# Sleep

# Version 1.8

# To sleep well, needs your help.

Don't drink fluids within three hours of going to bed, and go to the bathroom just before bed. These will minimise the frequency. Men, please sit down (as you always should for cleanliness) and relax for a minute until a second lot comes out from your kidneys.

Avoid before-bed snacks, particularly grains and sugars. These will raise your blood sugar (glucose) level so delay relaxation. After the body has consumed it, the blood sugar level will drop low and you may wake up and be unable to fall asleep again.

Low blood sugar or blood glucose called hypoglycemia, is when blood sugar decreases to below normal levels. This may cause a variety of symptoms including clumsiness, trouble talking, confusion, seizures, or death. A feeling of hunger, sweating, shakiness, and weakness may also occur. Symptoms typically come on quickly. The most common cause of hypoglycemia is a medication used to treat diabetes mellitus such as insulin, sulfonylureas, and biguanides.

Safe evening snacks are a little acid fruit which can help the , a drug, an amino acid in most proteins, cross your blood-brain barrier.

Ttryptophan is a pharmaceutical drug used to diagnose, cure, treat, or prevent disease. Drug therapy is an important part of the medical field and relies on the science of pharmacology for continual advancement and on pharmacy for appropriate management. Drugs are classified in various ways. One of the key divisions is by level of control, which distinguishes prescription drugs from over-the-counter drugs (those that consumers can order for themselves).

are a little high-protein snack (thick green smoothy) an hour before bed. This can provide the L-tryptophan needed for your melatonin and serotonin production.

When cool, wear loose socks to bed. Feet often feel cold before the rest of the body because they are furthest from the heart. A study has shown that wearing socks to bed reduces night waking. As an alternative, you could place a hot water bottle near your feet at night.

Have no continuous night lights, or wear an eye mask to block out lights. As discussed earlier, it is very important to sleep in as close to complete darkness as possible. That said, it's not always easy to block out every stream of light using curtains, blinds or drapes, particularly at full moon or if you live in a lit up urban area (or if your spouse has a different schedule than you do).

Put your work away at least one hour before bed (preferably two hours or more). This will give your mind a chance to unwind so you can go to sleep feeling calm, not hyped up or anxious about tomorrow's deadlines. This doesn't apply to me so I can go straight to sleep.

A Long-Term Study, Linked Chronic Insomnia to Increased Risk of Death.

To sleep well, your bedroom must be free of all electromagnetic fields (EMF) and currents, which means no 220 volt cables, switches or lights within two metres of your bed, no cell or cordless phones, no computers with Wi-Fi in the house, and the bedroom completely dark.

Unless late (after midnight) and really tired, I was taking an hour to get to sleep and would wake up frequently and take up to an hour to get to sleep again. Gary Beck, Naturopath of Maximum Wellbeing Clinic, 93 Fourteenth Ave, Tauranga South, 3112. Phone 07 571 1141 checked the electromagnetic fields in our bedroom, office and home. Our bedroom had 3,600 milliamps which is six times higher than they should be. We moved the TV, Bose radio and electric clock from the end of the bed to the far wall, removed our two reading lights which were close to our heads and fitted two pull cord halogen reading lights 30 cm from the ceiling. The very first night after the changes, I slept right through. Auriel also then slept better until 7 am.

My office was alive from the eight year old computer screen, small TV, radio, 12 power points and four transformers, and a fridge and freezer through the wall in the garage. A power point and computer and printer cables close to my feet were one of the causes of my feet getting sore and pins and needles. Plugs and cables were moved to more than a metre away and the transformers even further. The DSL router for Broadband was so bad it had to be moved to two metres. Our Apple Mac computers with large screens emitted no rays or magnetic fields. We turned all the Wi-Fi's off. We changed four cordless phones to corded ones.

I felt a lot better, instead of being heavy, sluggish and tired. Now at 83 I feel like I felt decades ago, but

must point out that I got amalgam removed and mercury drained out of my body which lowered its level from 40 to 2 and other heavy metals drained by Chris Rhodes. I exercise several times a day at the computer by leg lifting. See Exercise. Some people suffer ill health simply because of insufficient exercise.

If acid refluxes occur at any time, finish all meals with some fruit. It sends a message to the stomach to release alkali, not acid. All fruits are acid, so even small amounts after meals can reduce acid refluxes, which can be excessive after alkali foods like dairy products, biscuits, carbohydrates, etc.

Some bodies make too much acid and cause acid refluxes so need to be discouraged from producing more. My stomach makes too much acid so, depending on your size, eat a Kiwi fruit or two, half an apple, three greenguages, a plum or two, or half a dozen grapes (all pH about 4.5) just before bed, and before lying down at any time. These help provide the L-tryptophan (see below) needed for your body's melatonin and serotonin production. If something more is needed to help sleep, take one Melatonin capsule just before bed.

I always take a drink of diluted pineapple juice or honey water (both pH about 4.5) to bed to have a sip if needed to clear my throat, or quench a slight thirst. After doing that I suck saliva into my mouth to neutralise it. Your saliva pH should be about 7 which is neutral, so is better for your teeth than acid in your mouth all night. Don't make too much and swallow it, or your stomach will release acid.

A lot fewer people don't make enough acid, so their food doesn't get digested and doesn't move on. Acid tablets can help them. Acid fruits don't help them and should be avoided after meals.

All people should avoid before-bed snacks of grains and sugars. These will raise your blood sugar and delay sleep. Then later, when blood sugar drops too low (hypoglycemia), you may wake up and be unable to go back to sleep again. We are all different so there is not one complete formula re digestion.

If old, take some magnesium which relaxes and reduces the chances of cramp. Currently (January 2014) Thompson's Organic Magnesium is the best I've found. Their earlier ones contained a little heavy metals. Most other magnesiums have heavy metals.

If injecting the Somatropin hormone, do it in the morning, not evening, because it increases alertness about four hours after injecting it.

Feet are often cold before and after the rest of the body because they are the furthest, so have the poorest circulation. A study showed that wearing thin socks to bed reduces night waking. In winter a wheat bag heated in a microwave for one or two minutes, then placed near feet, helps some bad sleepers get to sleep.

To get deep, long, relaxing sleep you need as close as possible to complete darkness. It is not always possible to block out every stream of light using curtains, blinds or drapes, particularly if you live in an urban area, or if your spouse has a different schedule. If necessary wear an eye mask to block out lights from the moon, clocks, TV lights, etc.

Stop work at least an hour before bed (preferably two hours or more). This will give your mind a chance to unwind so you can go to sleep feeling calm, not hyped up or anxious about what is not finished and tomorrow's deadlines.

If there is a delay between getting into bed and falling asleep, get comfortable on your side, push your bottom out backwards to allow fluid to get back into your back joints, lift your knees to let fluids return to their joints, relax and slow down, breath in slowly and breath out **slowwlly**, think to yourself, sleeeeep and/or reeelaaax. By the fourth one you should yawn naturally and want to fall asleep soon after. Continue doing this for as long as necessary to stop your mind thinking about waking things. This doesn't work if not tired, are stressed, cold, hot, or have some other discomfort. In USA I could not sleep on their hard beds, so would get all the pillows out of the cupboards and sleep on them and the large one I always took on planes. A Kiwi friend was promoted to USA, so took his mattress with him.

If you have EMFs or automatic meter readers in or near your house, they can affect you more adversely at night when trying to sleep.

## L-tryptophan

This is an amino acid and protein builder that can be found in many plants, fruits and animal proteins. It is an essential amino acid because the body can't make it. It must be obtained from foods.

L-tryptophan helps insomnia, sleep apnea, depression, anxiety, facial pain, a severe form of premenstrual syndrome called premenstrual dysphoric disorder (PMDD), smoking cessation, grinding teeth during sleep (bruxism), attention deficit-hyperactivity disorder (ADHD), Tourette's syndrome, and to improve athletic performance.

L-tryptophan is naturally in animal and plant proteins. It is considered an essential amino acid because our bodies can't make it. It is important for the development and functioning of many organs in the body. After absorbing L-tryptophan from food, our bodies convert it to 5-HTP (5-hyrdoxytryptophan), and then to serotonin. Serotonin is a hormone that transmits signals between nerve cells. Changes in the level of serotonin in the brain can alter moods. To sleep well, the brain needs to be correctly fed and balanced.

#### **A Survey Showed**

The vast majority sleep better after exercise.

A few recent studies suggest that fewer people are troubled by post-workout insomnia that previously thought. In 2013, a poll by the National Sleep Foundation1 found that 83 percent of people report sleeping better when they exercise than when they don't, even if the exercise is late at night.

More than half of those who exercised moderately or vigorously said they slept better on workout days than non-workout days, but just three percent of late-day exercisers said their sleep quality was worse when they exercised than when they did not.

#### **The National Sleep Foundation Concluded**

While some believe exercising near bedtime can adversely affect sleep and sleep quality, no major differences were found between the data for individuals who say they have done vigorous and/or moderate activity within four hours of bedtime compared to their counterparts (those who did vigorous or moderate activity more than four hours before bedtime).

According to the 2013 Sleep in America® poll, the conclusion can be drawn that exercise, or physical activity in general, is generally good for sleep, regardless of the time of day the activity is performed.

#### **Vigorous Evening Activity Often Improves Sleep**

Two other studies have confirmed that vigorous evening exercise may improve sleep, as opposed to disturbing it. One study followed 52 19-year-old students who played sports for up to 90 minutes in the evenings, ending about 1.5 hours before their usual bedtime.

Those who reported more exertion during the sports fell asleep faster, woke up fewer times during the night, and slept more deeply than those who exercised more moderately.

The students who exercised with higher levels of exertion also reported increased tiredness, less hunger, and better moods at night.

#### **Researchers Found**

Against expectations and general recommendations for sleep hygiene, high self-perceived exercise exertion before bedtime was associated with better sleep patterns in a sample of healthy young adults.

Another study published in 2011 found that people who exercised vigorously for 35 minutes right before bed slept just as well as on nights when they didn't exercise.

The point is that it appears the cautions about exercising in the evening may be a bit overstated, and the only way to know how it affects YOU is to test it out.

If you've been avoiding evening exercise out of fear of insomnia, then it would be instructive to test out the theory. You might be pleasantly surprised. However, if your experiment is an epic failure, then you may need to try a few tricks to help your body gear down more quickly so you can sleep.

#### **Over-exercising Can Backfire**

One of the major causes of insomnia is over-exercising. Exercising excessively or incorrectly can backfire on your health in multiple ways, including interfering with your sleep.

Over-exercising can actually cause your tissues to break down, become inflamed, and fail to heal or repair, which raises your risk for injury. This is why it's so important to make sure you allow your body to fully recover between sessions. Excessive endurance exercise activates your stress response, elevating your stress hormones—cortisol, adrenaline, and norepinephrine. If these hormones stay elevated all of the time, it's not good for your heart, fitness, or overall health.

Stress hormones increase your heart rate, alertness, and the blood flow to your muscles, so they help you perform the physical activity but may make it difficult to doze off. Cortisol plays an important role in your sleep-wake cycles. Normally, your cortisol level peaks about 30 minutes after you wake up and then declines throughout the day, being lowest at bedtime, which helps you fall asleep. But doing something like, say, an

evening spinning class may throw your system off by kicking your cortisol level back up again.

Over time, extreme exercise may give you chronically elevated stress hormone levels, which can weaken your immune system and raise your risk for chronic disease. The most serious risk of extreme endurance training involves damage to your heart—including sudden cardiac death. This is especially true if you have a history of heart disease.

#### **Tips for Preventing Post-Workout Insomnia**

If evening is the most convenient time of day for you to exercise and it doesn't interfere with your sleep, then by all means continue. But if you are one of the folks who has a hard time nodding off after an evening workout, then you might want to change up your routine.

Sometimes selecting a less strenuous workout at night may be helpful, while saving the heavy hitting, such as high-intensity interval training (HIIT), for morning or afternoon. Consider reserving your evening exercise sessions for less strenuous exercises like yoga, Pilates, or even an evening walk. Or just try lowering the intensity of what you're already doing. Restorative Yoga is particularly beneficial for stress reduction, relaxation and sleep. Below are five more tips to help you slip into slumberland with ease.

• If possible, seek to get your workout done three to four hours prior to bedtime.

• Coffee before a workout can enhance your fitness gains, but if you exercise in the late afternoon or evening, the caffeine may keep you awake.

• Staying well hydrated during your workout can help blunten your cortisol response.

• Try taking a hot bath, shower, or sauna just before bed. The sudden temperature drop helps your body shut itself down, facilitating sleep.

Whatever you do in terms of exercise, you should never allow yourself to become sleep deprived—the price for doing so can be steep. Sleep deprivation has the same effect on your immune system as physical stress or illness, which helps explain why poor-quality or insufficient sleep is tied to an increased risk of numerous chronic diseases. Research tells us that inadequate sleep can contribute to everything from physical aches and pains to diabetes, heart disease, and even irreversible brain damage.

The US Centres for Disease Control and Prevention (CDC) actually classifies insufficient sleep as a public health epidemic, as it's crucial for virtually every tissue and organ in your body. It's during sleep that metabolic waste products are eliminated from your brain, and it is thought that insufficient sleep may actually injure your brain cells, impacting your cognition. Recent studies show just how dangerous sleep deprivation really is. The following are just a few of the more recent studies on this topic.

• People who reported sleeping less each night were found to have swelling in a region of their brain that is predictive of more rapid cognitive decline.

• Older men who sleep poorly are more likely to face subsequent cognitive decline.

• Older adults who sleep less than six hours or more than eight hours per night, on average, have lower brain function scores.

• People with chronic sleep problems may develop Alzheimer's disease sooner than those who sleep well.

• Interrupted sleep may be as harmful as no sleep at all—just one night of interrupted sleep was found to be enough to wreak havoc on mood and energy levels.

If you suffer insomnia, it may take some time before you notice any benefits from exercise. A study from Northwestern University found that working out once is not enough to improve sleep, you have to sustain your fitness routine for a number of weeks to months. Sleep science also makes it clear that you can't "catch up" on sleep over the weekend—that is, it doesn't prevent the damage. So you must take steps to ensure that you sleep well every night.

### Dr Mercola wrote -

Based on the 2013 International Bedroom Poll by the National Sleep Foundation, 25 percent of Americans report having to cut down on sleep, because of long workdays. On average, Americans get only 6.5 hours of sleep on week nights, although 7.25 hours is needed in order to function optimally. Canadians fare slightly better in this regard. On average, Canadians get just over seven hours of sleep per night.

Sleep is imperative for physical and mental health. Remember, cutting back on even just a few hours of sleep every night can have serious, far-reaching effects on your health.

As a general rule, children, especially infants, need significantly more sleep than adults. Sleep experts

recommend the following for different age groups:

- Toddlers (1 to 3 years old) -2 to 14 hours a night
- Preschoolers (3 to 5 years old) 11 to 13 hours a night
- School-aged children (up to 12 years old) 10 to 11 hours a night
- Teenagers About 9 hours a night

Use your child's mood as an indicator to determine if he or she is getting enough sleep. Excessive fussiness, irritability, crying, or tantrums are often linked to lack of sleep. Frequent yawning throughout the day is another dead giveaway that your child may need more snooze time.

How Much Do Newborns Sleep?

Babies do not have regular sleep cycles until they're about 6 months old. While newborns sleep about 16 to 17 hours per day, they may only sleep for 1 or 2 hours at a time. As babies get older, they need less sleep. However, different babies have different sleep needs. It is normal for a 6-month-old to wake up during the night, and to go back to sleep after a few minutes.

To ensure your baby will always get a good night's sleep, I advise you to follow these safe sleeping habits -

• Let your baby sleep on his/her back at night or even during nap time to avoid chances of accidentally rolling onto his/her stomach.

• Remove toys or pacifiers with strings or cords from your baby's crib or sleeping area to prevent risks of choking or strangulation.

• Make sure the room's temperature is not too hot or too cold for your baby (preferably somewhere around 70 degrees Fahrenheit).

• Keep your baby's sleeping area smoke-free at all times.

• Shelter your baby from exposure to toxins by using only organic beddings and mattresses free from harmful chemicals and chemical flame retardants. These dangerous compounds can also be found in nursing pillows, car seats, changing table pads, high chairs, strollers, portable cribs, sleeping wedges, walkers, and other baby care products.

# **How Much Sleep Is Too Much?**

Too much of something can be bad for you. While there are a lot of Americans who lack sleep, there are also some who may be sleeping more than they should -a habit that can also have negative effects on your health.

In one study, researchers revealed that people in their 60s and 70s who sleep nine hours or more each night have a more rapid decline in their cognitive function than those who sleep between six and eight hours. Surprisingly, the long sleepers (9 hours or more) comprised a large portion (40 percent) of the 2,700 study participants. Another 49 percent were considered normal sleepers (6 to 8 hours), while 11 percent slept just five hours or less.

To find out if you're getting enough sleep, observe how long it takes you to fall asleep. If you fall asleep within a few minutes of your head hitting the pillow, chances are you're most likely sleep deprived. A well-rested person, on the other hand, will take about 10-15 minutes to fall asleep at night.

# Five simple secrets to a sound and restful sleep by Dr Mercola

If you've been tossing and turning in bed and have been experiencing some difficulty sleeping at night, I recommend giving these simple lifestyle changes a try:

• Stop watching television or using any of your electronic gadgets at least an hour before going to bed. The blue light from these devices tricks your brain into thinking it's still daytime and messes up your circadian rhythm.

• Do not eat a heavy meal or spicy foods close to bedtime.

• Take note of key factors that disrupt your body's healthy melatonin production. These include electromagnetic field (EMF) sources, and too much light in your bedroom. Switch off Wi-Fi devices and remove all electronics from your room. You can also wear an eye mask or turn off all the lights so you can sleep in total darkness.

• Keep the temperature in your bedroom at about 21 degrees Celsius. According to studies, the optimal room temperature for sleep is quite cool, between 16 and 20 degrees C. Keeping your room cooler or hotter can lead to restless sleep.

• Make sure your pillows and mattresses are made from wholesome organic materials that do not contain harsh substances like chemical flame retardants, [cadmium or ] my addition.

• Studies have shown that flame retardants have numerous side effects, especially in children. In fact, approximately 90 percent of Americans have some level of flame retardant chemicals in their bodies.

# Here's another way to get you more sleep

You can sleep better like you've never before with my American Wool Bedding and Silk-Filled Bedding. Unlike most other bedding out there, my American Wool Bedding and Silk-Filled Bedding are not only made from the finest materials, but most importantly, are naturally flame resistant. My Silk-Filled Bedding is also certified asthma and allergy-friendly by the Asthma and Allergy Foundation of America.

Inside the suprachiasmatic nucleus (SCN) of your brain, which is part of your hypothalamus, resides your master biological clock. Based on signals of light and darkness, your SCN tells your pineal gland when it's time to secrete melatonin, and when to turn it off.

Your melatonin level inversely rises and falls with light and darkness, and both your physical and mental health is intricately tied to this rhythm of light and dark.

When it's dark, your melatonin levels increase, which is why you may feel tired when the sun starts to set. Conversely, when you're exposed to bright artificial lighting at night, including blue light emitted from TVs and electronic screens, you may have trouble falling asleep due to suppressed melatonin levels.

Many sleep problems can be resolved by making sure you avoid blue light exposure after sunset and sleep in total darkness.

Interestingly, being exposed to very dim light during sleep — even if it does not noticeably seem to impair your sleep — may also affect your brain function and cognition during the day.

Minute Amounts of Light During Sleep Can Affect Cognition

I've been a long-time advocate of sleeping in TOTAL darkness, and an interesting study1 published in Scientific Reports highlights the importance of this recommendation — not just for solid sleep, but also for cognitive health.

In this study, 20 healthy men slept in a laboratory shrouded in complete darkness for two nights in a row. On the third night, they were exposed to a dim light of either 5 or 10 lux while sleeping.

To get an idea of how dim a light intensity of 5 or 10 lux is, 1 lux is equal to the brightness of a surface illuminated by one candle, placed 1 meter (3.28 feet) away from the surface. Twilight is just below 11 lux, whereas an object illuminated by the light of the full moon is about one-tenth of a lux.2

After the second and third nights, the participants performed working memory tests (so-called n-back tests) while undergoing functional magnetic resonance imaging (fMRI). The goal was to evaluate the effects of dim light exposure during sleep on functional brain activation during a working memory task the next day.

When sleeping under 10 lux light conditions, there was decreased activation in the right inferior frontal gyrus, an area of your brain involved in response inhibition, attentional control and the detection of relevant cues when performing a task.3

Exposure to 5-lux light had no statistically significant effect on the participants' brain activity. In other words, past a certain point of very dim light, nighttime light exposure can have a direct influence on your brain function, specifically your cognition and working memory.