

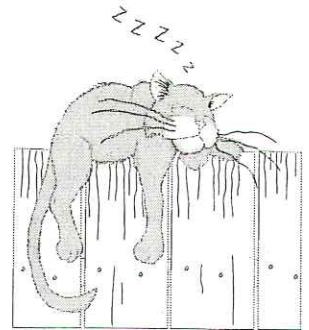


UPPER ISLAND ASSESSMENT AND RESOURCE SERVICE

IMPROVING YOUR SLEEP

Sleep is a state in which a great part of every life is passed...Yet of this change so frequent, so great, so general, and so necessary, no searcher has yet found either the efficient or final cause; or can tell by what power the mind and body are thus chained down in irresistible stupefaction; or what benefits the animal receives from this alternate suspension of its active powers...And once in four and twenty hours, the gay and the gloomy, the witty and the dull, the clamorous and the silent, the busy and the idle, are all overpowered by the gentle tyrant, and all lie down in the equality of sleep.

Samuel Johnson, *The Idler*



Most individuals suffer occasional sleepless nights or periods of poor sleep during stressful life events such as job or home difficulties, pregnancy, a wedding, an illness, or a death. For some, occasional sleeping problems can evolve into chronic insomnia. Over one hundred million Americans are estimated to have occasional sleep problems, and about one in six have chronic insomnia and consider it a serious problem.

Fortunately, a significant amount of research devoted to sleep and insomnia over the past twenty-five years has uncovered many things you can do to improve your sleep. In fact, because of side effects from sleep medications, behaviour techniques are now considered the most effective form of treatment for chronic insomnia.

Our program incorporates a number of clinically-proven behavioural techniques for managing insomnia. Our research suggests that this program results in significant improvements in sleep in about 75 percent of our patients. To obtain these benefits, however, it is necessary to practise these techniques in the sequential, stepwise manner in which they are presented.

Each set of techniques requires about one to two weeks of practise before they begin to affect your sleep consistently. Once you are practising one set of techniques consistently, begin to practise the next set.

Overcoming insomnia cannot be done quickly. Too many people abandon a behavioural technique after two or three nights if it doesn't produce an immediate change in their sleep. Our behaviour self-help program requires time, patience, and persistence.

Furthermore, although the changes resulting from behaviour interventions may be slower than those produced by medication, they are more enduring and effective. If you are persistent and use these techniques regularly over a ten-week period, you should significantly improve your sleep.

To facilitate these improvements, keep a daily Sleep Diary during this self-help program. See the Sleep Diary form at the end of this article; it will take about one minute to complete each morning when you wake up. At the end of each week, review your entries to determine more objectively your sleep patterns. Sleep diaries also help you to assess your progress and are an excellent form of self-reinforcement.

625C 11th Ave., Campbell River, B.C. V9W 4G5 • (250) 287-2266 • (250) 338-4533 • (250) 956-3144

Toll Free: 1-866-789-2266 • Fax (250) 287-3380 • www.upperislandars.com

"This service is a joint effort supported by local employers and unions."

WHAT IS INSOMNIA



There is no standard definition of insomnia, since the amount of sleep required for feeling rested varies widely among individuals. Some feel rested with four hours of sleep while others require ten. According to Dr. Patricia Lacks, at Washington University in St. Louis, an arbitrary definition of insomnia may include any of the following:

- a. sleep-onset insomnia: difficulty falling asleep defined by an average of at least thirty minutes per night to fall asleep
- b. sleep-maintenance insomnia: difficulty staying asleep as defined by an average awake time after falling asleep totalling more than thirty minutes per night, or early morning awakening before the desired wake-up time with an inability to fall back asleep
- c. poor quality of sleep

You may have one or a combination of these types of insomnia. Insomnia can result in daytime fatigue, impaired performance, and mood disturbance. For a diagnosis of insomnia, you must exhibit at least one of the sleep-disturbance patterns and at least one of the effects that carry over into your day. Even if you experience only one of these elements, you can benefit from behavioural techniques.

Insomnia can be caused by stress or other behavioural factors such as unrealistic sleep expectations, inappropriate scheduling of sleep, trying too hard to sleep, consuming caffeine, inadequate exercise, and a number of other behavioural factors. Insomnia can also be caused by depression, a medical problem, or alcohol or drug use. Before beginning this self-help program, get a complete physical history and medication examination from your physician. The techniques discussed are not appropriate for insomnia caused by depression, alcohol or drug use, or a medical condition.

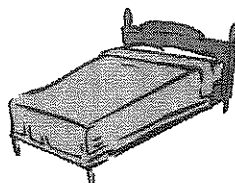
Take a Moment To ... Reflect on your sleep pattern. Do you...

- ▶ have difficulty falling asleep?
- ▶ have difficulty staying asleep?
- ▶ feel your sleep is of poor quality?
- ▶ have a combination of these types of sleep patterns?

If yes, reflect on behaviours that may influence your sleep pattern. Do you...

- ▶ worry or feel anxious at bedtime?
- ▶ try too hard to sleep?
- ▶ consume caffeine or smoke near bedtime?
- ▶ spend too much time in bed?
- ▶ get too little exercise?
- ▶ have an inconsistent sleep schedule?

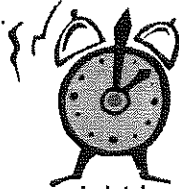
Read on to learn strategies to change these and other behaviours which may negatively affect your sleep.



BASIC FACTS ABOUT SLEEP

Sleep is divided into five stages. *Stage 1*, the lightest stage, marks the transition from wakefulness to sleep; if awakened during *Stage 1*, you would probably report being awake. *Stage 2* sleep is the first "true" sleep stage, a "light" sleep from which you can easily be awakened. *Stages 3 and 4* sleep are called *delta* sleep and are the deepest stages of sleep; it is very difficult to be awakened from delta sleep. In *Stage 5*, rapid eye movement (REM) sleep, or dream sleep, your eyes move horizontally and vertically because you look around while you dream; virtually all dreaming occurs during REM sleep. You are more likely to awaken during REM sleep than delta sleep because REM is a "lighter" stage of sleep.

During normal, good, restful sleep, you progress from *Stage 1* to *Stage 4*, then back to *Stage 2*, then to REM sleep in about ninety minutes. The typical sleeper will go through four to six of these cycles per night. However, during the first part of the night, delta cycles (*Stages 3 and 4*) are longer and REM cycles are very short. As the night progresses, delta cycles become shorter and the length of REM cycles increase. Thus, we obtain most of our deep sleep during the first half of the night and most of our dream sleep during the second half. It is normal to wake up several times during the night but not remember this the next morning.



The eight-hour myth

The belief that everyone must sleep eight hours a night is a myth. According to Dr. Peter Hauri, at the Mayo Clinic in Rochester, Minnesota, adults average about seven to seven-and-one-half hours of sleep per night, and many individuals function effectively with four to six hours of sleep. In fact, 20 percent of the population (slightly more in men) sleep less than six hours per night.

Many people worry needlessly about not sleeping eight hours. If you sleep only five hours a night but are not sleepy or fatigued the next day, you may be trying to sleep more than you really need. Dr. Edward Stepanski and his team of researchers at the Henry Ford Hospital in Detroit, Michigan, and the Grandview Hospital in Dayton, Ohio, have shown that poor sleepers are not usually sleepier during the day than good sleepers. Another significant fact is that sleep changes with age. Not only does total sleep time decrease (to an average of about six-and-one-half hours during old age), but deep sleep decreases and light sleep increases, making it more common to have problems sleeping as we get older.

The effects of sleep loss

The effects of sleep loss are subject to a number of popular misconceptions. Contrary to popular belief, the human nervous system has a remarkable tolerance for sleep loss, at least on a temporary basis. As Dr. Hauri notes, one night of total sleep deprivation makes healthy young volunteers sleepy, but has remarkably little effect on their days' performance. Even extended sleeplessness has little effect on abilities - it simply makes you feel extremely sleepy. (One volunteer stayed awake for eleven days and showed no major effects on physical or psychological functions!). Even after extended sleeplessness, two to three nights of extended sleep returns volunteers to normal.

Dr. Claudio Stampi, at the Institute for Circadian Physiology in Boston, Massachusetts, observes that most individuals can maintain their usual performance with 60-to-70 percent of their normal sleep. If you are an eight-hour sleeper, this means your performance at work will not suffer significantly if you get four and one-half to five and one-half hours of sleep. In fact, a study, conducted by Drs. Jeffrey Sugerma,

John Stern, and James Walsh, at the Deaconess Hospital and Washington University in St. Louis, Missouri, found that individuals suffering from insomnia perform as well on tests of mental performance as good sleepers.

Finally, people who have difficulty sleeping often overestimate the time it takes to fall asleep and underestimate total sleep time. You may, in fact, be getting more sleep than you think!

Since performance is not usually significantly affected after sleep loss, what are its consequences? For moderate sleep loss, the major effects are irritability and fatigue. These feelings are often due to our appraisals about loss of sleep. Consider how differently we regard sleep loss due to late-night socializing, travel, or entertainment compared to sleep loss due to insomnia. Tossing and turning all night in bed is frustrating and aggravating; we appraise it as stressful, and it adversely affects our mood the following day.

For moderate sleep loss, the *perception* is as important as the amount lost. So, don't be afraid of insomnia. The less you fear insomnia and the less you appraise sleep loss as stressful, the better you will sleep and the better you will feel the next day.

Take a Moment To ... Assess your reaction to sleep loss.

- ▶ Are you very concerned about getting eight hours of sleep?
- ▶ Do you panic about sleep loss?
- ▶ Do you get angry and frustrated when you cannot sleep?
- ▶ Do you tell yourself you will be unable to function the next day?



Now that you understand some basic facts about sleep and insomnia, let us turn to the first set of behavioural techniques to improve your sleep. These are called *sleep hygiene*, referring to the daytime and before-sleep behaviours that affect sleep.

IMPROVING DAYTIME AND BEFORE-SLEEP BEHAVIOURS

Practice these steps daily:

Step 1.

Under the supervision of a physician, gradually eliminate the habitual use of sleeping pills. The effects achieved by most sleep medications are only temporary, since they lose their effectiveness after two to four weeks of continued use. They also decrease delta sleep and dream sleep, so that while you may fall asleep faster, your sleep will be of poorer quality. Besides disrupting sleep, sleep medications are usually not eliminated from the body by morning and produce a "hangover" effect which can decrease daytime alertness and impair thinking. People also tend to develop tolerance for the medication and need increasingly larger doses. Additionally, psychological or physical dependence can develop if the medication is used for an extended period. Finally, when you stop using them, many sleep medications result in a temporary "rebound" insomnia which can be worse than the initial insomnia! So, if you must take a sleeping pill, limit yourself to one per week.



Christine's Experience:

Christine, a twenty-eight-year-old housewife, came to our program complaining of difficulty falling asleep, daytime fatigue, and irritability. Although she took sleeping medication nightly for over three months, she often required one to three hours to fall asleep. As part of her treatment program she first gradually withdrew from her medication under the supervision of a physician. The first week she experienced some rebound insomnia, and her sleep remained poor for a second week. At that point, she began to use the behaviour techniques discussed in this chapter. Within three weeks, she was regularly falling asleep within twenty minutes. Christine also reported increased energy, less irritability, and feeling more "like her old self."

Step 2.

Reduce your consumption of alcohol and caffeine. Alcohol disrupts sleep by reducing deep sleep and dream sleep; it should not be consumed within two hours of bedtime. Caffeine is a powerful stimulant and should not be consumed within six hours of bedtime. Many foods, beverages and medications contain caffeine - learn to read the produce labels carefully. If you smoke, stop. Nicotine is a stimulant, and nonsmokers fall asleep more quickly than smokers.



Step 3.

Establish a regular aerobic exercise program. As suggested by Dr. Hauri, people who have difficulty sleeping tend to lead more sedentary lives than good sleepers, and we now know that physical inactivity may contribute to insomnia (by inhibiting our normal and rhythmic increases and decreases of body temperature). Regular exercise in the late afternoon or early evening eliminates this problem because it makes your body temperature rise and then fall (as you cool down). Dr. Deborah Sewitch, at the Griffen Hospital in Derby, Connecticut, observes that this aids your sleep because decreasing body temperature facilitates the onset of sleep and promotes deep sleep. However, exercise in the early morning does not affect sleep, and exercise within three hours of bedtime may stimulate you, which will make it more difficult to fall asleep. For many individuals, brisk walking the late afternoon or early evening is sufficient to increase core body temperature. You should exercise at least three to four times per week in order to affect your sleep consistently.

Roberta's Experience:



Roberta, a fifty-year-old housewife, came to our program complaining that she often felt sleepy and "on edge," and had difficulty coping when she slept poorly. Roberta's sleep diaries revealed that she required an average of sixty minutes to fall asleep at night. Furthermore, her night time awakenings averaged over ninety minutes per night. Because she did not exercise, Roberta was instructed to begin a regular aerobic exercise program. She began brisk walking every evening after dinner for thirty minutes. Within two weeks, she was falling asleep in an average of thirty minutes per night, and she reduced both the frequency and duration of her nighttime awake time by 50 percent. She also felt more rested, and her mood and daily functioning began to improve. Roberta's exercise program clearly had a significant and rapid effect on her sleep.

Step 4.

Plan tomorrow's activities, complete phone calls and personal business, and review the day's events early in the evening so the two hours prior to bedtime can serve as a relaxing, wind-down

period. Activities during this transition between waking and sleeping might include reading or watching television or a movie. A light carbohydrate snack during your wind-down period may help you sleep, because carbohydrates increase the production of serotonin, the brain chemical responsible for sleep.



Step 5.

Make sure your sleeping environment is conducive to sleep. Minimal levels of light and sound aid sleep. For many individuals, the hum of a fan or an air conditioner or a commercially-available sound conditioner will aid sleep. Also, make sure the temperature of your bedroom is comfortable. In general, a cooler room temperature will facilitate sleep, since this will help decrease your core body temperature.



Step 6.



Reduce your fluid intake after eight P.M. to help reduce any chance of waking up at night because of a full bladder.

Practise these sleep-hygiene techniques regularly until they become an integral part of your daily and before-sleep routine. This will probably require at least two weeks of daily practice.

Take a Moment To ...

List sleep-hygiene behaviours which might interfere with your sleep pattern:

List steps you might find useful to improve your sleep hygiene behaviours:

Once you have established the sleep-hygiene techniques as a regular part of your daytime and before-sleep behaviours, you are ready to practise the next set of behaviour techniques; these are called *sleep-scheduling techniques*.

SCHEDULING YOUR SLEEP

One of the most important ways to improve your sleep is to reduce your time in bed. It is common for poor sleepers to extend time in bed, especially after a restless night, in order to "catch up" on sleep. However, as Dr. Hauri notes, the more time you spend in bed, the more difficulty you will have falling asleep and the lighter and poorer your sleep will be. By reducing that time, you will be drowsier at bedtime, can consolidate and deepen your sleep, and also create a slight sleep debt that will make it easier to fall asleep and sleep more deeply the next night.

Step 1.

Reduce your time in bed to no more than six to seven hours. For most people, this means delaying bedtime by about one hour. If you become drowsy earlier in the evening, use activity to help you ward off drowsiness - move around your house, socialize, do some light cleaning - anything to keep you slightly active. Spending too much time in bed is the most common mistake a person with insomnia can make. Cutting down that time is *crucial* to improving your sleep.

Neil's Experience:



Neil, a thirty-seven-year-old financial consultant, came to our program with sleep-maintenance difficulties. Although he fell asleep easily, Neil woke up regularly between two A.M. and four A.M. and often required three hours to fall back to sleep. His poor sleep was adversely affecting his mood, motivation, and job performance. As part of sleep-scheduling techniques, Neil was instructed to reduce his time in bed by delaying his bedtime by about one hour each night. Within two weeks, he reduced his nighttime awakenings significantly and was able to enjoy five hours of uninterrupted, solid sleep. By reducing time in bed, Neil's sleep improved, as did his mood and energy level.

Step 2.

Get up at about the same time every day (including weekends), even if you have a poor night's sleep. This will help to maintain a consistent circadian rhythm - the twenty-four-hour internal body rhythm or cycle - that keeps us awake during the day and asleep (usually) at night. With time, the hour that you become drowsy will become more consistent. As noted by Dr. Charles Reynolds, at the University of Pittsburgh School of Medicine in Pittsburgh, Pennsylvania, getting up at the same time each day and not "sleeping in", also promotes a slight sleep debt that will make it easier to fall asleep and sleep more deeply that night.

Step 3.

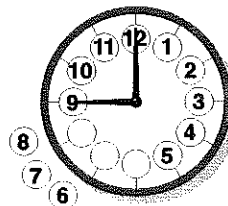
Use prior wakefulness to regulate when you get drowsy and how deeply you sleep. The longer you are awake (that is, the earlier you get up), the quicker you will fall asleep and the deeper you sleep that night. If you have an important meeting early Monday morning and want the best chance of getting to sleep at a reasonable time Sunday night, get up earlier Sunday morning.

Step 4.

Do not nap longer than one hour, especially late in the day, since naps of this length can make you less sleepy at bedtime. Naps under sixty minutes, however, may be beneficial after a sleep-deprived night, especially around three-thirty in the afternoon. According to Drs. Scott Campbell and Juergen Zulley, at the Max Planck Institute in Munich, Germany, our mood and performance decline in midafternoon due to a biological need for sleep. A short nap can satisfy that need and usually will not affect sleep-onset.

Take a Moment To ... Reflect on your sleep schedule.

- ▶ What time do you usually go to bed?
- ▶ What time do you usually get up?
- ▶ How much time do you spend in bed?
- ▶ Do you nap frequently?
- ▶ Identify several strategies to improve your sleep scheduling:



Allow yourself at least two weeks to integrate sleep-scheduling techniques into your daily routine. At the end of this period, you should be practising both sleep-hygiene and sleep-scheduling techniques regularly.

The next behaviour technique to improve sleep is called *stimulus control*.

STIMULUS-CONTROL TRAINING

For most people, the bed and bedroom are associated with relaxation, drowsiness, and sleep. For many poor sleepers, however, the bed and bedroom have become conditioned cues for mental arousal, sleeplessness, and frustration because they are used for many activities other than sleep, including reading work-related materials, talking on the phone, worrying, and most importantly, trying too hard to sleep. Interestingly, some individuals with insomnia sleep well everywhere except their own bedroom, including other rooms in their house, in front of television, or even in a sleep laboratory! The goal of stimulus-control training is to teach you to reassociate the bed and bedroom with relaxation, drowsiness, and sleep. Most importantly, stimulus control will teach you not to try to sleep, which is one of the biggest mistakes anyone who has difficulty sleeping can make.

Based on our research and clinical work with people who sleep poorly, we have developed a modified version of the stimulus-control technique originally developed by Dr. Richard Bootzin in Northwestern University in Evanston, Illinois.

Step 1.

Use your bedroom only for pleasurable, relaxing activities and sleep. Do not use your bedroom for any stressful activities. Furthermore, do not use your bed in the evening until bedtime. The goal is to associate your bedroom and bed with relaxation and sleep only.

Step 2.

Go to bed only when drowsy even if that moment comes later than your new delayed bedtime. The goal is to associate bedtime and your bed with drowsiness.



Step 3.

When you are quite drowsy, get into bed and relax for fifteen to twenty minutes by reading, listening to music, or watching television until you are very drowsy. Then turn out the lights with the intention of going to sleep. If you are not asleep within twenty to twenty-five minutes, *do not try to sleep!* The harder you try, the more you will stay awake. Instead, open your eyes and read - a book-reading light works well - or watch TV until you are drowsy again, then turn out the lights to sleep again. Repeat this procedure as often as necessary. If you regularly repeat this process three or four times, you are going to bed too early.

If you are wide awake and your mind is very active, you are probably better off getting out of bed and leaving your bedroom. This is especially appropriate if you sleep well everywhere (including other rooms in your own home) except your bedroom, or if you tend to try to go back to sleep too soon when you stay in bed. Engage in quiet, relaxing activity until you begin to feel drowsy again, then return to your bedroom with the intention of going to sleep. Repeat this procedure as often as necessary until you fall asleep.

If you wake up in the middle of the night and are still awake after twenty to twenty-five minutes, open your eyes and read or watch TV until you are drowsy; then close your eyes to go to sleep. Repeat this

procedure until you fall asleep. If you are wide awake and your mind is very active, you may be better off leaving your bedroom for another activity until you are drowsy. However, getting out of bed in the middle of the night is disruptive for some individuals, so try reading or watching television in bed first. Repeat this procedure as often as necessary.

Since one of the goals of stimulus-control training is to engage in a relaxing, distracting activity instead of trying to sleep when you are unable to, plan an enjoyable, relaxing activity in advance. If you have nothing to do, you will increase your frustration and aggravation. Boredom is one of the surest routes to insomnia!

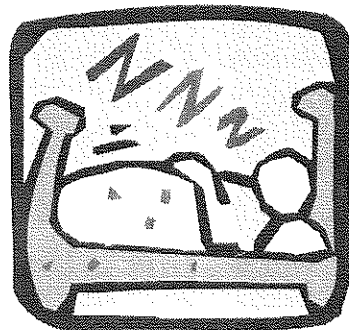
Finally, remember that even if you do not sleep, but lie relaxed in bed or another room reading or watching television, you will feel more rested the following day than if you toss and turn all night.

Take a Moment To ... Reflect on any of your bedtime behaviours that are conditioned cues for wakefulness, mental arousal, and frustrations which interfere with your ability to sleep.

- ▶ Do you use the bedroom for nonrelaxing activities?
- ▶ Do you go to bed when you are not really drowsy?
- ▶ Do you continue to try to sleep if you are still awake after twenty-five minutes?

After identifying these behaviours, identify strategies to help you reassociate the bed and bedtime with relaxation, drowsiness, and sleep:

Stimulus control is one of the most effective behavioural techniques for improving sleep but also one of the more difficult to master. Many people want to go to bed before they are drowsy, and many have difficulty with not trying to sleep. At least two weeks are often needed to begin mastering stimulus-control techniques. Without consistent usage for at least two weeks, you will not learn to associate your bed and bedroom with relaxation, drowsiness, and sleep. Practice stimulus-control techniques every night!



SLEEP DIARY

Name: _____

Day: _____

Date: _____

- 0) What time did you get to bed last night? _____
- 1) How many minutes did it take you to fall asleep last night? _____
- 2) How many times did you awaken during the night? _____
- 3) For each occurrence listed in question 2, indicate how many minutes you were awake.

- 4) What is the total number of hours and minutes you slept last night? _____
- 5) What time did you wake up this morning? _____
- 6) What time did you get out of bed this morning? _____
- 7) How difficult was it for you to fall asleep last night?
1 2 3 4 5
not very extremely
difficult difficult
- 8) How rested did you feel this morning?
1 2 3 4 5
very poorly
rested rested
- 9) Rate the quality of last night's sleep.
1 2 3 4 5
excellent very poor
- 10) What was your level of physical tension when you went to bed last night?
1 2 3 4 5
extremely extremely
relaxed tense
- 11) Rate your level of mental activity when you went to bed last night.
1 2 3 4 5
very very
quiet active
- 12.) How well do you think you were functioning yesterday?
1 2 3 4 5
very well very poorly