Sleep and Sleep Disorders: Info Kit

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Sleep Hygiene

What is sleep hygiene?

Sleep hygiene is a variety of different practices that are necessary to have normal, quality nighttime sleep and full daytime alertness.

What are some examples of good sleep hygiene?

The most important sleep hygiene measure is to maintain a regular sleep and wake pattern seven days a week. It is also important to spend an appropriate amount of time in bed, not too little, or too excessive. This may vary by individual; for example, if someone has a problem with daytime sleepiness, they should spend a minimum of eight hours in bed, if they have difficulty sleeping at night, they should limit themselves to 7 hours in bed in order to keep the sleep pattern consolidated. In addition, good sleep hygiene practices include:

- Avoid napping during the day; it can disturb the normal pattern of sleep and wakefulness.
- Avoid stimulants such as caffeine, nicotine, and alcohol too close to bedtime. While alcohol is well known to speed the onset of sleep, it disrupts sleep in the second half as the body begins to metabolize the alcohol, causing arousal.
- Exercise can promote good sleep. Vigorous exercise should be taken in the morning or late afternoon. A relaxing exercise, like yoga, can be done before bed to help initiate a restful night’s sleep.
- Food can be disruptive right before sleep; stay away from large meals close to bedtime. Also dietary changes can cause sleep problems, if someone is struggling with a sleep problem, it’s not a good time to start experimenting with spicy dishes. And, remember, chocolate has caffeine.
- Ensure adequate exposure to natural light. This is particularly important for older people who may not venture outside as frequently as children and adults. Light exposure helps maintain a healthy sleep-wake cycle.
- Establish a regular relaxing bedtime routine. Try to avoid emotionally upsetting conversations and activities before trying to go to sleep. Don’t dwell on, or bring your problems to bed.
- Associate your bed with sleep. It’s not a good idea to use your bed to watch TV, listen to the radio, or read.
- Make sure that the sleep environment is pleasant and relaxing. The bed should be comfortable, the room should not be too hot or cold, or too bright.

Why is it important to practice good sleep hygiene?

Sleep hygiene is important for everyone, from childhood through adulthood. A good sleep hygiene routine promotes healthy sleep and daytime alertness. Good sleep hygiene practices can prevent the development of sleep problems and disorders.
How does someone know if his or her sleep hygiene is poor?

Sleep disturbances and daytime sleepiness are the most telling signs of poor sleep hygiene. If one is experiencing a sleep problem, he or she should evaluate their sleep routine. It may take some time for the changes to have a positive effect.

How do I know the best sleep hygiene routine for me?

If you're taking too long to fall asleep, or awakening during the night, you should consider revising your bedtime habits. Most important for everyone is to maintain a regular sleep-wake schedule throughout the week and consider how much time you spend in bed, which could be too much or too little.

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Do You Think You Have a Sleep Disorder?

At various points in our lives, all of us suffer from a lack of sleep that can be corrected by making sure we have the opportunity to get enough sleep. But, if you are spending enough time in bed and still wake up tired or feel very sleepy during the day, you may have a sleep disorder.

One of the best ways you can tell whether you are getting enough good-quality sleep, and whether you have signs of a sleep disorder, is by keeping a sleep diary. Use this diary to record the quality and quantity of your sleep; your use of medications, alcohol, and caffeinated beverages; your exercise patterns; and how sleepy you feel during the day. After a week or so, look over this information to see how many hours of sleep or nighttime awakenings one night are linked to your being tired the next day. This information will give you a sense of how much uninterrupted sleep you need to avoid daytime sleepiness. You also can use the diary to see some of the patterns or practices that may keep you from getting a good night’s sleep.

You may have a sleep disorder and should see your doctor if your sleep diary reveals any of the following:

- You consistently take more than 30 minutes each night to fall asleep.
- You consistently awaken more than a few times or for long periods of time each night.
- You take frequent naps.
- You often feel sleepy during the day—or you fall asleep at inappropriate times during the day.

Sources: Sleep Foundation - [Sleep Topics](https://www.sleepfoundation.org/sleep-topics)
National Heart, Lung, and Blood Institute – [Healthy Sleep](https://www.nhlbi.nih.gov/health-topics/healthy-sleep)
Parasomnias

Parasomnias are disruptive sleep-related disorders that can occur during arousals from REM sleep or partial arousals from Non-REM sleep. Parasomnias include nightmares, night terrors, sleepwalking, confusional arousals and many others.

Types of Parasomnias

Nightmares

Nightmares are vivid nocturnal events that can cause feelings of fear, terror, and/or anxiety. Usually, the person having a nightmare is abruptly awakened from REM sleep and is able to describe detailed dream content. Usually, the person having a nightmare has difficulty returning to sleep. Nightmares can be caused by many factors including illness, anxiety, the loss of a loved one, or negative reactions to a medication. Call your doctor if nightmares occur more often than once a week or if nightmares prevent you from getting a good night's sleep for a prolonged period of time.

Sleep terrors/night terrors

A person experiencing a night terror or sleep terror abruptly awakes from sleep in a terrified state. The person may appear to be awake, but is confused and unable to communicate. They do not respond to voices and are difficult to fully awaken. Night terrors last about 15 minutes, after which time the person usually lies down and appears to fall back asleep. People who have sleep terrors usually don't remember the events the next morning. Night terrors are similar to nightmares, but night terrors usually occur during deep sleep.

People experiencing sleep terrors may pose dangers to themselves or others because of limb movements. Night terrors are fairly common in children occurring in approximately 5% of them mostly between the ages of three to five. Children with sleep terrors will often also talk in their sleep or sleepwalk. This sleep disorder, which may run in families, also can occur in adults. Strong emotional tension and/or the use of alcohol can increase the incidence of night terrors among adults.

Sleepwalking

Sleepwalking occurs when a person appears to be awake and moving around but is actually asleep. They have no memory of their actions. Sleepwalking most often occurs during deep non-REM sleep (stages 3 and 4 sleep) early in the night and it can occur during REM sleep in the early morning. This disorder is most commonly seen in children aged eight to twelve; however, sleepwalking can occur among younger children, the elderly and adults.

Sleepwalking appears to run in families. Contrary to what many people believe, it is not dangerous to wake a person who is sleepwalking. The sleepwalker simply may be confused or disoriented for a short time upon awakening. Although waking a sleepwalker is not dangerous,
sleepwalking itself can be dangerous because the person is unaware of his or her surroundings and can bump into objects or fall down. In most children, it tends to stop as they enter the teen years.

Confusional arousals

Confusional arousals usually occur when a person is awakened from a deep sleep during the first part of the night. This disorder, which also is known as excessive sleep inertia or sleep drunkenness, involves an exaggerated slowness upon awakening. People experiencing confusional arousals react slowly to commands and may have trouble understanding questions that they are asked. In addition, people with confusional arousal often have problems with short-term memory and have no memory of doing these things the following day.

Rhythmic movement disorders

Rhythmic movement disorder occurs mostly in children who are one year old or younger. A child may lie flat, lift the head or upper body, and then forcefully hit his or her head on the pillow. Rhythmic movement disorder, which also has been called "head banging," also can involve movements such as rocking on hands and knees. The disorder usually occurs just before a person falls asleep.

Sleep talking

Sleep talking is a sleep-wake transition disorder. Although it usually is harmless, sleep talking can be disturbing to sleep partners or family members who witness it. Talk that occurs during sleep can be brief and involve simple sounds, or it can involve long speeches by the sleeper. A person who talks during sleep typically has no recollection of the actions. Sleep talking can be caused by external factors including fever, emotional stress or other sleep disorders.

Nocturnal leg cramps

Nocturnal leg cramps are sudden, involuntary contractions most commonly of the calf muscles during the night or periods of rest. The cramping sensation may last from a few seconds to 10 minutes, but the pain from the cramps may linger for a longer period. Nocturnal leg cramps tend to be found in middle-aged or older populations, but people of any age can have them. Nocturnal leg cramps differ from restless legs syndrome as the latter usually does not involve cramping or pain. The cause of nocturnal leg cramps is not known. Some cases of the disorder can occur without a triggering event, while other causes of leg cramps may be linked to prolonged sitting, dehydration, an overexertion of the muscles, or structural disorders (such as flat feet). Muscle-stretching, exercise and adequate water intake may help prevent leg cramps.

Sleep paralysis

People with sleep paralysis are not able to move their body or limbs either when falling asleep or waking up. Brief episodes of partial or complete skeletal muscle paralysis can occur during sleep paralysis. Sometimes sleep paralysis runs in families, but the cause of sleep paralysis is
not known. This disorder is not harmful, but people experiencing sleep paralysis often are fearful because they do not know what is happening. An episode of sleep paralysis often is terminated by sound or touch. Within minutes, the person with sleep paralysis is able to move again. It may occur only once in your lifetime or can be a recurrent phenomenon.

**Sleep-related painful erections**

Erections are a normal component of REM sleep for men. In rare cases, however, erections become painful and cause a man to wake up. The treatment of sleep-related painful erections may involve drugs that suppress REM sleep (some antidepressants, for example).

**REM sleep cardiac arrhythmias**

A cardiac arrhythmia is a change from the normal rate or control of the hearts contractions. People who have coronary artery disease and whose blood oxygen is lowered by sleep-disordered breathing may be at risk for arrhythmias, which take place during REM sleep. Continuous positive airway pressure (CPAP) treatment may reduce this risk.

**REM sleep behavior disorder (RBD)**

People with rapid eye movement (REM) sleep behavior disorder act out dramatic and/or violent dreams during REM sleep. REM sleep usually involves a state of sleep paralysis (atonia), but people with this condition move the body or limbs while dreaming. Usually, RBD occurs in men aged 50 and older, but the disorder also can occur in women and in younger people. It differs from sleep walking and sleep terrors in that the sleeper can be easily awakened and can recall vivid details of the dream. In the diagnosis and treatment of RBD, potentially serious neurological disorders must be ruled out. Polysomnography (sleep tests) and drug treatments also can be involved in the diagnosis and treatment of this disorder.

**Sleep bruxism**

Sleep bruxism involves the involuntary, unconscious, excessive grinding or clenching of teeth during sleep. It may occur along with other sleep disorders. Sleep bruxism may lead to problems including abnormal wear of the teeth and jaw muscle discomfort. The severity of bruxism can range from mild cases to severe cases that involve evidence of dental injury. In some cases, bruxism can be prevented with the use of a mouth guard. The mouth guard, supplied by a dentist, can fit over the teeth to prevent teeth from grinding against each other.

**Sleep enuresis (bedwetting)**

In this condition, the affected person is unable to maintain urinary control when asleep. There are two kinds of enuresis -- primary and secondary. In primary enuresis, a person has been unable to have urinary control from infancy onward. Primary bedwetting appears to run in families. Children are more likely to have it if their parents or siblings had it as children. In secondary enuresis, a person has a relapse after previously having been able to have urinary control. Enuresis can be caused by medical conditions (including diabetes, urinary tract
infection, or sleep apnea) or by psychiatric disorders. Some treatments for bedwetting include behavior modification, alarm devices, and medications.

**Nocturnal Paroxysmal Dystonia (NPD)**

This disorder is sometimes marked by seizure-like episodes during non-REM sleep. Most evidence points to NPD being a form of epilepsy. Episodes of NPD typically recur several times per night.

Reviewed by The Sleep Medicine Center at The Cleveland Clinic.
Edited by Leonard J. Sonne, MD on January 01, 2007
Source: Web MD - [Parasomnias](#)
Chronic Fatigue Syndrome

General Information

Chronic fatigue syndrome, or CFS, is a devastating and complex disorder characterized by overwhelming fatigue that is not improved by bed rest and that may be worsened by physical or mental activity. People with CFS most often function at a significantly lower level of activity than they were capable of before the onset of illness.

In addition to these key defining characteristics, patients report various nonspecific symptoms, including weakness, muscle pain, impaired memory and/or mental concentration, insomnia, and post-exertional fatigue lasting more than 24 hours. In some cases, CFS can persist for years.

The cause or causes of CFS have not been identified and no specific diagnostic tests are available. Moreover, since many illnesses have incapacitating fatigue as a symptom, care must be taken to exclude other known and often treatable conditions before a diagnosis of CFS is made.

Case Definition

As of today, the cause or causes of CFS have not been identified and no specific diagnostic tests are available. Therefore, in order to be diagnosed with chronic fatigue syndrome, a patient must satisfy two criteria:

1. Have severe chronic fatigue for at least 6 months or longer that is not relieved by rest and not due to medical or psychiatric conditions associated with fatigue as excluded by clinical diagnosis; and

2. Concurrently have four or more of the following symptoms:
   - self-reported impairment in short-term memory or concentration severe enough to cause substantial reduction in previous levels of occupational, educational, social, or personal activities
   - sore throat that’s frequent or recurring
   - tender cervical or axillary lymph nodes
   - muscle pain
   - multi-joint pain without swelling or redness
   - headaches of a new type, pattern, or severity
   - unrefreshing sleep and
   - Post-exertional malaise (extreme, prolonged exhaustion and sickness following physical or mental activity) lasting more than 24 hours.

The fatigue and impaired memory or concentration must have impaired normal daily activities, along with other symptoms that must have persisted or recurred during 6 or more consecutive months of illness and must not have predated the fatigue.
Causes of CFS

The cause or causes of CFS remain unknown, despite a vigorous search. While a single cause for CFS may yet be identified, another possibility is that CFS represents a common endpoint of disease resulting from multiple sudden causes. Some of the possible causes of CFS might be due to infectious agents, immunological dysfunction, stress activating the hypothalamic-pituitary adrenal (HPA) axis, neurally mediated hypotension, and/or nutritional deficiency.

Symptoms of CFS

The primary symptoms of CFS are severe fatigue, weakening that is not improved by bed rest and may be worsened with physical or mental activity. It is an all-encompassing fatigue that results in dramatic decline in both activity level and stamina.

The fatigue of CFS is accompanied by characteristic symptoms lasting at least 6 months. These symptoms include:

- self-reported impairment in short-term memory or concentration severe enough to cause substantial reduction in previous levels of occupational, educational, social, or personal activities
- sore throat that's frequent or recurring
- tender cervical (neck) or axillary (armpit) lymph nodes
- muscle pain
- multi-joint pain without swelling or redness
- headaches of a new type, pattern, or severity
- unrefreshing sleep and
- post-exertional malaise (extreme, prolonged exhaustion and sickness following physical or mental activity) lasting more than 24 hours.

The symptoms listed above are the symptoms used to diagnose this illness. However, many CFS patients may experience other symptoms, including irritable bowel, depression or psychological problems, chills and night sweats, visual disturbances, allergies or sensitivities to foods, odors, chemicals, medications, or noise, brain fog, difficulty maintaining upright position, dizziness, balance problems or fainting.

Diagnosis of CFS

Because there is no blood test, brain scan or other lab test to diagnose CFS, it is a diagnosis of exclusion. A health care professional will first take a detailed patient history, then a thorough physical and mental status examination. Next, a series of laboratory screening tests will be ordered to help identify or rule out other possible causes of symptoms. There may also be additional tests to follow up on results of the initial screening tests. A diagnosis of insufficient fatigue could be made if a patient has been fatigued for 6 months or more, but does not meet the symptom criteria for CFS.

A clinician should consider a diagnosis of CFS if these two criteria are met:
1. Unexplained, persistent fatigue that's not due to ongoing exertion, isn't substantially relieved by rest, is of new onset (not lifelong) and results in a significant reduction in previous levels of activity.

2. Four or more of the following symptoms are present for six months or more:
   - Impaired memory or concentration
   - Postexertional malaise (extreme, prolonged exhaustion and sickness following physical or mental activity)
   - Unrefreshing sleep
   - Muscle pain
   - Multijoint pain without swelling or redness
   - Headaches of a new type or severity
   - Sore throat that's frequent or recurring
   - Tender cervical or axillary lymph nodes

**Treatment of CFS**

Managing chronic fatigue syndrome can be as complex as the illness itself. There is no cure yet, no prescription drugs have been developed specifically for CFS, and symptoms vary considerably over time. These factors complicate the treatment picture, which require patients and doctors to always monitor and change treatment strategies.

One key to managing CFS is each patient needs to work with a team of doctors and other health care practitioners, which might include mental health professionals, rehabilitation specialist, and physical or exercise therapists, to create an individualized treatment program. This program should be based on a combination of therapies that address coping techniques, symptoms and activity management.

Source: The Centers for Disease Control and Prevention – [Chronic Fatigue Syndrome](https://www.cdc.gov/CFS/about.html)
Can't Sleep? What To Know About Insomnia

Insomnia, which is Latin for "no sleep," is the inability to fall asleep or remain asleep. Insomnia is also used to describe the condition of waking up not feeling restored or refreshed. According to Dr. Mark Mahowald, Professor of Neurology at the University of Minnesota Medical School and Director of the Minnesota Regional Sleep Disorders Center at Hennepin County Medical Center, insomnia refers to the inability to get the amount of sleep you as an individual needs to wake up feeling rested.

Insomnia is the most common sleep complaint among Americans. It can be either acute, lasting one to several nights, or chronic, even lasting months to years. When insomnia persists for longer than a month, it is considered chronic. According to Statistics Canada about 45-55% of Canadian adults say they have some symptoms of insomnia within a given year, and 13% of Canadian adults say they have chronic insomnia. People who have trouble sleeping every night without exception for months or years are fairly rare. More often, people experience chronic-intermittent insomnia, which means difficulty sleeping for a few nights, followed by a few nights of adequate sleep before the problem returns.

Insomnia can be a disorder in its own right, but often it is a symptom of some other disease or condition. Half of all those who have experienced insomnia blame the problem on stress and worry. In the case of stress-induced insomnia, the degree to which sleep is disturbed depends on the severity and duration of the stressful situation. Sometimes this may be a disturbing occurrence like loss of a loved one, loss of a job, marital or relationship discord or a tragic occurrence. Anticipation of such things as weddings, vacations, or holidays can also disturb sleep and make it difficult to fall asleep or remain asleep. Insomnia can also occur with jet lag, shift work and other major schedule changes.

If you have difficulty sleeping, it is essential to determine whether an underlying disease or condition is causing the problem. Sometimes insomnia is caused by pain, digestive problems or a sleep disorder. Insomnia may also signal depression or anxiety. Often times, insomnia exacerbates the underlying condition by leaving the patient fatigued and less able to cope and think clearly. For insomnia related to a medical condition or pain, ask your doctor about nighttime pain aids.

If your sleep trouble is confined to difficulty falling asleep, the time you are choosing to go to sleep may not be synchronized with your biological clock. The biological processes that initiate and maintain sleep in humans are active throughout the night. Opposing this sleep tendency, however, is the alerting action of the biological clock that is active throughout the day. When the biological clock is active at your scheduled bedtime, you will have sleep-onset insomnia.

The prevalence of insomnia is higher among older people and women. Women suffer loss of sleep in connection with menstruation, pregnancy, and menopause. Rates of insomnia increase as a function of age but most often the sleep disturbance is attributable to some other medical condition.
Some medications can lead to insomnia, including those taken for:

- colds and allergies
- high blood pressure
- heart disease
- thyroid disease
- birth control
- asthma
- pain medications
- depression (especially SSRI antidepressants)

Some common sleep disorders such as restless legs syndrome and sleep apnea can also lead to insomnia.

Sleep is as essential as diet and exercise. Inadequate sleep can result in fatigue, depression, concentration problems, illness and injury.

**SYMPTOMS:**

Symptoms of insomnia include:

- difficulty falling asleep
- waking up frequently during the night
- difficulty returning to sleep
- waking up too early in the morning
- unrefreshing sleep
- daytime sleepiness
- difficulty concentrating
- irritability

**TREATMENT:**

Left untreated, insomnia is linked to increased illness or morbidity. There is a wealth of research indicating that people with insomnia have poorer overall health, more work absenteeism, and a higher incidence of depression. Sleep deprivation is not insomnia. It is not actually clear that insomniacs "lose sleep," particularly when it is primary. Many do not exhibit daytime distress or symptoms. Although people with acute insomnia may experience daytime sleepiness, most chronic insomnia patients experience an unpleasant sense of excessive arousal during the daytime.

If you are experiencing difficulty sleeping, consider whether an event or particular stress could be the cause. If so, the problem may resolve in time. If not, and the problem persists for a few weeks or more, or if you experience distress and discomfort as a result of the insomnia, talk to your doctor about your symptoms. Bring with you a record of your sleep, fatigue levels throughout the day, and any other symptoms you might be having.
There are a number of approaches to treating insomnia. A health care professional will ask about your sleep experience, your sleep schedule, and your daily routine. A thorough medical history and physical examination may be called for.

Because of the close connection between behavior and insomnia, behavioral therapy is often part of any treatment for insomnia. This is because people with insomnia may begin to associate certain sleep-related stimuli with being awake. For example, bedtime routines or the bedroom itself may become linked with anxiety for a person who is experiencing insomnia because they dread the thought of another sleepless night. A combination of several behavioral treatments is typically the most effective approach. Some examples of behavioral treatments are:

- Stimulus Control Therapy: creating a sleep environment that promotes sleep
- Cognitive Therapy: learning to develop positive thoughts and beliefs about sleep
- Sleep Restriction: following a program that limits time in bed in order to get to sleep and stay asleep throughout the night

Relaxation techniques, such as yoga, meditation, and guided imagery may be especially helpful in preparing the body to sleep. Exercise, done early in the day, can also be helpful in reducing stress and promoting deeper sleep.

Behavioral therapies alone may not be enough. Treating insomnia with medication is the most common treatment for these sleep problems, particularly once a combination of behavioral approaches has been tried. Sleep medications for the treatment of insomnia are called hypnotics. They should only be taken when:

- The cause of your insomnia has been evaluated
- The sleep problems are causing difficulties with your daily activities
- Appropriate sleep promoting behaviors have been addressed

All hypnotics induce sleep and some will help to maintain sleep. They work by acting at areas in the brain believed to be involved in sleep promotion. They are the drugs of choice because they have the highest benefit and the lowest risk as sleep-promoting drugs. Talk to your doctor about the possible side effects of taking hypnotics, such as morning sedation, memory problems, headaches, sleepwalking and a night or two of poor sleep after stopping the medication.

Women who are pregnant or nursing should not take hypnotics. Talk to your doctor about how to cope with insomnia during this time.

Finally, practicing good sleep hygiene may improve the quality of your sleep.

**COPING:**

Regardless of what's causing your sleep problems, it is important to establish and maintain healthy sleep habits. Here are some tips that will help you sleep well:
At night:

- Use the bed and bedroom for sleep and sex only
- Establish a regular bedtime routine and a regular sleep-wake schedule
- Do not eat or drink too much close to bedtime
- Create a sleep-promoting environment that is dark, cool and comfortable
- Avoid disturbing noises – consider a bedside fan or white-noise machine to block out disturbing sounds

During the day:

- Consume less or no caffeine, particularly late in the day
- Avoid alcohol and nicotine, especially close to bedtime
- Exercise, but not within three hours before bedtime
- Avoid naps, particularly in the late afternoon or evening
- Keep a sleep diary to identify your sleep habits and patterns that you can share with your doctor

**POLL DATA:**

In 2005, the following percentages of adults reported having the following symptoms this often: 38% woke up feeling unrefreshed; 32% wake often during the night; and 21% of the population reports waking too early, not being able to get back to sleep and difficulty falling asleep. Of this last group, almost 1/4 state that it takes them at least 30 minutes to fall asleep. These people are likely to be women (28% vs. 16%) and not to have a bed partner (27% vs. 19%).

People who drink >4 caffeinated beverages a day are more likely to have difficulty falling asleep and wake unrefreshed. Those who are obese are more likely to have a symptom of insomnia. Adults who have daytime sleepiness at least 3 times a week are experiencing a symptom of insomnia (86%) compared to those who rarely or never have such symptoms (31%). This is also true for those who say sleepiness has a strong impact on their daily activities (83%) versus those who experience very little impact (44%).

Reviewed by David N. Neubauer, M.D., M.A

**Sources:**
National Sleep Foundation – [Insomnia and Sleep](#)
Statistics Canada
Restless Legs Syndrome

Do I have restless legs syndrome (RLS)?

Chances are, if you are reading this answer, it is because you are concerned that you or someone you love may have restless legs syndrome (RLS). How many of the questions below are true for you?

- When you sit or lie down, do you have a strong desire to move your legs?
- Does your desire to move your legs feel impossible to resist?
- Have you ever used the words unpleasant, creepy crawly, creeping, itching, pulling, or tugging to describe your symptoms to others?
- Does your desire to move often occur when you are resting or sitting still?
- Does moving your legs make you feel better?
- Do you complain of these symptoms more at night?
- Do you keep your bed partner awake with the jerking movements of your legs?
- Do you ever have involuntary leg movements while you are awake?
- Are you tired or unable to concentrate during the day?
- Do any of your family members have similar complaints?

If you answered "yes" to a majority of these questions, you may have RLS. If you do have RLS, you are not alone! Approximately 3 to 10% of the Canadian population may have RLS. Many people have a mild form of the disorder, but RLS severely affects the lives of millions of individuals.

What are the primary features of RLS?

In order for you to be officially diagnosed with RLS, you must meet the criteria described in the four bullets below:

- You have a strong urge to move your legs which you may not be able to resist. The need to move is often accompanied by uncomfortable sensations. Some words used to describe these sensations include: creeping, itching, pulling, creepy-crawly, tugging, or gnawing.
- Your RLS symptoms start or become worse when you are resting. The longer you are resting, the greater the chance the symptoms will occur and the more severe they are likely to be.
- Your RLS symptoms get better when you move your legs. The relief can be complete or only partial but generally starts very soon after starting an activity. Relief persists as long as the motor activity continues.
- Your RLS symptoms are worse in the evening especially when you are lying down. Activities that bother you at night do not bother you during the day.

RLS can also cause difficulty in falling or staying asleep which can be one of the chief complaints of the syndrome. A substantial number of people who have RLS also have periodic limb movements of sleep (PLMS). These are jerks that occur every 20 to 30 seconds on and off.
throughout the night. This can cause partial awakenings that disrupt sleep. Sleep deprivation can seriously impact your work, relationships, and health.

**What non-drug treatments are recommended for RLS?**

In addition to medications, there are other things you and your doctor can consider when trying to help you deal with RLS. These options may include:

- Checking to see if there is an underlying iron or vitamin deficiency and then possibly supplementing your diet with iron, vitamin B12 or folate.
- Looking at medications you may be taking which make RLS worse. These may include drugs used to treat high blood pressure, heart conditions, nausea, colds, allergies and depression.
- Looking at any herbal and over-the-counter medicines you may be taking to see if they could be worsening your RLS.
- Identifying habits and activities that worsen RLS symptoms.
- Looking at your diet to assure it is healthy and balanced.
- Discussing whether or not antihistamines could be contributing to your RLS.
- Eliminating your alcohol intake.
- Looking at various activities that may help you personally deal with RLS. These could include walking, stretching, taking a hot or cold bath, massaging, acupressure, or relaxation techniques.
- Attempting to keep your mind engaged with activities like discussions, needlework or video games when you have to stay seated.
- Implementing a program of good sleep habits.
- Possibly eliminating caffeine from your diet to aid in general sleep hygiene.

By arming yourself with information, you have taken the first step toward defeating RLS. However, your optimum plan requires that you work together with your healthcare provider. Some things that you can do to help eliminate or reduce the need for drugs include:

- Living a healthy lifestyle.
- Eliminating symptom-producing substances.
- Taking vitamin and mineral supplements as necessary.
- Engaging in activities which help take your mind off of RLS.
- Avoiding or eliminating foods or medicines that aggravate your symptoms.

If you do need medication, careful trials may be necessary to find the medication and dosage that works best for you, and sometimes a medication that worked well in the past may become ineffective. Because no single treatment for RLS is entirely effective for everyone, continued research is of vital importance. Until we find the cause of RLS and a cure for it, your best approach is to work closely with your healthcare provider, join a local RLS support group, and explore both non-drug and drug treatments. These strategies offer the most reliable approach to living a happy and productive life in spite of having RLS.
Can taking vitamin or mineral supplements help my RLS?

If an underlying iron or vitamin deficiency is found to be the cause of your restless legs, supplementing with iron, vitamin B or folate (as indicated) may reduce or even alleviate your symptoms. Because the use of even moderate amounts of some minerals (such as iron, magnesium, potassium, and calcium) can impair your body's ability to use other minerals or can cause toxicity, you should use mineral supplements only on the advice of your healthcare provider.

Are there any medications that can make RLS worse? Yes. These include:

- Antihistamines (like Benadryl) found in many cold, allergy and over the counter sleeping pills.
- Anti-dizzy, anti-nausea medications like meclizine, Compazine, Phenergan and Reglan.
- Antidepressants such as Elavil, Prozac, Lexapro, Effexor.
- Psychiatric medications that treat bipolar disorders, schizophrenia and other serious disorders such as haloperidol and phenothiazines.

Always be sure that your healthcare provider is aware of all the medicines you are taking, including herbal and over-the-counter medications.

Are there any substances that should be avoided?

The use of caffeine often intensifies RLS symptoms. Caffeine-containing products, including chocolate and caffeinated beverages such as coffee, tea, and soft drinks should be avoided. The consumption of alcohol also increases the span or intensity of symptoms for most individuals.

How do doctors diagnose RLS?

Your doctor should:

- Listen to a description of your symptoms.
- Complete a diagnostic interview checking for symptoms highlighted on the previous page.
- Review your medical history.
- Complete a thorough physical exam.
- Rule out conditions that may be confused with RLS.

Your doctor might:

- Check your iron (ferritin) levels.
- Ask you to stay overnight in a sleep study lab to determine other causes of your sleep disturbance.
Is RLS hereditary?

RLS often runs in families. In July of 2007, researchers discovered a gene variant for RLS.

Is there a known cause for RLS?

Extensive research into the cause of RLS is occurring worldwide. A single unifying cause has not been identified, but we are getting closer. Here is what we do know:

- RLS often runs in families. This is called primary or familial RLS. Researchers are currently looking for the gene or genes that cause RLS.
- RLS sometimes appears to be a result of another condition, which, when present, worsens the underlying RLS. This is called secondary RLS.
- Up to 25% of women develop RLS during pregnancy but symptoms often disappear after giving birth.
- Anemia and low iron levels frequently contribute to a worsening of RLS.
- RLS is very common in patients requiring dialysis for end-stage renal disease.
- Damage to the nerves of the hands or feet (i.e., peripheral neuropathy) from any number of causes including diabetes contributes to RLS.
- Attention Deficit Disorder (ADD) is common in children and adults with RLS.

How common is RLS?

Rigorous epidemiologic studies into the true prevalence of RLS are underway. However, several studies have been conducted that look at the rate of response to questions such as "Do you have a creepy, crawly sensation in your legs at night when you attempt to sleep?" Positive rates have ranged from 3% to 15%.

How do I receive additional information about RLS?

To receive the most up-to-date and comprehensive information, you can become a member of the Restless Legs Syndrome Foundation. As a member, you will receive our quarterly newsletter NightWalkers featuring the latest information on treatment and research while also allowing readers to ask questions and get answers from top RLS specialists.

Are there exercises that can help with RLS?

In 2006, a small study found that a combination of moderate aerobic exercise and lower-body resistance training three days a week reduced symptom severity by about 50%. The study found that it took six weeks to see maximum benefit from the exercise program. Generally, people with RLS have reported that moderate exercise seems helpful and that strenuous exercise may worsen their RLS.
**How does dopamine play a role in RLS?**

As most RLS patients know, the use of dopamine medications often provides good treatment for RLS. It is generally felt and recent PET (position emission tomographic) scans have tended to confirm, that RLS involves abnormal dopamine activity in the brain. It is our basic hypothesis that the low brain iron causes the dopamine problems in the brain, which in turn cause RLS.

Sources:

[Willis-Ekbom Disease Foundation](http://www.willis-ekbom.org)

**Narcolepsy**

Narcolepsy’s main symptom is extreme and overwhelming daytime sleepiness, even after adequate nighttime sleep. In addition nighttime sleep may be fragmented by frequent awakenings. People who have narcolepsy often fall asleep at inappropriate times and places. Although TV sitcoms occasionally feature these individuals to generate a few laughs, narcolepsy is no laughing matter. People who have narcolepsy experience daytime “sleep attacks” that last from seconds to more than one-half hour, can occur without warning, and may cause injury. These embarrassing sleep spells also can make it difficult to work and to maintain normal personal or social relationships.

With narcolepsy, the usually sharp distinctions between being asleep and awake are blurred. Also, people who have narcolepsy tend to fall directly into dream-liked REM sleep, rather than enter REM sleep gradually after passing through the non-REM sleep stages first. In addition to overwhelming daytime sleepiness, narcolepsy has three other commonly associated symptoms, but these may not occur in all people: Sudden muscle weakness (cataplexy). This weakness is similar to the paralysis that normally occurs during REM sleep, but it lasts a few seconds to minutes while an individual is awake. Cataplexy tends to be triggered by sudden emotional reactions, such as anger, surprise, fear, or laughter. The weakness may show up as limpness at the neck, buckling of the knees, or sagging facial muscles affecting speech or it may cause a complete body collapse.

*Sleep Paralysis:* People who have narcolepsy may experience a temporary inability to talk or move when falling asleep or waking up, as if they were glued to their beds.

*Vivid dreams:* These dreams can occur when people who have narcolepsy first fall asleep or wake up. The dreams are so life like that they can be confused with reality.

According to the Canadian Sleep Society approximately 0.05% of the Canadian population suffers from narcolepsy. Unfortunately, it has been found that patients are diagnosed up to 10 years after experiencing symptoms. The disorder may be as widespread as Parkinson’s disease or multiple sclerosis, and more prevalent than cystic fibrosis, but it is less well known. Narcolepsy is often mistaken for depression, epilepsy, or the side effects of medicines. Narcolepsy can be difficult to diagnose in people who have only the symptom of excessive daytime sleepiness. It is usually diagnosed during an overnight sleep recording (PSG) that is followed by an MSLT. Both tests reveal symptoms of narcolepsy—the tendency to fall asleep rapidly and enter REM sleep early, even during brief naps.

Narcolepsy can develop at any age, but the symptoms tend to appear first during adolescence or early adulthood. About 1 of every 10 people who have narcolepsy has a close family member who has the disorder, suggesting that one inherits a tendency to develop narcolepsy. Studies suggest that a substance in the brain called hypocretin plays a key role in narcolepsy. Most people who have narcolepsy lack hypocretin, which promotes wakefulness. Scientists believe that an autoimmune reaction—perhaps triggered by disease, viral illness, or brain injury—specifically destroys the hypocretin-generating cells in the brains of people who have narcolepsy.
Eventually, researchers may develop a treatment for narcolepsy that restores hypocretin to normal levels. In the meantime, most people who have narcolepsy in some to all of their symptoms relieved by various drug treatments. For example, central nervous system stimulants can reduce daytime sleepiness. Antidepressants and other drugs that suppress REM sleep can prevent muscle weakness, sleep paralysis, and vivid dreaming. Doctors also usually recommend that people who have narcolepsy take short naps (10–15 minutes) two or three times a day, if possible, to help control excessive daytime sleepiness.

**Types of Sleep**

**Non-REM Sleep**

**Stage 1:** Light sleeps; easily awakened; muscles relax with occasional twitchs; eye movements are slow.

**Stage 2:** Eye movements stop; slower brain waves, with occasional bursts of rapid brain waves.

**Stage 3:** Occurs soon after you fall asleep and mostly in the first half of the night. Deep sleep; difficult to awaken; large slow brain waves, heart and respiratory rates are slow and muscles are relaxed.

**REM sleep**

Usually first occurs about 90 minutes after you fall asleep, and longer, deeper periods occur during the second half of the night; cycles along with the non-REM stages throughout the night. Eyes move rapidly behind closed eyelids. Breathing, heart rate, and blood pressure are irregular. Dreaming occurs. Arm and leg muscles are temporarily paralyzed.

**Sources:**

US Department of Health and Human Services – [Your Guide to Healthy Sleep](#)

Canadian Sleep Society – [Nacrolepsy and Cataplexy](#)
Sleep Apnea

Sleep apnea is a serious disorder that causes your breathing to stop repeatedly while you sleep. These breathing pauses or "apneas" usually last 10 to 30 seconds and can happen many times throughout the night.

Untreated sleep apnea can lead to serious health problems, accidents, and premature death. Thankfully, sleep apnea can be treated effectively.

Types of sleep apnea

The most common type of sleep apnea is obstructive sleep apnea, which happens when the upper airway gets blocked during sleep. Most often, the blockage happens when the soft tissue in the back of the throat collapses and closes during sleep. Relaxed throat muscles, a narrow airway, a large tongue or extra fatty tissue in the throat can also block the airway.

Central apnea and mixed apnea are other types of sleep apnea, but are more rare. In central sleep apnea the part of the brain that controls breathing doesn't work properly.

The effects due to lack of sleep

Untreated sleep apnea can cause serious health problems:

- Excessive daytime sleepiness
- Decreased intellectual functioning
- Memory loss
- Depression
- Hypertension (high blood pressure)
- Heart problems - can lead to heart attacks and strokes

The health problems caused by sleep apnea can lead to loss of employment, marriage break-up. Untreated sleep apnea is also associated with some permanent memory loss and dementia, especially in the elderly. Because of the daytime sleepiness it causes, sleep apnea is also responsible for car accidents and industrial accidents.

How sleep apnea is linked to heart attacks and stroke

During deep sleep, your heart rate and blood pressure drop. This allows your heart to rest. The pattern of snoring, pauses in breathing and then gasping or choking for air that happen with sleep apnea prevent you from getting the kind of restful, deep sleep your body needs. This can result in high blood pressure.

When your blood pressure is high, your heart must work too hard. This can lead to heart attack or stroke. More than half of people with untreated sleep apnea have high blood pressure. If sleep apnea isn't treated for a long time, your heart begins to wear out because it has to pump harder to cope with the lack of oxygen caused by repeated pauses in breathing.
Many people have sleep apnea without knowing it

Many people with sleep apnea don't know they have it. They may not recognize the signs and symptoms of sleep apnea. People with sleep apnea commonly seek help because of daytime sleepiness, or snoring and pauses in breathing noted by their bed partner.

Snoring is not necessarily sleep apnea

Sleep apnea is sometimes called the "snoring disease" because snoring is one of the symptoms. But snoring by itself doesn't necessarily mean that you have sleep apnea. It is true that loud snoring is common in people with this disorder, but there's a big difference between simple snoring and sleep apnea. Your doctor can diagnose the cause of snoring and determine whether it's caused by sleep apnea or by something else.

Who gets sleep apnea?

One in five adults has at least mild sleep apnea and one in fifteen adults have at least moderate sleep apnea. Kids can also get sleep apnea; obstructive sleep apnea (OSA) affects 1-3% of children.

Who's most at risk for sleep apnea?

Men, women and children of all ages can have sleep apnea. Your risk is higher if you:

- Smoke
- Drink alcohol
- Are overweight
- Have a large tongue
- Have a narrow throat
- Have large adenoids and tonsils (in children)

Sources: The Lung Association
Talking To Your Doctor About Sleep and Sleep Disorders

Sleep is essential to your health, safety and quality of life. If you are not getting enough sleep or you are having difficulty sleeping, talk with your doctor and get help. Most sleep problems and sleep disorders can be diagnosed and are treatable in safe and effective ways.

Preparing for Your Visit

What to do:

Observe your sleep schedule and habits. When is it difficult to sleep? How often do you have problems sleeping? Also be aware of any sleepiness you feel in the daytime or when you expect to be awake. Note if and how it affects your ability to function and enjoy life. Are you:

- having difficulty concentrating or making decisions?
- experiencing drowsiness when you drive or are engaged in other activities?
- feeling moody or irritable with others?

You may want to complete a quick and helpful questionnaire called the Epworth Sleepiness Scale to rate your level of daytime sleepiness. You will get immediate results.

It is helpful to maintain a Sleep Diary for about two weeks to record your sleep and health habits. This can be used in your discussion with your doctor.

What to bring:

- Sleep diary and/or results of Epworth test
- List of medications or other aids/supplements you are taking
- A medical history or jot down major illnesses or procedures
- Information you may have read from the Internet, newspaper or other sources
- A list of questions and information about your sleep
- You may also want to bring a family member, particularly your bed partner, who may have observed you experiencing sleep problems. S/he may also provide helpful information (for example, how often you snore or have limb twists or jerks during sleep) and participate in and help support your treatment program.

During Your Visit

Communication is the key to a successful doctor-patient relationship and will help you receive the greatest benefit from your health care. So that your doctor can learn about your problems, it is best to come prepared with a complete description and information about your sleep experiences.

Important Sleep Information and Experiences to Share with Your Doctor

- You snore most nights — and how loudly
- You experience or have been told that you gasp for breath or stop breathing during sleep
- You feel sleepy during the day or fall asleep when reading, watching TV or are engaged in daily activities
- You fell asleep or dozed off when driving or while at work or school
- You have difficulty falling or staying asleep — and how often
- You wake up often feeling tired and not rested
- The number of hours you usually sleep each night
- Whether you keep a regular bed and wake time
- You often have disruptions to your sleep — due to any cause
- You are taking any sleeping pills or other treatments to help you sleep better
- List of medications or supplements you are taking
- You use alcohol or smoke regularly
- The time of day you use caffeine products, exercise and eat your last meal
- You experience nighttime heartburn, pain or the need to urinate
- Your level of stress and whether you have experienced lifestyle changes recently
- You are a night or rotating shiftworker

Sources: National Sleep Foundation
Myths and Tips

Myth: Sleep is not important. I can just get by on a few hours.

Fact: Sleep is vital to our health and well-being, and is just as important as diet and exercise. Research shows that all mammals need sleep. Sleep regulates mood and is related to learning and memory functions. Not only will getting enough sleep help you learn a new skill, stay on task or be productive, it may also be a critical factor in your health, weight and energy level.

Although individual needs may vary, adults typically need between 7 to 9 hours of sleep per night. It is difficult to make up for lost sleep because each time you don't get enough sleep, you add to your sleep debt (the accumulated sleep that is lost due to poor sleep habits, sickness, awakenings due to environmental factors or other causes.) As a result, the sleep debt may make you feel sleepier and less alert at times.

Many people follow an exercise program to stay healthy. It’s important to have a smart sleep program as well.

Myth: Watching TV in my bedroom and working on my laptop in bed helps me wind down and fall asleep.

Fact: Doing work, watching TV and using the computer, both close to bedtime and especially in the bedroom, hinders quality sleep. Violent shows, news reports and stories before bedtime can be agitating. The sleep environment should be used only for sleep and sex.

Myth: Exercising before bed will make me tired, and help me sleep.

Fact: Exercise can be helpful for good sleep, especially when done regularly in the morning or afternoon and not too close to bedtime. If you don’t exercise regularly, add good sleep to a long list of reasons why you should take up the practice.

However, sleep experts have cautioned people to avoid strenuous exercise right before sleep and even up to three hours before bedtime. That’s because exercise has an alerting effect and raises your body temperature. This rise leads to a corresponding fall in temperature five to six hours later, which makes sleep easier then. If you've been exercising close to bedtime and having trouble falling or staying asleep, try to arrange your workout earlier in the day.

Myth: Men and women are affected the same way by insomnia.

Fact: Insomnia is nearly twice as common in women than in men, and women are more likely than men to report insomnia to their healthcare professional. A woman’s sleep is uniquely influenced by menstrual cycle, biological life stage, stress level, health, mood, parental status, work hours and other life responsibilities.

Myth: Insomnia is not a serious medical condition and has no consequences.

Fact: Insomnia can be a serious medical condition characterized by difficulty falling asleep, difficulty staying asleep (waking up often during the night and having trouble going back to
sleep), waking up too early in the morning or feeling tired upon waking. Several consequences of insomnia are decreased work performance, depression or mood changes and increased risk of automotive crashes.

**Myth:** Prescription sleep aids are not safe and may be addictive or cause dependency.

**Fact:** When taken as prescribed, sleep aids can safely and effectively treat insomnia. There is a lower risk for dependency and tolerance with the newer prescription sleep aids compared to traditional benzodiazepines. People with a history of addiction, or alcohol and drug abuse, are at an increased risk of dependence from sleep aids. Be sure to inform your healthcare professional of any previous dependence problems.

As with all medications, it is important to take sleep aids only as directed by a healthcare professional. This means following his or her instructions about how to take, when to take and how long to take sleep medicine. Sleep aids should not be taken with alcohol, before driving or operating machinery, or before taking a bath or shower, among other things. Be sure you’re able to devote 7 to 8 hours to sleep before being active again.

**Myth:** I can have alcohol or wine with my sleep aid – it will help me get to sleep faster.

**Fact:** Sleep medications should not be used with alcohol or other drugs. Sleep aids should also not be taken before driving or operating machinery, or before taking a bath or shower, among other things. Always follow your healthcare professional’s instructions about how to take, when to take, and how long to take sleep aids.

Some people feel that alcohol is a sleep aid on its own. However, while alcohol may calm you and speed the onset of sleep, it actually increases the number of times you awaken during the night.

**Tips for Sleeping Smart**

- Establish a regular bed and wake time
- Avoid nicotine altogether and avoid caffeine close to bedtime
- Avoid alcohol
- Exercise regularly (but complete the workout at least 3 hours before bedtime)
- Establish a consistent relaxing “wind-down” bedtime routine
- Create a sleep-conducive environment that is dark, quiet and comfortable
- Discuss the appropriate way to take any sleep aid with a healthcare professional

**Try Keeping a Sleep Diary:**

A sleep diary can help you learn you what factors help or hinder your sleep

Each morning, record

- Time I went to bed last night
- Time I woke up this morning
- No. of hours slept last night
- No. of awakenings and total time awake last night
- How long I took to fall asleep last night
- Medications taken last night
- How did I feel when I got up this morning?
  1 – Wide awake
  2 – Awake but a little tired
  3 – Sleepy

Each evening, record
- No. of caffeinated drinks (coffee, tea, cola) and time when I had them today
- No. of alcoholic drinks (beer, wine, liquor) and time when I had them today
- Naptimes and lengths today
- Exercise times and lengths today
- How sleepy did I feel during the day today?
  1 – So sleepy had to struggle to stay awake during much of the day
  2 – Somewhat tired
  3 – Fairly alert
  4 – Wide awake

Sources:
National Sleep Foundation – Sleep Topics
US Department of Health and Human Services – Your Guide to Healthy Sleep