

Sleep Hygiene & CBT-I

by Angela Poch, RPC

Introduction

While I love researching data and written many articles on health, I do not consider myself a sleep expert. That said, I am not ignorant about the subject either. I have studied sleep as part of my nutritional diploma and I am a certified CBT-I clinician (CBT for insomnia). I have also personally experienced the effects of poor sleep, dealt with my own insomnia, and discovered benefits of good sleep in my own health.

Sleep Education

We Need Sleep

The rest for body gets during sleep enables your body to repair cells and process information from the day.¹ This in turn plays a role in the immune system, memory, learning, ability to maintain a healthy lifestyle, better calorie regulation, lowers risk of heart disease and other lifestyle diseases, and inflammatory conditions. "Sleep affects almost every tissue in our bodies," says Dr. Michael Twery, a sleep expert at NIH. "It affects growth and stress hormones, our immune system, appetite, breathing, blood pressure and cardiovascular health."³ I won't spend too much time on this since most of us know how important sleep is.

Too little not a good thing

Our cognitive function is significantly reduced if we do not get enough sleep. In fact, the body will manually start to shut down if you try to not sleep in as little as 17 hours but varies up to 19 hours. This "shut down" is similar to drinking alcohol, the equivalent to BAC of 0.05%, or about 2 glasses of wine (varies based on weight, age, etc.).⁴

The American Cancer Society found that there is a higher chance of death in adults who sleep less than 6 hours per night.⁵ "People reporting consistently sleeping 5 hours or less per night should be regarded as a higher risk group for all-cause mortality."⁶ But it is children and teenagers are the most likely to be affected by too little sleep as they need much more than adults. The Sleep Foundation reports, "The American Academy of Pediatrics estimates that sleep problems affect 25 to 50 percent of children and 40 percent of adolescents."⁷

Too much not great either

Yet, there is an even higher mortality correlation for adults who sleep over 8 hours per night. Of course, this can be an underlying issue causing more sleep not that sleeping too much causes death! CNN reports, "The recommended amount of sleep for adults is six to eight hours a night. Sleeping more than those hours is associated with an increased risk of death and cardiovascular diseases, says a global study published Wednesday in the European Heart Journal." There was shown an increased risk of 5% for 8 to 9h of sleep, 17% for 9 to 10, and 41% for those that slept over 10h.⁸ NCBI writes, "In terms of prevention, consistently sleeping 6 to 8 h per night may therefore be optimal for health. However, sleeping 9h or more per night may represent a useful diagnostic tool for detecting subclinical or undiagnosed co-morbidity."⁶

Ideal amount of sleep

As we've seen, 6 to 8 hours is the ideal range, some studies narrow that closer to 6 to 7. "A study of the sleep habits of more than one million people over six years seems to debunk the popular idea that eight hours of sleep nightly are required for optimal health. Those who had six or seven hours had a lower death rate than those who regularly slept eight or more hours—or less than four."⁹

So we see from current research around 7 hours is the healthy average or norm, give or take 1 hour. Why such a variance? Much of human biology is on a bell curve. In other words, most of the population fits into a pretty narrow window, but there are some who fall on either side with varying degrees off the 'normal' or the mean.¹⁰ This means there are a few that can get less than 6 hours of sleep, or more than 7, and still be healthy. This leads us to the next very important piece about sleep and health. Our own thinking, worries, and stress levels.

Other sleep concerns

The latest research shows worrying about your sleep quality may affect you as much as the your actual sleep quality. A recent study showed people who thought they had insomnia scored worse whether or not they actually had insomnia in a sleep study!¹¹ So do your best, but don't sweat it.

Other normal notes about sleep

Here are some things you may or may not know about sleep that can help put your mind at ease. Everyone wakes up in the middle of night! In fact, you can wake up 20x per hour although you likely won't be aware of it.¹²

Sleep Cycles

Basically we have 4 stages of sleep that generally work in this order: stage 1 is light sleep and you might not even thing you ARE asleep as you can be semiconscious, stage 2 is moderate, stage 3 is our deep sleep where the body does most of it's physical cellular repair, and finally stage 4 is REM or dream sleep, noted for helping with cognitive function. These stages repeat through the night about 3 or 4 times, and each cycle of the 4 stages lasts about 70 to 120 minutes, shorter when you first fall asleep as the body does its job of getting deep sleep as soon as possible. We tend to have more and more light sleep as the night progresses.¹³

Core Sleep

Interesting we seen under "too little sleep" that under 5 hours was a significant factor in increase morbidity rates for all forms of death. If we don't get core sleep our cognitive decline can contribute to risky behaviour, poor motor control (increase in accidents), and even suicidally due to poor emotional coping. Increasingly we were created with the drive to get core sleep. This is 5.5 hours (on average, it's less for those who sleep only 6 hours regularly) the body will demand. The body will adjust the sleep cycle above to get the needed deep sleep. Studies report healthy adults can go for months on just core sleep and still function normally. It's not the ideal but remember it's our worry and concern that is more harmful.¹⁴

Awake & Adenosine

The longer we are awake the more adenosine our bodies produce. Adenosine regulates sleep-waking behaviour and is very important to helping you fall asleep. Thus it enables us to reset after a poor night sleep. See "Sleep Troubles" for more.¹⁵

Five keys for a good night's sleep:

These 5 keys are adapted from the CBT-I course by Dr. Gregg Jacobs (well researched see sources):

1. Good preparations: Avoid caffeine after mid morning, have a "quiet" time to unwind before you even go to the bedroom, and don't use your bed for reading, watching TV, etc. bed is for sleep and sex ONLY! Having a regular bedtime routine triggers sleepiness, where as doing other things in bed triggers arousal. See the 10 M's on page 3.

2. Go to bed ONLY once you are tired. Regular bedtime is important but if you are waking up in the middle of the night you (for longer than 30 mins) or have trouble falling asleep, you will need to make some adjustments to reset your body clock. Don't stay awake in bed for more than 30 mins. This goes for before falling asleep, in the middle of the night, or once you walk up. Wake up, get up is the motto for in the morning.

3. Room set up: Sleep in a dark, quiet room (especially important for shift workers), on a comfortable bed with a good pillow. Make your bedroom your sanctuary. See the 10 M's on page 3.

4. If you wake in the middle of the night, lie as still as possible in one spot and count your blessings or deep breathe. Tossing and turning will only make things worse. If you wake within 1 hour of your normal rising time, it is usually better to just get up. Don't try to get in that last hour! And if you are awake longer than 30 mins get up and do something restful, like something from your bedtime routine, and go back to bed once sleepy (unless too close to your wake up time then stay up).

5. VERY, VERY IMPORTANT!!!! Saving the best for last! You need a regular wake up time. Ok, you are hearing

the word “regular” a lot! That’s because our bodies have an internal clock called a circadian rhythm. Pick an appropriate wake up time, then get up at the same time each morning, even if you went to bed late, every day of the week! Many people have trouble falling a sleep or staying asleep because of this one factor, not waking up the same time each morning. Even sleeping in once or twice a week (like weekends) can mess up your circadian rhythm for the week.

What about Naps?

Naps are fine for those who are NOT having any trouble sleeping at night. If you can fall asleep ok, and sleep your standard amount (6 to 7 hrs), then having a short nap if that works for you is fine. In fact, some find they don’t get “over tired” and other needs that extra few minutes to improve cognitive function and reduce sleepiness. Certainly if you are driving and you feel sleepy, STOP and take an nap it can save your life and others on the road. Learn more about naps here: www.sleepfoundation.org/sleep-hygiene/napping

Sleep troubles? 3 Steps to Resetting your Rhythm

Need help to break bad bedtime habits like not falling asleep until midnight or waking up for more than 30 minutes during the night? Try this effective program developed by the National Sleep Foundation and used very effectively by sleep clinics in various forms (there are some alternatives, speak to a sleep specialist or CBT-I trained clinician).

1. First night, go to bed ONLY once you are tired.
2. Get up as soon as you wake or at your alarm time, whichever is earlier, even if you only got 3-4 hours sleep! As we noted above, choosing your wake up time is very important because no matter what time you go to bed, getting up within 30 mins of your regular wake up time is very important to preventing insomnia.
3. Next night go to bed 1 hour earlier than the night before and get up as soon as you wake or your alarm time whichever is earlier! You may have to repeat until you sleep through the night. Repeat till you are sleeping 6 to 7 hours per night and not waking up more than 30 mins in the middle.

As simple and effective as these 3 steps are a sleep diary and working with an insomnia specialist can be really helpful see the section on CBT-I. Sometimes depression and/or anxiety plays a role and can be helpful to address this piece. Again, these 3 steps are adapted from Dr. Jacob’s research and material.

Other Tips for Rest - the 10 ‘M’s’

MUSIC: Music helps increase melatonin, which is directly linked to having a good nights rest. So sing during the day and sleep sweet at night. You need to participate in the music, sing or play with it.¹⁶

MODERATE EXERCISE: Exercise has all kinds of benefits but vigorous exercise can stimulate the body so avoid at least a few hours before bed if you notice that causing you problems.¹⁷

MAKE-OVER: An orderly room can have a calming effect. Also, having a space dedicated to sleep with a different ambiance can help trigger sleepiness. Put in dark out blinds, use calming colors, and keep it clean.¹⁸

MEDITATION: Relaxation techniques can be helpful as part of your bedtime routine. Deep breathing, calming yourself, and prayer. In fact, prayer has been shown to lower blood pressure and decrease stress.¹⁹

MINIMIZE CAFFEINE: Watch your caffeine intake. Caffeine has a long half life, about 5.7 hours in a healthy adult, but it can be as long as 60 to 148 hours in someone with major health problems such as cancer or heart disease. And that’s just the HALF life. That means for those who don’t have major health problems, 10 hours after your LAST cup of coffee you still can have up to 29% or so in your body (of course if you have several cups over the morning hours this will impact the total amount of caffeine left in your system).²⁰

MANAGE LIGHT: Re-program your circadian rhythm by staying on schedule and getting bright sunlight or use a light box. At night keep your room as dark as possible. Not only does it help keep your eyes closed and give your body the sense of “time to go to bed,” but it helps with melatonin production - good for tomorrows sleep.

MATTRESS: You may need a new one. If it is too soggy or too hard your body roams around trying to get

comfortable. Check your pillow for comfort. How do you normally sleep? There are different recommendations for pillows based on your favourite sleeping position.

MONOTONOUS: Stay on schedule. Don't read, watch TV, or talk in bed. This is not the time for stimulating the mind. Sleep experts suggest only sleep in your bed to train your brain this is what you are here to do.

MAINTAIN: If you are awake more than 30 mins get up to maintain bed = sleep in your brain.²¹

MELATONIN: Melatonin is a vital hormone that rises in the evening usually around 9pm and aids you with getting a good nights sleep and maintaining healthy circadian rhythm.²² Regardless if you are a morning or night person, this 9am is pretty standard and so helpful when possible to go to bed sometime after 9pm but not wait too long (11pm or so) as the levels will change. Your body makes melatonin from serotonin (which comes from tryptophan) in the pineal gland. Tryptophan is found in various foods such as almonds, tofu, and gluten. You can also get melatonin directly from food, like bananas. Your body also makes melatonin directly in the eye as long as there is darkness, hence, when we sleep at night keep your room dark.²² While all light affects melatonin, blue light has a particularly strong effect in dampening the production which is why all the talk about avoiding blue light 2 to 3 hours before bed.²³ Thankfully many devices now offer a "night" mode that reduces blue light.

CBT-I - What is it and how can it help those with Insomnia

Is a five week program (some clinicians do 6 weeks) based on Dr. Gregg Jacobs' twenty years of CBT-I research and clinical practice at Harvard Medical School. Is the only CBT-I program world-wide that includes weekly individualized CBT-I guidelines and feedback from an internationally-recognized insomnia expert. Was developed from Dr. Jacobs' research that was funded by the National Institutes of Health, and published in the Archives of Internal Medicine, demonstrating that a similar CBT-I program was more effective than Ambien. Visit: www.cbtforinsomnia.com for details!

Sources (not in APA format due to space, all retrieved 2021-05-10):

Dr. Jacob Gregg lists several sources in his materials I won't repeat here.

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