The importance of sleep
(and how yours can be better...)

Most of us understand that sleep is not restricted to the cessation of consciousness that allows us to recover mentally from the stresses of the day. What most of us don’t know is just how vital shut-eye is to our complete well-being. In fact, there are very few body processes that aren’t affected by the quality and quantity of our sleep.

Why Sleep?
Although scientists and researchers have studied most aspects of sleep, no one can say for sure why we must be asleep for the body’s reparative processes to take place. Yet throughout the animal kingdom, creatures sleep—even those whose survival depends on being alert at all times.

To further complicate our understanding of sleep, it appears that part of our brains stay awake, or at least alert in some way. This explains how a new parent can stay asleep during a thunderstorm, yet instantly wake at a baby’s soft whimper. As we learn more about sleep, so pieces of the puzzle are gradually coming together.

What happens when we don’t sleep?
If you think that sleep is a waste of time and prefer to answer emails or get caught up on surfing, you might want to think again. During sleep, growth and repair processes take place and the immune system is replenished. Since most diseases are related to a compromised immune response, people who lack sleep often fall prey to viral conditions and recover more slowly than those who sleep more. (It’s by Nature’s design that we want to sleep more when we are sick—it speeds the healing process.)

Aside from feeling miserable, irritable and “bushed” the day after a poor night’s sleep, people are more likely to have a traffic accident or mishap involving heavy machinery. Researchers in Australia and New Zealand have reported that sleeping for less than six hours a night can impact coordination, reaction time and judgment. Drivers are especially vulnerable, the researchers warned. In fact, driving when sleep-deprived was likened to driving while impaired.

Studies show that people who drive after being awake for 17 to 19 hours performed worse than those with a blood alcohol level of .05 per cent. (In BC, a blood alcohol reading of .05 to .08 per cent is considered serious enough to attract penalties.)

Here are more ways in which a lack of sleep can affect your body:

Immune suppression. Included in the long list of health problems that have been linked to sleep deprivation are those that stem from an impaired immune system. These include colds and flu, and the possible development of cancers that are not caught in their early stages and quelled by the immune response. A 1999 study, reported in the British Journal of Cancer, suggests that women who are completely blind have an average 36 per cent lower risk of developing breast cancer than sighted women. This was especially true for women who became blind before age 65.


who had a 49 per cent lower incidence of the disease. Several later
studies have supported these findings, including some that showed
increased breast cancer rates among women exposed to artificial light
throughout the night, such as shift workers.iii

So how might sleep deprivation affect breast cancer risk? We know
that the sleep hormone, melatonin, suppresses estrogen levels and
that elevated estrogen levels increase lifetime breast cancer risk. The
researchers speculate that, since blind women are in constant
darkness, their melatonin levels are elevated and estrogen levels
consequently suppressed. This may exert a protective effect against
breast cancer. In the case of the female shift workers, researchers
speculate that exposure to artificial lighting during the time
melatonin levels normally peak, causes a reduction in melatonin
secretion and associated elevated levels of estrogen.

Heart disease. Sleep disorders have been linked to increased levels of
the stress hormone, cortisol, as well as hypertension, leading to
cardiovascular problems. A 2009 studyiv carried out by researchers
from the Université de Montréal, its associated Sleep Disorders Centre
and the Université Laval, compared the 24-hour blood pressure of
insomniacs and sound sleepers. Those who slept well experienced
a drop in nighttime blood pressure that allowed the heart to rest.
However, those who did not sleep well, experienced no such drop.
Over time, the researchers concluded, the elevated nighttime blood
pressure could cause long-term cardiovascular risks and damage to
the heart.

A study published in the Oct. 2011 online edition of Circulation,
confirmed this conclusion. The study collected data on almost 53,000
men and women who took part in a national health survey from 1995
to 1997 and who answered questions about their sleep habits. The
researchers also identified close to 2,400 people who had a first heart
attack during the following 11 years.

The researchers found that people who had constant trouble falling
asleep had a 45 per cent increased risk of heart attack, compared with
those who had no problem drifting off. In addition, people who had
trouble staying asleep stood a 30 per cent higher risk of
experiencing a heart attack, compared with those who had no
problem staying asleep. Study participants who failed to feel refreshed
after a night’s sleep had a 27 per cent increased risk of a heart attack,
compared with those who did, the researchers notedv.

Diabetes. Type 2 diabetes develops when the body fails to respond
properly to insulin—the hormone that regulates blood sugar. This
condition is known as insulin resistance. While levels of blood
glucose are high, the cells are unable to utilize this sugar for
energy. This increases the risk for life-threatening medical
conditions including kidney damage, heart disease, and
impaired vision.

A 1999 University of Chicago studyvi showed that chronic sleep
deprivation (6.5 or fewer hours per
night), had the same effect on insulin
resistance as aging. Several men in their
20s were allowed to sleep for only four
hours a night. After a week, glucose tolerance tests showed that the
young men were pre-diabetic and had insulin levels typical for men
in their 60s. As soon as the subjects caught up on their sleep, their
insulin levels returned to normal.

Weight gain. If you’re still counting sheep, here’s another reason why
you need to address your sleeping problem. An ongoing lack of sleep
can result in weight gain.

Scientists have known for a long time that the sleep hormone, melatonin, affects both
appetite and satiety (the experience of feeling satisfied after a meal). During
sleep, melatonin causes the secretion of another hormone—leptin. This hormone,
named from the Greek word leptos, meaning thin, is an appetite suppressant
that also increases metabolism. One of the functions of leptin is to make sure
we don’t awaken during the night due to hunger. Some studies have shown an
average 15 per cent reduction in leptin secretion among people who
sleep for fewer than five hours a night. Researchers have therefore
speculated that the reason insomniacs gain weight over time is due to
overall decreased leptin levels.

In another studyvii, carried out at the University of Chicago,
researchers placed 10 overweight people on a calorie-restricted diet.
For two weeks, half the group slept for 8.5 hours and half slept for
5.5 hours. The two groups then switched sleep schedules. The
participants lost about 6.6 pounds during each two-week
intervention but, during the period of restricted sleep, most of this fat
loss came from muscle. By contrast, when sleep was not restricted,
the loss came from body fat. When the researchers measured the patients’
‘‘hormone levels, they found that those who slept for fewer than 5.5 hours had a 10-point increase in levels of ghrelin—a
hormone that increases appetite and holds onto body fat.

Cancer. Can impaired sleep increase the risk for certain cancers? We
know that women who work night-shift have a higher incidence of
breast cancer likely due to increased levels of estrogen, but has a lack
of shut-eye been linked with the development of other cancers? A
studyviii published in the February 2011 edition of the journal, Cancer,
found an association between sleep duration and risk of
polyps, which are tied directly with the risk for colon
cancer. Researchers at Case Comprehensive Cancer Center/Case Western Reserve University in
Cleveland studied 1,240 men and women undergoing routine colonoscopy. After
analyzing the sleeping patterns of the subjects, they found a higher
incidence of precancerous polyps in people who reported getting less
than six hours of sleep. While
this doesn’t establish a
direct causal link (perhaps those who slept longer
had overall healthier
lifestyles), it does support
the importance of a healthy
lifestyle to complete well-being.

iii. Shorehammer, E.S., et al. Rotating night shifts and risk of breast
cancer in women participating in the Nurses’ Health Study. Journal of the
National Cancer Institute, Vol 95, 2003, No. 20, pp. 1583 - 1586.

iv. Lafrance PA, Pontaresi MH, Feudtner L, Dumont M, Martin CM,
Montplaisir J. Nighttime blood pressure in normotensive subjects with
chronic insomnia: implications for cardiovascular risk. Department of
Medicine, Division of Cardiology, Hôpital du Sacré-Cœur de Montréal
and Université de Montréal, Quebec, Canada. Paula Lafrance@umontreal.ca. Sleep. 2009 Jun 30(6):790-6.

v. Lars E. Langlund, MD; Lars J. Vatten, MD, PhD; Carl Platou, MD;
Inne Jolynn, MD, PhD. Insomnia and the risk of acute myocardial
infarction: A Population Study. Circulation (online), October 24, 2011,

vi. Speigel, K, PHD; Leproult, R, PHD; van Cauter, E, PHD. Impact of
354, p. 1455.

vii. Arlet V, Nadelkevich, MD, Jennifer M. Kilkman, MS; Jacqueline
Imperial, RN, Dale A. Schoeller, PhD, Pattianna D. Potter, MD, PhD,
Independent Sleep Undermines Dietary Efforts to Reduce Adiposity

viii. Cheryl L. Thompson PhD., Emma K. Lerin PhD., Sanjey Pandi
MD, Nathan A. Berger MD, Stana Roldain MD, Li Li MD, PhD,
Short duration of sleep increases risk of colorectal adenoma
Cancer Volume 117, Issue 4, pages 841–847, 15 February 2011,
Improving your Sleep

Like many health conditions, insomnia does not fall neatly into one category. Some people have difficulty falling asleep but, once they have dropped off, have no problem staying there. Others fall asleep quickly, only to wake up in the early hours and lie awake until dawn. Still others have difficulty both falling and staying asleep. To feel fully rested, it is important to have both quantity and quality of sleep.

Most sleep problems appear to be caused by insufficiency of the sleep hormone, melatonin. This hormone is secreted by the pineal gland when the retinas of the eyes no longer sense the presence of light. When our ancestors lived outdoors, and their sleep/wake cycle synchronized with the natural rhythms of day and night, melatonin was secreted at dusk and sleep was quick to follow. In modern times, however, electricity has extended daytime hours and melatonin is not secreted as readily. Instead of falling asleep shortly after dusk, most of us go to bed well after nightfall. Compounding the problem is the fact there is no longer a gradual progression from day to night. After spending a few hours under artificial lighting, the light source is suddenly switched off, and we must try to fall asleep.

We can best address this disruption by turning the lights down low before going to bed, and by making sure that, when we do retire for the night, there is no visible light in the bedroom. The light from computer screens, cell phones (which many people keep next to the bed), radio/alarm clocks, outdoor lighting and street lamps can all impact melatonin secretion. So can the light coming under a door. Moonlight and starlight appear to not affect the secretion of this hormone but, since few of us sleep outdoors, it merely serves as a reminder that natural light from the heavens has been a part of the evolutionary process through which our bodies have adapted and evolved.

In addition to this, you may want to try a melatonin supplement (see page 6). Melatonin supplements come in a variety of strengths and formulations, including a time-release formula that makes sure your melatonin levels stay even throughout the night—especially helpful for those who go to bed well after nightfall. For the same reason, crossword puzzles and Sudoku are a no-no.

More ways to improve sleep

- Working late on electronic equipment stimulates the mind and impacts readiness for sleep. If you have difficulty falling asleep, you should never take an iPad or laptop to bed with you. Instead, make a pact with yourself to stop using electronic/wireless equipment at least one hour prior to retiring.

Since even the small amount of light coming from electronic equipment can be enough to suppress melatonin secretion, it is also a good idea to remove or cover electronics in your bedroom.

- Although we don’t encourage the consumption of dairy products, a warm drink before bed can be part of the routine that says it’s sleep time. We suggest our soothing herbal Bedtime Tea blend with borage, chamomile, lemon balm, linden, oats, rose petals rosehips, and skullcap.

- Avoid hot toddies and other alcoholic drinks that make you feel relaxed. While alcoholic drinks do encourage you to fall asleep, the effect is short-lived and you are more likely to wake up at 1 - 2:00 am and spend the next few hours tossing and turning.

- Even if you do feel tired, caffeine consumed during the day can keep you awake at night. So can sugar, so best to avoid a slice of caffeine-and-sugar-packed chocolate cake at dinner. If you have difficulty drifting off, avoid caffeine after noon.

- Make a warm bath part of your “wind down” routine that prepares your body and mind for sleep. Adding Finlandia essential oil of lavender will help you feel relaxed and sleepy.

- Reading in bed is OK—provided the material you choose isn’t overly stimulating to the mind. Getting to the last pages of a whodunit is not conducive to falling asleep. For the same reason, crossword puzzles and Sudoku are a no-no.

- Removing distractions from your bedroom is a good idea if you’re the kind of person who likes to prepare tax statements using your pillow as a desk. If a TV is stopping you from sleeping, remove it! View your bedroom as a place to sleep and/or get close to your partner but nothing else.

- Reduce “partner problems.” If the one you love snores or insists on keeping a light on to read, simply invest in some ear plugs and/or a sleep mask. The same goes for dealing with noisy traffic, loud neighbours or intrusive street lighting. If you don’t like the idea of ear plugs, invest in a machine that makes white noise, often incorporated in the soothing sounds of nature.

- If you lie awake thinking about all the things that stress you, you’ll have a tough time falling asleep. Instead, think of yourself completing a mundane chore like folding clothes or sorting out a drawer. Be meticulous about folding everything perfectly. As soon as your mind wanders, pull it gently back. Before you know it, you’ll be waking up in the morning.

- Say no to daytime napping. Power naps might feel good, especially after a carb-laden lunch, but sleeping during the day disrupts your sleep/wake cycle. Go for a refreshing walk instead. And since we mentioned carbs, there is some truth to the suggestion that a slice of toast or bread before bed can help you sleep—especially when combined with a food containing the amino acid tryptophan. By raising insulin levels, carbs help flush competing amino acids from the blood, allowing more tryptophan to enter the brain and encourage the production of melatonin.
Melatonin is a highly effective sleep supplement because it directly affects the most important of our circadian rhythms—the sleep/wake cycle. Circadian rhythms are the body’s self-sustained biological cycles that normally span a period of 24 hours. (The word circadian is derived from the Latin circa diem, meaning “about a day.”)

The control centre of the sleep/wake cycle is buried deep in the hypothalamus of the brain, and the neighbouring pituitary gland. As soon as the retinas of the eyes sense an absence of light, the pineal gland secretes melatonin or sleep hormone, which tells the brain to enter the state of sleep. As soon as the retinas sense light again, the production of melatonin is suppressed and the sleep/wake cycle reset.

Although melatonin is best known for its function in the sleep/wake cycle, it plays a number of significant roles, including helping to maintain the tissues in a youthful state, stimulating the immune system, and alleviating depression. It is a powerful antioxidant.

But if the body produces its own melatonin, why should we need a supplement? We have already mentioned how the artificial extension of daylight hours and use of laptops and tablets suppresses the production of melatonin (page 3). Another factor is aging.

As we grow older, the body’s ability to produce melatonin decreases (young children have the highest levels of melatonin). While it was once believed that the reason older people sleep less was due to reduced melatonin, recent research calls this into question. There is little doubt however that a loss of melatonin secretion is associated with the aging process.

Many researchers also believe that electro-smog suppresses the body’s ability to produce the sleep hormone. Electro-smog consists of microwaves/wireless technology, and radiation from computers and television sets. These are believed to disturb the body’s natural magnetic rhythms and hormone output.

Know the ABCs of getting your ZZZs

Lack of sleep can be a major contributor to high stress levels and poor health. SLEEP® restores your body’s normal sleep rhythm while promoting the generation of the nerve cells that act as the building blocks of your entire nervous system. Best of all, you can sleep easy knowing it’s the all-natural, non-addictive way to get the 8 hours of sleep you need.
Because melatonin plays such an important role in the sleep/wake cycle, it is used by hundreds of thousands of people to reset their biological clocks when travelling. The use of melatonin has been shown in numerous studies to ease or even prevent jet-lag.

**Melatonin and cancer**

Several studies suggest that low melatonin levels may be associated with breast cancer risk. Women with breast cancer tend to have lower levels of melatonin than those without the disease. Laboratory experiments have found that when levels of melatonin are low, the growth of certain types of breast cancer cells is stimulated. In contrast, when melatonin is added to the cells, their growth is slowed.

Preliminary evidence also suggests that melatonin may enhance the effects of some chemotherapy drugs used to treat breast cancer. One study of women showing no improvement after taking tamoxifen demonstrated a different effect after melatonin was added to the mix. The tumours shrank, albeit modestly, in more than 28 per cent of the women.

**Not for everyone**

Although melatonin supplementation is completely safe for most, some people should not take melatonin without prior consultation with a health professional. In general, you should not take melatonin if you are pregnant or wishing to become pregnant, have or have had breast cancer, are nursing, or have diabetes, epilepsy, kidney disease or autoimmune disorders. Children under the age of 13 should not be given melatonin.

We have a number of melatonin supplements in the store and online, including Finlandia Liquid Melatonin, and formulas that are time-released. We can also compound melatonin in cream form. Using one of these supplements a couple of hours before retiring should greatly enhance your ability to fall asleep.

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**How stress affects sleep**

Unmanaged stress is a primary contributor to insomnia. Rather than stress resulting in a restful, “Phew! Thank heavens the day’s over” sleep, it produces restlessness and the tendency to awaken at regular intervals and start thinking over all the day’s stressors. Relatively minor concerns seem to grow as we stare into darkness and, before we know it, a new day has begun and the cycle repeats itself.

In a US study (2007 Stress and Anxiety Disorders Survey), 75 per cent of adults whose sleep was affected by stress or anxiety said that their sleep problems also increased their stress and anxiety: 54 per cent said that stress or anxiety increased their anxiety about falling asleep at night, and 52 per cent of men and 42 per cent of women reported it affected their ability to remain focused the next day.

The impact of stress can affect sleep in a number of ways. Gnawing personal worries or unresolved work issues can increase the body’s output of cortisol—the “fight or flight” hormone produced under stress. Chronic stress can lead to high levels of cortisol, disrupting patterns of sleep.

A popular response to stress is to go for a coffee. Although caffeine is not the dangerous substance it was once purported to be, too many cups can cause the jitters in most people, and can certainly disrupt sleep when taken in the afternoon or evening.

Closely aligned with relaxation is the end-of-workday alcoholic beverage, and/or nightcap. Although alcohol is a depressant, making us feel relaxed, this effect is temporary—often leading to the desire for more alcohol to keep the relaxation going. A nightcap before bed usually produces a drowsy effect followed by sleep, only to wake in the wee hours and not be able to drift back to sleep. This is because alcohol is metabolized rapidly by the body and the withdrawal effect causes wakefulness. Alcohol also suppresses REM sleep at the start of the sleep cycle, and increases the length of non-REM sleep.

Practising a stress management technique can help your sleep by activating your body’s relaxation response—the mechanism by which your body counters the fight or flight response to stress—returning hormone levels and other systems to normal.

Stress-reducing techniques that support the relaxation response include meditation, tai-chi and/or any form of mindfulness training that helps you be in the “now” as opposed to stressing over past mistakes or future problems.

Although late night running, weight training and other forms of physical activity can impede sleep, a short yoga session releases mood-enhancing endorphins and can be effective at reducing stress.

Another technique to reduce stress can be employed when in bed. Lie on your back, making sure you feel completely comfortable (use a pillow under your knees if needed). Then concentrate on relaxing each body part starting with your toes. Really feel that relaxation taking the place of stress.
The process of sleep consists of two distinct phases, which alternate throughout the night. Scientists believe that both phases play an important role in our complete well-being. The two phases are referred to as REM and non-REM sleep. (REM stands for Rapid Eye Movement.) Non-REM sleep is further divided into four stages.

In stage 1 of non-REM sleep, commonly referred to as “drifting off,” we transition from wakefulness to sleep. During this stage, fragmented, illogical images known as hypnagogic hallucinations occur. Common examples of this phenomenon include feeling like you are falling or hearing someone call your name. A sleeper may also experience sudden muscular contractions that make her jump or feel like she is falling. These are known as hypnic myoclonia.

After 10 minutes or so, we fall deeper asleep and enter stage 2 of non-REM sleep. The body temperature falls and the breathing and heart rate slow. The theta waves of stage 1 are accompanied by slower delta waves and the brain begins to produce bursts of rapid, rhythmic brain wave activity called sleep spindles. During stage 3, delta waves increase and we fall into a deeper sleep, followed by the deepest sleep during stage 4. This stage of deep sleep lasts for approximately 30 minutes. Some dreams take place during this phase.

During the next phase—REM sleep—the heart rate and blood pressure increase, the breathing becomes more rapid, and the eyes flutter back and forth rapidly beneath the closed eyelids. REM sleep occurs approximately 60 to 90 minutes after we fall asleep. This is the phase in which we dream the most, and a person who wakes during REM sleep usually remembers what he or she was dreaming about. Interestingly, when a person is dreaming, the arms and legs become paralyzed—a condition known as muscle atonia. This appears to prevent us from responding to our dreams, for example, trying to run away from a dangerous situation and colliding with the bedroom wall.

It also explains why we often dream about trying to run away from something—an evil person perhaps—but, try as we may, we can’t seem to move.

During REM sleep, our heart rate and breathing quickens, our blood pressure rises and our body temperature fluctuates. In fact, our brain activity is almost the same as when we are awake.

Sleep cycles through these stages approximately four or five times throughout the night. During the first one or two cycles of sleep, REM sleep and the first couple of stages of non-REM sleep are shorter, lengthening as the night progresses, so that the last cycle of REM sleep can last an hour. Correspondingly, the deep sleep stages shorten.

Although we are generally in REM sleep for only one quarter of our sleep time, people who are not allowed to sleep during the REM phase report feeling fatigued and groggy the following day.

What are dreams?

Everybody dreams but some people remember their dreams more than others. While dreams can be quite vivid, we usually don’t recall much about them, as they appear to not be processed in the same way as the experiences that happen during our waking hours.

Although we dream mostly during the REM phase of sleep, scientists have observed people dreaming during all sleep phases, but especially vividly in stage 4 and REM. For reasons unknown, dreams tend to be more negative than positive, expressing anxiety and fear more than happiness or elation.

Dreams last, on average, between five and 20 minutes, and usually occur many times during sleep. In fact, it has been estimated that we spend close to six years of our lives dreaming.

According to Sander van der Linden, a doctoral researcher in social experimental psychology at the London School of Economics and Political Science, dreams appear to help us process emotions by encoding and constructing memories of them. While what we see and experience in our dreams is not real, the emotions attached to these experiences are. Our dreams attempt to strip the emotion out of a specific experience by creating a memory of it. This way, the emotion itself is no longer active. This is important role because when we don’t process our emotions—especially...
processing of day-to-day information and events within the brain. No evidence exists to suggest dreams are anything more than the

Can dreams predict the future?

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characters than about women, while women dream about both sexes.

Perhaps surprisingly, men are twice as likely to dream about other male

Dream. These experiences are known as "lucid dreams." 

often believing he woke up, then returned to dreaming the same

dreamer feels he is awake when telling himself to stop dreaming—

more positive vein. This all takes place during sleep, even though the

experience is just a dream and tell himself to stop dreaming such nonsense.

Some people report the ability to control or direct their dreams. For

example, a person may be dreaming about being killed, recognize that

this is just a dream and tell himself to stop dreaming such nonsense.

As a result, the evil character disappears, and the dream carries on in

a more positive vein. This all takes place during sleep, even though the

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Can we control dreams?

Do animals dream?

We don't know if all animals dream, but certainly the higher animal

kingdom experiences both REM and non-REM sleep. Dogs and cats

twitch their faces and paws, and sometimes whine when in REM sleep,

strongly suggesting they dream just as we do. Rats trained to

navigate mazes have had the associated patterns formed in their brains

tracked, and found to be closely aligned with patterns formed

during REM sleep.

What do other cultures dream?

Although our dreams are heavily influenced by our individual

experiences, it seems we share a common bond when it comes
to the general themes of dreams. Common dreams include running

away from a dangerous situation or bad person (and often not being

able to move), falling, losing something of value, losing

teeth, being naked in public, flying, and

seeing planes crash.

Do only creative people dream in colour?

Since, whether we are "creative" or not, our lives are filled with colour, most of

us recall seeing colours in our dreams at one time or another. In one study,
distinctly colourful dreams were reported 70 per cent of the time and

vague colour another 13 per cent of the time.

For more information on Finlandia Pharmacy's liquid Herbal Sleep Formula and other fine herbal formulations, please contact

herbal dispensary manager, Michelle Bonnie, at 604.733.5323.

These statements have not been evaluated by the FDA or Health Canada and are for information only. These statements, this product and its contents, are not intended to diagnose, mitigate, prevent, treat or cure any disease. If you are ill, you should seek the advice of a qualified health professional.

From time to time, we all need a little help drifting off to sleep. Finlandia's liquid Herbal Sleep Formula will help you:

• feel relaxed and calm, relieved of nervous tension;
• have an easier time falling—and staying—asleep;
• have better focus and mental clarity due to proper rest

This formula contains the following herbs:

CHAMOMILE (Matricaria recutita): Soothes nervous excitability including feelings of restlessness, hysteria and hyperactivity; calms the digestive system; acts as a mild analgesic, anti-inflammatory, mild nerve sedative, and anti-spasmodic.

HOPS (Humulus lupulus): Used for nervous anxiety, nervous stomach, nerve pain, muscle spasms and restless legs, hops exert a hypnotic, sedative and mild analgesic action. They also act as a long-lasting nerve relaxant and diuretic.

JAMAICAN DOGWOOD (Piscidia erythrina): Calms brain excitability, relieves neuralgia, and has sedative and antispasmodic properties. This herb also acts as a mild analgesic, hypnotic and anti-inflammatory agent. It is particularly helpful for insomnia caused by excess mental activity.

WILD LETTUCE (Lactuca virosa): Helps to lessen physical stress, restlessness, and anxiety, and to promote healthful sleep. This herb also relieves muscle pain, is a nerve relaxant, mild analgesic, mild hypnotic, sedative, and anti-spasmodic.

PASSION FLOWER (Passiflora incarnata): Helpful for sleeplessness due to mental unrest, nervous excitability, and overactive brain. Passion Flower also helps soothe headache, neuralgia, and twitching limbs. This herb is also known for its ability to improve mood.

SKULLCAP (Scutellaria lateriflora): Used for disturbed sleep, nervous stress and to calm unwanted thoughts, Skullcap relieves mental and physical exhaustion and nervousness. It also possesses anti-convulsive and anti-spasmodic qualities, and acts as a sedative for the central nervous system.

PASQUE FLOWER (Anemone pulsatilla): This herb relaxes nerves in women and acts as a mild sedative, mild analgesic and anti-spasmodic. It also assists with adrenal exhaustion, anxiety, and over-sensitivity.

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Men's dreams tend to be more aggressive than women's dreams (perhaps fuelled by shifts in testosterone).

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processing of day-to-day information and events within the brain.

negative ones—worry and anxiety are increased. It also explains why

severe REM sleep deprivation is associated with the development of

mental disorders.

This theory carries even more weight when we take a closer look at

narcolepsy. Often connected with sleep paralysis and vivid, frightening

dreams at the onset of sleep, narcolepsy is characterized by daytime

sleep attacks and collapsing at the onset of strong emotions while

remaining conscious.

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distinctly colourful dreams were reported 70 per cent of the time and

vague colour another 13 per cent of the time.
Sadly, most of us run our lives in the manner of Hemingway, allowing our lives to “fall apart” by depriving ourselves of the sleep we need to keep our bodies and minds together. Poor habits such as drug and alcohol use, mismanaged stress and the ever-present electro-smog of microwaves/wireless technology wreck our natural sleep cycle and leave us feeling exhausted and unable to cope.

Let’s take a look at how drugs commonly prescribed for insomnia affect our sleep. Benzodiazepines such as diazepam (Valium®) and lorezapam (Ativan®), and non-benzodiazepine hypnotics, including zolpidem (Ambien® in the US, Sublinox® in Canada), zaleplon (Sonata® US only), eszopiclone (Lunesta® US only) and zopiclone (Imovane® in Canada) are commonly prescribed sedative-hypnotic medications used to treat insomnia or anxiety. In the short term, they can be effective as they cause sedation and drowsiness, but their long-term use carries risks for withdrawal, dependency, and—yes—rebound insomnia.

Other prescription drugs that affect many people’s ability to sleep include statins such as simvastatin (Zocor®), theophylline/dimethylxanthine drugs prescribed for respiratory diseases, and both prescription and OTC antihistamines, pain relievers and cold remedies.

SSRI antidepressants are a major cause of insomnia, which adds to fatigue and increases depression. Fluoxetine (Prozac®), sertraline (Zoloft®), and paroxetine (Paxil®) all list insomnia as a side-effect.

Paradoxically, drugs prescribed specifically for insomnia can aggravate the condition, such as the aforementioned zolpidem. The most commonly prescribed drug for sleep problems, zolpidem carries a long list of health risks, and addiction is common. Zolpidem has also been linked to sleepwalking. If you have read The many stages of sleep on page 7, you will recall that, during all-important REM sleep, the limbs are temporarily paralyzed, probably to prevent us acting out dreams. Could it be that zolpidem and similar drugs—which appear to inhibit REM sleep—also prevent the inhibition of this temporary paralysis? We also know that during natural sleep, the appetite-dampening hormone leptin is secreted, preventing us from waking due to hunger. Perhaps this is why zolpidem has also been associated with excessive/binge eating.

Even the “fun” stuff is heavily linked with the inability to sleep. Alcohol, for example, is a great sleep inducer, but triggers the brain to wake a few hours later. Alcohol mixed with zolpidem is a particularly hazardous combination causing motor impairment, memory loss, dizziness, and slowed breathing. The interaction of alcohol with zolpidem increases the risk for problems associated with sleep apnea—a condition that causes interrupted breathing during the night and can lead to severe medical problems. Zolpidem is among the top 10 drugs identified in the blood of impaired drivers.

Even a glass of wine with dinner can suppress the body’s ability to enter the state of REM sleep. In fact, for those who are sensitive to the effects of alcohol and have been avoiding it, even one sip can impair the REM phase.

There is, fortunately, good news, but before I get to it, a couple more warnings to heed: THC, a component of marijuana, and of course caffeine, are stealers of sleep and well being. What many people don’t realize is that, every time they knock back a Java or draw on a joint to relax, they are affecting their sleep/wake cycle and thus compromising their true ability to get the most out of life.

Lastly, in this newsletter, we have touched on the issue of electro-smog—the ever-present result of new technologies that bring us both frustration and pleasure. Prolonged use of mobile telephones may lead to reduced melatonin (sleep hormone) production, with elevated 60-Hz magnetic field exposure intensifying that effect. (The alternating current flowing in residential/office power lines and electrical wiring is 60-Hz.) Smart meters and WiFi add to the problem.

And now for the good news: Melatonin, the body’s natural sleep hormone, is very safe—even in high doses. For people who are experiencing ongoing insomnia, doses exceeding 5 mg may be necessary to ensure sleep is unbroken until the morning. It is important to remember that each person’s requirements are different and that a consultation may be required to determine what dosage and delivery (liquid, tablets, cream) is best targeted to your specific needs.

Electrosensitive people should also turn off the WiFi at night and do their best to remove all electronics from the sleep area. If you suffer from insomnia, don’t take your iPad, other tablet or wireless phone to bed with you. After five years’ exposure, the effects of electro-magnetic fields (EMFs) are particularly severe. Prescription sleep medications may need to be adjusted, or discontinued, in consultation with your physician or pharmacist.

Without sleep, we are literally the walking dead, keeping coffee shops in business at the expense of our well-being. It’s time to heed the poets and playwrights of the past, and the wise men of today, and give sleep the importance it truly deserves.

Ernest Hemingway

William Shakespeare, The Tempest

“‘I love sleep. My life has the tendency to fall apart when I’m awake you know...’”

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