevated immune responses to casein shown on IgE and IgG food testing. As our mucus membranes of our nose, mouth and intestines are our first line of defense against inflammatory molecules we eat/drink, if you are sensitive to casein and the other portions of animal milk and you eat/drink dairy products, you may notice congestion, sinusitis, chronic sinus infections, tonsillitis, chronic post nasal drip, poor Gl function, gas and bloating, etc. Inflammation of mucus membranes can be protective but isn't healthy long term. Inflamed nasal and throat passages can contribute to snoring as well as obstructive apnea. This can result in poor sleep patterns and daytime fatigue. In summary: your diet may contain food sensitivities = increased immune response and possible enzyme dysregulation = stress to your nervous system could lead to poor sleep, suboptimal mood, slow metabolism, painful muscles and joints and/or fatigue.
9) Caffeine and alcohol.

Caffeine, a stimulant, and alcohol, a depressant, in and of themselves are not a problem for everyone. However, caffeine should be consumed in moderation, always followed by a tall glass of water (as caffeine is a diuretic that dehydrates us), and not consumed 6 hours before bedtime. Alcohol should also be
consumed in moderation and always followed by a tall glass of water. Although it acts as a depressant to the nervous system, it is short lived. So, alcohol may help us fall asleep but then typically makes the second half of the night less restful. It is best to consume alcohol with dinner and not directly before bedtime, this allows time for your liver to process the alcohol and the negative neurologic effects on sleep to be less.

## 10) Hydrate.

Stay hydrated during the day. Recognize that it is normal and okay to get up to use the restroom 1-2 times/night if you are well hydrated. That having been said, don't drink a few glasses of water right before bedtime! Your goal for hydration is to drink enough clean, preferably reverse osmosis filtered water, to keep your urine clear to light yellow every time you urinate. If your urine is dark yellow, you are already dehydrated and need to drink 2 tall glasses of water immediately. Remember, urinating is one of 3 ways that your body removes toxins. The other 2 ways are sweating and bowel movements. So, please sweat frequently, have 1-2 easy enjoyable, well-formed bowel movements daily, and drink enough water to keep your urine clear.

## 11) The 90 minute sleep cycle trick.

We humans sleep in cycles that last between 90-110 minutes and during that time we should move through the 5 stages of sleep and return back to a point of consciousness. We don't remember every one of these cycles typically, but if you are a healthy sleeper you are moving through them all. Choose a wake up time that is approximately based on one of the cycles and set your alarm for the number of hours indicated so that your chance of waking up at the end of one of your sleep cycles is optimized. le: 3 cycles at 90 minutes each $=4.5$ hours, 4 cycles at 90 minutes each $=6$ hours, 5 cycles at 90 minutes each $=7.5$ hours

## 12) The power of neurotransmitters and hormones

Have your neurotransmitters, stress hormones, sex hormones checked by a well-trained practitioner who practices a comprehensive and integrative approach to optimal health. These different metabolic chemicals create a symphony of interactions that when optimized and balanced help us move through stressful emotional, cognitive and physical situations with relative ease. Neurotransmitters are very involved in the subtle balance between sleep and wake cycles (Clifford B. Saper, Thomas E. Scammell \& Jun Lu, "Hypothalamic regulation of sleep and circadian rhythms" Nature. October 2005), Hormones such as progesterone potentiate GABA receptors and estrogen potentiates serotonin receptors, all of which can have a calming, pro-sleep influence on the brain and nervous system. Elevated stress hormone cortisol at bedtime can make falling asleep challenging. Depleted sleep hormone melatonin also makes falling asleep difficult. The majority( $>90 \%$ ) of your body's serotonin is made in the intestines, so take good care of them with your diet, and serotonin is implicated in poor moods and difficulty staying asleep. Research demonstrates that if you are depressed you don't sleep well and conversely, if you don't sleep well you are prone to depression (Franzen, PhD and Buysse, MD "Sleep disturbances and depression: risk relationships for subsequent depression and therapeutic implications" Dialogues Clin Neurosci. 2008 December; 10(4): 473-481). So, how is your serotonin level? And more importantly, how are all of your neurotransmitters and stress/sleep/sex hormones looking? They are all attendees at the same dance and we need all of them to be optimized for a healthy brain.

