What is restless legs syndrome? — Restless legs syndrome, or RLS for short, is a condition that causes strange sensations in your legs. If you have RLS, you probably have the urge to kick or move your legs at night. This can wake you up or make it hard to sleep. People who have RLS get an uncomfortable feeling in their legs when they are at rest. They describe this feeling as crawling, creeping, pulling, or itching. And they say the feeling is deep in the legs—not on the skin—usually below the knees. These symptoms usually get worse as the day moves on, and they are worst at night. But people can make the feeling go away temporarily if they kick or move their legs. Some people with RLS find that their legs move on their own while they are asleep.

In short, the symptoms:
- Happen when you are at rest
- Go away if you move your legs on purpose
- Are worst at night
- Sometimes include the legs moving on their own during sleep

Together, the symptoms of RLS can make it hard to get a good night’s sleep. People with the condition often feel tired during the day. In some cases, RLS happens on its own and seems to be passed on in families. In other cases, the condition seems to be linked to other medical problems. For instance, a condition called “anemia,” in which there is too little iron in the blood, seems to increase the risk of RLS. Other conditions that increase the risk of RLS include kidney disease, diabetes. Pregnancy seems to increase a woman’s risk of developing RLS, too.

Is there a test for RLS? — There is a test, but it is not usually necessary. Your doctor or nurse should be able to tell if you have it by asking about your symptoms and doing an exam. Still, it is possible that your doctor or nurse will decide to send you for a “sleep study,” to be sure of what is happening. For a sleep study, you spend the night in a lab, and you are hooked up to different machines that monitor your movements, heart rate, breathing, and other body functions.

Is there anything I can do on my own to feel better? — Yes. You might feel better if you:
- Do activities that keep your mind alert during the day, such as crossword puzzles
- Message your legs (or have someone massage them)
- Avoid caffeine, nicotine, and alcohol; these things seem to make RLS worse

How is RLS treated? — Some people with RLS do not need medicine for it because they have mild symptoms that don’t bother them very often. If treatment is needed, there are a number of medicines doctors can suggest. Examples include:
- Iron supplements
- Pramipexole (brand name: Mirapex)
- Requiprole (brand name: Requip)
- Rotigotine (brand name: Neupro)
- Carbipodeg-levodopa (brand name: Sinemet)
- Gabapentin enacarbil (brand name: Horizant)
- Gabapentin (brand name: Neurontin)
- Pregabalin (brand name: Lyrica)

In people with RLS who also have a severe form of kidney disease called kidney failure, the RLS might improve with a treatment called hemodialysis (also known as just dialysis). What if I am pregnant? — If you are pregnant, you can take iron supplements and try the other tips that do not involve taking prescription medicines. Most of the medicines used to treat RLS are not safe to take during pregnancy. If your symptoms are bad, there are some medicines that might be OK to take. But keep in mind that the condition usually goes away toward the end of pregnancy.

Patient information: Nocturnal (nighttime) leg cramps (The Basics) Written by the doctors and editors at UpToDate

What are nocturnal (nighttime) leg cramps? — Nighttime leg cramps cause pain and sudden muscle tightness in the legs, feet, or both. The cramps can wake you up from sleep. They can last for many minutes or just a few seconds. Nighttime leg cramps are common in both adults and children. But as people get older, they are more likely to get them. About half of people older than 50 get nighttime leg cramps.

What causes nighttime leg cramps? — Most nighttime leg cramps do not have a cause that doctors can find. When doctors do find causes, the causes can include:
- Having a leg or foot structure that is different from normal — For example, having flat feet or a knee that bends in the wrong direction
- Sitting in an awkward position or sitting too long in one position
- Changes in your body’s fluid balance — This can happen if you:
  - Take medicines called diuretics (also called “water pills”)
  - Are on dialysis (a kind of treatment for kidney disease)
  - Are not on enough water
- Exercising — Having certain conditions — For example, Parkinson disease, diabetes, or low thyroid
- Being pregnant — Some pregnant women do not have enough of the mineral magnesium in their blood. This can cause leg cramps.

Is there anything I can do on my own to feel better? — Yes. Things you can try include:
- Riding a stationary bike for a few minutes before bed — If you normally get little exercise, this might help.
- Doing stretching exercises (Stand facing the wall, feet together, about 2 feet from the wall. With your heels firmly on the floor and your shoulders, hips, and knees lined up straight, lean forward into the wall. This should stretch the backs of your legs. Hold this position for 10 to 30 seconds. Repeat 5 times each session, at least twice a day.
- Wearing shoes with firm support, especially at the back of your foot around your heel
- Keeping bed covers loose at the foot of your bed and NOT tucked in
- Drinking plenty of water, especially if you take diuretics. (Do this only if your doctor or nurse has not told you to limit the amount of water you drink.)
- Limiting the amount of alcohol and caffeine you drink
- Staying cool when you exercise, and NOT exercising in very hot weather or hot rooms
- If you get a cramp, slowly stretch the cramped muscle. To prevent more cramps, you can try: Walking around or jiggling your leg or foot
- Lying down with your legs and feet up
- Taking a hot shower with water spraying on the cramped area for 5 minutes, or taking a warm bath
- Rubbing the cramped area with ice wrapped in a towel

Should I see a doctor or nurse? — If: You wake up several times a night with leg cramps
- Your cramps keep you from getting enough sleep
- You can find that your legs move on their own during sleep
- Your cramps are very painful
- You have cramps in other parts of your body, such as your upper back or belly

Are there tests I should have? — Probably not. Your doctor or nurse will talk with you about your symptoms and do an exam to find out what could be causing your nighttime leg cramps. Depending on your symptoms and exam, you might also need some blood tests.

How are nighttime leg cramps treated? — Treatment options include:
- Making lifestyle changes — For example, exercising differently, doing stretching exercises, wearing shoes with good support, or drinking enough fluids
- Taking supplements — Supplements are pills, capsules, liquids, or tablets with minerals or vitamins your body needs. Tell your doctor or nurse about supplements
- Taking prescription medicines that improve sleep, relax muscles, calm overactive nerves, or help in other ways. Doctors and nurses prescribe medicines for nocturnal leg cramps only when other types of conditions do not work.
Insomnia

Patient information: Insomnia  Written by the doctors and editors at UpToDate

What is insomnia? — Insomnia is a problem with sleep. People with insomnia have trouble falling or staying asleep, or they do not feel rested when they wake up. Insomnia is not about the number of hours of sleep a person gets. Everyone needs a different amount of sleep. Insomnia is not defined by the number of hours slept because “sufficient sleep” can vary from one person to another. Sleep requirements may also decrease with age. Insomnia is the most common sleep complaint in the United States. While almost everyone has an occasional night of poor sleep, approximately 10 percent of adults have long-term or chronic insomnia. For many people, the symptoms of insomnia interfere with personal relationships, job performance, and daily function. In one survey, people who experienced chronic insomnia had a two-fold increased risk of automobile accidents compared with people who were fatigued for other reasons. People with insomnia have an impaired sense of sleep. You may feel that you have not slept, even if testing shows that you have. You may also feel more fatigued than individuals without insomnia, even if testing indicates that you are less sleep. This impaired sense of sleep may be related to a problem with the body’s sleep-awake system, which normally helps you feel awake after sleeping and feel tired before going to bed. One result of poor sleep is that you may become concerned that you will be sleep-deprived and will suffer from serious consequences of lost sleep. This concern may grow as you are unable to sleep, which in turn makes it increasingly difficult to fall asleep. It is important that you not get caught in this cycle and understand that you are sleeping more than it seems.

What are the symptoms of insomnia? — People with insomnia often:

• Have trouble falling or staying asleep  
• Feel tired or sleepy during the day  
• Forget things or have trouble thinking clearly  
• Get cranky, anxious, irritable, or depressed  
• Have less energy or interest in doing things

Daytime fatigue or sleepiness  
Poor concentration  
Irritability  
Anxiety  
Depression  
Reduced motivation or energy  
Increased errors or accidents

Are there tests I should have? — Probably not. Most people with insomnia need no tests. Your doctor or nurse will probably be able to tell what is wrong just by talking to you. He or she might also ask you to keep a daily log for 1 to 2 weeks, where you keep track of how you sleep each night (Figure 1 and Table 1).

In some cases, people do need special sleep tests, such as “polysomnography.” Polysomnography is a test that usually lasts all night and that is done in a sleep lab. During the test, monitors are attached to your body to record movement, brain activity, breathing, and other body functions.

What can I do to improve my insomnia? — You can follow good “sleep hygiene.” That means that you:

• Sleep only long enough to feel rested and then get out of bed  
• Go to bed and get up at the same time every day  
• Do not try to force yourself to sleep. If you can’t sleep, get out of bed and try again later  
• Have coffee, tea, and other foods that have caffeine only in the morning  
• Avoid alcohol in the late afternoon, evening, and bedtime  
• Avoid smoking, especially in the evening  
• Keep your bedroom dark, cool, quiet, and free of reminders of work or other things that cause you stress  
• Solve problems you have before you go to bed  
• Exercise several days a week, but not right before bed  
• Avoid looking at phones or reading devices (“te-books”) that give off light before bed. This can make it harder to fall asleep  
• Relaxation therapy, in which you focus on relaxing all the muscles in your body 1 by 1.

Are there medicines to help me sleep? — Yes, there are medicines to help with sleep. But you should try them only after you try the techniques described above. You also should not use sleep medicines every night for long periods of time. Otherwise, you can become dependent on them for sleep.

Insomnia is sometimes caused by mental health problems, such as depression or anxiety. If that’s the case for you, you might benefit from an antidepressant rather than a sleep aid. Antidepressants often improve sleep and can help with other worries, too.

Can I use alcohol to help me sleep? — No, do not use alcohol as a sleep aid. Even though alcohol makes you sleepy at first, it disrupts sleep later in the night.

INSOMNIA CAUSES — Insomnia may have many causes

Short-term insomnia — Short-term insomnia lasts less than three months and is usually associated with stressors. Possible stressors include the following:

• Changes in the sleeping environment (temperature, light, noise)  
• The loss of a loved one, divorce, or job loss  
• Recent illness, surgery, or sources of pain  
• Use or withdrawal from stimulants (caffeine), certain medications (theophylline), beta blockers, steroids, thyroid replacement, and asthma inhalers), illegal drugs (cocaine and methamphetamine), or alcohol  
• Short-term insomnia often resolves when the stressor resolves.

Situations that disrupt your normal sleep cycle can also cause insomnia. Some examples of this include:

• Jet lag  
• Traveling across time zones can cause insomnia, known as jet lag. Jet lag may occur regardless of the direction of travel, although it is most pronounced when traveling west to east. Most people require several days to adjust their sleep pattern to the new time zone.  
• Shift work — Individuals who work the night shift commonly experience insomnia. You may be sleepy at work and while driving home in the morning, but have difficulty staying asleep past noon. The sleep problems can be resolved by transferring from the night shift or by sleeping at the same time every day including weekends for several weeks.

Long-term insomnia — Long-term (or chronic) insomnia lasts longer than three months and occurs at least three nights per week. Insomnia often occurs with other conditions, including:

• Mental health problems, such as depression, anxiety disorders (including panic attacks), and posttraumatic stress disorder  
• Medical illnesses, especially those that cause pain, stress, or difficulty breathing  
• Neurological disorders, such as Parkinson disease and Alzheimer disease  
• Other sleep disorders, such as sleep apnea, restless legs syndrome, periodic limb movements, and circadian rhythm  
• Medications or illegal drug use  
• Irregular sleep habits

Short duration sleep and sleep deprivation — Insomnia is frequently confused with short sleep requirement and sleep restriction:

• Sleeping for only a short period of time is common among people who have insomnia. However, some people normally require little sleep and can function without difficulty after sleeping for only a few hours. People who sleep less but have no residual daytime sleepiness or other symptoms are called short sleepers and do not have a sleep problem. In addition, you may need less sleep as you get older. Needing less sleep does not necessarily mean that you have insomnia unless you also have daytime symptoms, such as sleepiness or dysphoria.

• People who have a reduced time in bed (sleep restriction) as well as those with insomnia sleep for a short time and have difficulty functioning during the daytime. However, people who are sleep restricted will fall asleep quickly and sleep normally if given the opportunity. Chronic loss of sleep, caused by spending fewer than eight hours in bed on most nights, is probably the most common cause of sleepiness. Patients with insomnia are unable to sleep normally when they are given the chance to sleep.

INSOMNIA DIAGNOSIS — If you seek help for insomnia, your doctor or nurse will start by asking you how many hours you sleep and what problems you have had with sleep over a typical 24-hour period. Your bed partner or caregiver can help to answer these questions because you may not be aware of what happens while you sleep. You may be asked to keep a daily sleep log, which is a record of sleep times for one to two weeks (Figure 1 and Table 3).

Laboratory tests may be recommended to help identify underlying medical or sleep disorders, although this is not required for everyone with insomnia. Laboratory tests may include polysomnography — Polysomnography is a formal sleep study done in a sleep laboratory. It uses monitors that are attached to your body to record movement, brain activity, breathing, and other physiologic functions. This test may be used when an underlying sleep disorder is suspected or if your insomnia has not responded to treatment.
BEHAVIORAL THERAPY FOR INSOMNIA — Behavioral therapy is often recommended as the initial treatment for insomnia. Behavioral changes may be recommended alone initially, or medication may be recommended along with behavioral changes. Behavioral therapy can include sleep hygiene education, relaxation, biofeedback, stimulus control, sleep restriction, cognitive therapy, cognitive behavioral therapy, phototherapy, and/or chronotherapy.

Sleep hygiene education — Sleep hygiene teaches good sleeping habits. This includes:
- Sleep only as much as necessary to feel rested and then get out of bed. Maintain a regular sleep schedule (the same bedtime and wake time every day).
- Do not force sleep. Avoid caffeinated beverages after lunch. Avoid alcohol near bedtime. Do not smoke (particularly during the evening).
- Do not go to bed hungry. Adjust the bedroom environment (light, noise, temperature) so that you are comfortable before you lie down.
- Deal with concerns or worries before bedtime. Make a list of things to work on for the next day so anxiety is reduced at night.
- Exercise regularly, preferably four or more hours before bedtime.
- Avoid prolonged use of phones or reading devices (“e-books”) that give off light before bed. This can make it harder to fall asleep.

Relaxation — Relaxation therapy involves progressively relaxing your muscles from your head down to your feet. Here is a sample of a relaxation program: Beginning with the muscles in your face, squeeze (contract) your muscles gently for one to two seconds and then relax. Repeat several times. Use the same technique for other muscle groups, usually in the following sequence: jaw and neck, shoulders, upper arms, lower arms, fingers, chest, abdomen, buttocks, thighs, calves, and feet. Repeat this cycle for 45 minutes, if necessary. This relaxation program can promote restfulness and sleep. Relaxation therapy is sometimes combined with biofeedback.

Biofeedback — Biofeedback uses sensors placed on your skin to track muscle tension or brain rhythms. You can see a display of your tension level or activity, allowing you to gauge your level of tension and develop strategies to reduce this tension. As an example, you may slow your breathing, progressively relax muscles, or practice deep breathing to reduce tension.

Stimulus control — Stimulus control therapy is based on the idea that some people with insomnia have learned to associate the bedroom with staying awake rather than sleeping. You should spend no more than 20 minutes lying in bed trying to fall asleep.
- If you cannot fall asleep within 20 minutes, get up, go to another room and read or find another relaxing activity until you feel sleepy again. Activities such as eating, balancing your checkbook, doing housework, watching TV, or studying for a test, which “reward” you for staying awake, should be avoided.
- When you start to feel sleepy, you can return to bed. If you cannot fall asleep in another 20 minutes, repeat the process.
- Set an alarm clock and get up at the same time every day, including weekends. Do not take a nap during the day.

You may not sleep much on the first night. However, sleep is more likely on succeeding nights because sleepiness is increased and naps are not allowed.

Sleep restriction — Some people with insomnia have long awakenings during the night and some try to deal with their poor sleep by staying in bed longer in the morning to “make up” some of their lost sleep. This additional sleep later in the morning may make it more difficult to fall asleep that night, resulting in the need to stay in bed even longer the following morning. Sleep restriction consolidates sleep and breaks this cycle.
- The first step in sleep restriction therapy is to estimate the average number of hours per night that you sleep. Decrease the total time allowed in bed per night to just that average sleep time, as long as it is not less than four hours.
- A rigid bedtime and awakening time are recommended and naps are not permitted. This causes partial sleep deprivation, which increases your ability to sleep the next night.
- Once sleep has improved, you may slowly increase your time in bed to find your needed hours of sleep.

During the first few days to weeks, you may feel sleepy during the day and may have difficulty being alert. You can deal with this by increasing activity levels when sleeping, avoiding sedentary activities, and discussing the sleep restriction therapy with your therapist, who may need to fine tune sleep times. It is best to try sleep restriction therapy with a therapist because reducing sleep too much can produce sleepiness that can result in accidents.

Cognitive therapy — People who are awake at night commonly become concerned that they will perform poorly the next day if they do not sleep enough. Such thoughts can initiate a cycle where being awake at night increases your anxiety, which then makes it more difficult to sleep. You may begin to blame all negative events in your life on poor sleep.

During cognitive therapy, you work with a therapist to deal with your anxiety and negative thinking. The therapist will help you to realize that poor sleep alone cannot be the cause of all of your problems.

Cognitive behavioral therapy — Cognitive behavioral therapy is a training course that combines several of the previously described approaches over an 8 to 10 week period.

A sample 8-session program may include an introductory education session, followed by a session or two that focus on stimulus control and sleep restriction. These may be followed by sessions that focus on cognitive therapy and sleep hygiene. Finally, there may be sessions that review and integrate the previous work and address future problems, such as stress and relapse.

Phototherapy — Phototherapy, also called light therapy, is an effective therapy for people whose insomnia is due to a problem called delayed sleep phase syndrome. People with this disorder have a problem with their body's "sleep clock" such that they have a difficult time falling asleep until much later in the evening or night than they wish (and therefore wake up later than they wish in the next morning).

Phototherapy involves sitting in front of a specially designed light box for 30 to 40 minutes. The timing of the light exposure is important. If done in the morning after awakening, it will cause you to fall asleep earlier in the evening. If the light box is used in the mid-afternoon or later, it will cause sleep to be delayed. In less severe cases, waking up consistently at a given time in the morning, followed by physical activity with exposure to bright light (eg, a walk outside), may be sufficient. Alternately, you may sit in an area with bright sunshine (eg, near a window or on a porch). The exposure to bright light at specific times helps to realign the body’s sleep clock.

Chronotherapy — Chronotherapy is also used in people with circadian rhythm sleep disorders. It involves intentionally delaying going to sleep by two to three hours on successive days until you are able to fall asleep at the desired bedtime. This can be difficult to do at home and often involves taking some days off from work or school to accommodate the moving sleep period when it occurs during the day. After reaching the desired bedtime, you must strictly enforce the newly-aligned sleep-wake schedule.

MEDITATIONS FOR INSOMNIA — Medications to aid sleep may be recommended if insomnia interferes with your ability to function during the daytime. Discuss sleep medicines with a doctor or nurse. Consider the potential benefits (eg, improved daytime symptoms and function) versus the risks (eg, side effects and addiction) and burdens (eg, cost and effort).

If a sleeping medicine is not effective within the first few days, your doctor or nurse may make changes in the medicine or may refer you to a sleep disorder center.

Sedative-hypnotic medicines — Sedative-hypnotic medicines work in the brain to cause you to feel sleepy. The primary differences between the various sedative-hypnotic medicines are how quickly they begin to work and how long the effect lasts. Most clinicians select a medicine based upon your type of insomnia (ie, difficulty falling asleep or staying asleep).

Benzodiazepines — Benzodiazepines are an older type of prescription medicine that cause sedation, muscle relaxation, and can lower anxiety levels. Benzodiazepines that were commonly used for the treatment of insomnia include quazepam (Doral), triazolam (Halcion), estazolam (ProSom), temazepam (Restoril), flurazepam (Dalmane), and lorazepam (Alivan).

People who take benzodiazepines should be cautious because you may be sleepy in the morning, which can affect driving safety, job performance, and decision-making. Additionally, do not take benzodiazepines with alcohol or other sedating drugs, and do not take more than your doctor or nurse recommends. Benzodiazepines are generally recommended for short-term use only.
Nonbenzodiazepines — Nonbenzodiazepines are a class of prescription medicines that are somewhat similar to benzodiazepines. These medications may have fewer side effects compared with benzodiazepines because they work more on sleep centers and less on other areas of the brain. They tend to be short acting, so they are also less likely to produce hangover sedation in the morning. Some can also be prescribed for a longer period of time.

Nonbenzodiazepines used to treat insomnia include zaleplon (Sonata), eszopiclone (Lunesta), zolpidem (Ambien), and zolpidem extended release (Ambien CR). Zolpidem is also available as a dissolving tablet (Edluar), an oral liquid spray (Zolpidem), and as a dissolving tablet at a lower dose for middle of the night use (Intermezzo). Do not take these medicines with alcohol or other sedating drugs, and do not take more medicine than your doctor or nurse recommends.

Precautions — Sedative-hypnotic medicines should be used with care and certain groups should not use them at all:

- Pregnant women, due to an increased risk of birth defects
- People with alcoholism
- Individuals with kidney, liver, or lung problems
- People with sleep apnea
- Individuals who need to make decisions during the night, such as clinicians on-call or single parents caring for children

Side effects — Sedative-hypnotic medicines can have potentially serious side effects:

- Unusual behaviors such as driving, eating, or having sex after going to sleep have been reported after taking benzodiazepines and nonbenzodiazepines. You may have no memory of this behavior. There is an increased risk of these unusual behaviors if you take the sleeping medicine after drinking alcohol or taking narcotic pain medicines.
- There is a risk of impaired driving the morning after taking some of these medications. This risk is higher in women and in older adults, and both of these groups typically start at the lowest available dose of the medicine.
- Severe allergic reactions (such as anaphylaxis and angioedema) have rarely been reported, sometimes after the first dose. Studies are being conducted to determine which sedative-hypnotic medicines have these risks. You should speak to your doctor or pharmacist about these risks to determine if any precautions are needed. (See "Patient information: Anaphylaxis symptoms and diagnosis (Beyond the Basics)."
- There is risk of addiction with continued use of these medications.

Ramelteon — Ramelteon (Rozerem) is a prescription medicine approved for insomnia that works in a different brain system (melatonin system) from the other sedative-hypnotic medications. Its benefit is greatest for people who have difficulty falling asleep. It is unlikely to cause morning sleepiness or to be habit-forming.

The most common side effects of ramelteon are headache, sleepiness, and sore throat, although these problems occur in fewer than 1 percent of patients. You should not take ramelteon if you have liver disease or take fluvoxamine (Luvox). Ramelteon is available in the United States, but not in Europe.

Suvorexant — Suvorexant (Belsomra) is a prescription medicine that was approved by the US Food and Drug Administration (FDA) in 2014 for insomnia. It works by blocking a brain chemical called orexin. Under normal conditions, orexin helps you to stay awake.

The most common side effect of suvorexant is drowsiness the next day. People who take suvorexant should be cautious because drowsiness in the morning can affect driving safety, job performance, and decision-making.

Antidepressants — In 2010, the FDA approved the use of very low doses of doxepin, an antidepressant, as a treatment for insomnia. This new formulation is called Silenor, and the very low doses of doxepin are specifically for treatment of insomnia. This medication may be most helpful for patients with difficulty staying asleep. The most common side effects of Silenor are drowsiness the next day, dry mouth, and dry eyes. Other antidepressants are not approved to treat insomnia, although they are sometimes used because they produce sedation. However, antidepressants may have a limited benefit unless you also have depression. Antidepressants can cause daytime sleepiness and other side effects. (See "Patient information: Depression treatment options for adults (Beyond the Basics)."

Antihistamines — Non-prescription sleep aids such as Nytol, Sominex, and Unisom contain an antihistamine (eg, diphenhydramine/Benadryl). Some of these products also contain a pain reliever (eg, Tylenol PM, Advil PM). You should not take products containing a pain reliever every night, especially if you do not have pain. There is little evidence that these sleep aids are beneficial for treating insomnia. Antihistamines can cause daytime sleepiness and other side effects, such as dry mouth, blurred vision, and difficulty emptying the bladder.

Melatonin — Melatonin is a hormone that is normally produced by a gland in the brain. Melatonin does not appear to be helpful in most people who have insomnia, except in people with delayed sleep phase syndrome. (See "Phototherapy" above.) Melatonin appears to be safe when used for less than three months. However, melatonin is marketed as a dietary supplement; the ingredients, dose, and purity of dietary supplements are not regulated.

ALCOHOL AND SLEEP — People commonly use alcohol as a sleep aid. However, alcohol often interferes with sleep later in the night. When used on a regular basis over the long-term, you can become dependent on alcohol and develop severe insomnia if you stop drinking alcohol. Due to numerous health risks, alcohol is not recommended at bedtime for people with insomnia.

ALTERNATIVE TREATMENTS FOR INSOMNIA — A recent review of complementary approaches in the treatment of insomnia concluded the following: There were some studies showing benefit from the use of tai chi, and yoga; the results were mixed for the use of acupuncture and L-tryptophan; and, there was little support for the use of herbal medicines, such as valerian, massage, or aromatherapy.

The potential benefits from tai chi and yoga might be related either to the procedure itself or to the activity involved. Other studies using various levels of exercise as a therapy have also shown mild benefit that correlated with improvement in fitness levels and were independent of an improvement in mood. Most herbal products have not been tested to be sure that they are safe and effective. Therefore, these treatments are not recommended.

WHERE TO GET MORE INFORMATION — Your healthcare provider is the best source of information for questions and concerns related to your medical problem.

This article will be updated as needed on our website (www.uptodate.com/patients). Related topics for patients, as well as selected articles written for healthcare professionals, are also available. Some of the most relevant are listed belo
## Consensus Sleep Diary

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today's date</td>
<td>4/5/11</td>
</tr>
<tr>
<td>1. What time did you get into bed?</td>
<td>10:15 PM</td>
</tr>
<tr>
<td>2. What time did you try to go to bed?</td>
<td>11:30 PM</td>
</tr>
<tr>
<td>3. How long did it take you to fall asleep?</td>
<td>55 min</td>
</tr>
<tr>
<td>4. How many times did you wake up, not counting your final awakening?</td>
<td>6 times</td>
</tr>
<tr>
<td>5. In total, how long did these awakenings last?</td>
<td>2 hours 5 min</td>
</tr>
<tr>
<td>6a. What time was your final awakening?</td>
<td>6:35 AM</td>
</tr>
<tr>
<td>6b. After your final awakening, how long did you spend in bed trying to sleep?</td>
<td>45 min</td>
</tr>
<tr>
<td>6c. Did you wake up earlier than you planned?</td>
<td>Yes</td>
</tr>
<tr>
<td>6d. If yes, how much earlier?</td>
<td>1 hour</td>
</tr>
<tr>
<td>7. What time did you get out of bed for the day?</td>
<td>7:20 AM</td>
</tr>
<tr>
<td>8. In total, how long did you sleep?</td>
<td>4 hours 30 min</td>
</tr>
<tr>
<td>9. How would you rate the quality of your sleep?</td>
<td>Very good</td>
</tr>
<tr>
<td>10. How rested or refreshed did you feel when you woke-up for the day?</td>
<td>Somewhat rested</td>
</tr>
<tr>
<td>11a. How many times did you nap or doze?</td>
<td>2 times</td>
</tr>
<tr>
<td>11b. In total, how long did you nap or doze?</td>
<td>1 hour 10 min</td>
</tr>
<tr>
<td>12a. How many drinks containing alcohol did you have?</td>
<td>3 drinks</td>
</tr>
<tr>
<td>12b. What time was your last drink?</td>
<td>9:20 PM</td>
</tr>
<tr>
<td>13a. How many caffeinated drinks (coffee, tea, soda, energy drinks) did you have?</td>
<td>2 drinks</td>
</tr>
<tr>
<td>13b. What time was your last drink?</td>
<td>9:20 PM</td>
</tr>
</tbody>
</table>

14. Did you take any over-the-counter or prescription medication(s) to help you sleep? | Yes |
| If so, list medication(s) dose, and time taken | Tylenol 30 mg at 11 PM |

15. Comments (if applicable) | I have a cold |

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Questions 1 through 10 are to be completed within one hour of getting out of bed in the morning. Questions 11 through 15 are to be completed before bed.

### Consensus: Sleep Diary Instructions

#### General Instructions

**What is a sleep diary?**
A sleep diary is designed to gather information about your daily sleep pattern.

**How often and when do I fill out the sleep diary?**
It is necessary for you to complete your sleep diary every day. If possible, the sleep diary should be completed within one hour of getting out of bed in the morning.

**What should I do if I miss a day?**
If you forget to fill in the diary or are unable to finish it, leave the diary blank for that day.

**What if something unusual affects my sleep or how I feel in the daytime?**
If your sleep or daytime functioning is affected by some unusual event (such as an illness, or an emergency) you may make brief notes on your diary.

**What do the words “bed” and “day” mean on the diary?**
This diary can be used for people who are awake or asleep at unusual times. In the sleep diary, the word “day” is the time you choose or are required to be awake. The term “bed” means the place where you usually sleep.

**Will answering these questions about my sleep keep me awake?**
This is not usually a problem. You should not worry about giving exact times, and you should not watch the clock. Just give your best estimate.

#### Sleep Diary Item Instructions

Use the guides below to clarify what is being asked for each item of the sleep diary.

**Date:** Write the date of the morning you are filling out the diary.

1. **What time did you get into bed?**
   - Write the time that you got into bed. This may not be the time you began “trying” to fall asleep.

2. **What time did you try to go to sleep?**
   - Record the time that you began “trying” to fall asleep.

3. **How long did it take you to fall asleep?**
   - Beginning at the time you wrote in question 2, how long did it take you to fall asleep?

4. **How many times did you wake up, not counting your final awakening?**
   - How many times did you wake up between the time you first fell asleep and your final awakening?

5. **In total, how long did these awakenings last?**
   - What was the total time you were awake between the time you first fell asleep and your final awakening? For example, if you woke 3 times for 20 minutes, 35 minutes, and 15 minutes, add them all up (20 + 35 + 15 = 70 min or 1 hr and 10 min).

6a. **How many times did you wake up?**
   - Record the last time you woke up in the morning.

6b. **After your final awakening, how long did you spend in bed trying to sleep?**
   - After the last time you woke up (item 6a), how many minutes did you spend in bed trying to sleep? For example, if you woke up at 8 AM and continued to try and sleep until 9 AM, record 1 hour.

6c. **Did you wake up earlier than you planned?**
   - If you woke up or were awakened earlier than you planned, check yes. If you woke up at your planned time, check no.

6d. **If yes, how much earlier?**
   - If you answered “yes” to question 6c, write the number of minutes you woke up earlier than you had planned on waking up. For example, if you woke up 15 minutes before the alarm went off, record 15 minutes here.

7. **What time did you get out of bed for the day?**
   - What time did you get out of bed with no further attempt at sleeping? This may be different from your final awakening time (e.g., you may have woken up at 6:35 AM but did not get out of bed to start your day until 7:20 AM).

8. **In total, how long did you sleep?**
   - This should just be your best estimate, based on when you went to bed and woke up, how long it took you to fall asleep, and how long you were awake. You do not need to calculate this by adding and subtracting; just give your best estimate.

9. **How would you rate the quality of your sleep?**
   - “Sleep quality” is your sense of whether your sleep was good or poor.

10. **How restless or refreshed did you feel when you woke up for the day?**
    - This refers to how you felt after you were done sleeping for the night, during the first few minutes that you were awake.

11a. **How many times did you nap or doze?**
    - A nap is a time you decided to sleep during the day, whether in bed or not in bed. “Dozing” is a time you may have nodded off for a few minutes, without meaning to, such as while watching TV. Count all the times you napped or dozed at any time from when you first got out of bed in the morning until you got into bed again at night.

11b. **In total, how long did you nap or doze?**
    - Estimate the total amount of time you spent napping or dozing, in hours and minutes. For instance, if you napped twice, once for 30 minutes and once for 60 minutes, and dozed for 10 minutes, you would answer “1 hour 40 minutes.” If you did not nap or doze, write “NA” (not applicable).

12a. **How many drinks containing alcohol did you have?**
    - Enter the number of alcoholic drinks you had where 1 drink is defined as one 12 oz beer (can), 5 oz wine, or 1.5 oz liquor (one shot).

12b. **What time was your last drink?**
    - If you had an alcoholic drink yesterday, enter the time of day in hours and minutes of your last drink. If you did not have a drink, write “NA” (not applicable).

13a. **How many caffeinated drinks (coffee, tea, soda, energy drinks) did you have?**
    - Enter the number of caffeinated drinks (coffee, tea, soda, energy drinks) you had where for coffee and tea, one drink = 6-8 oz; while for caffeinated soda one drink = 12 oz.

13b. **What time was your last caffeinated drink?**
    - If you had a caffeinated drink, enter the time of day in hours and minutes of your last drink. If you did not have a caffeinated drink, write “NA” (not applicable).

14. **Did you take any over-the-counter or prescription medication(s) to help you sleep?**
    - If so, list medication(s), dose, and time taken: List the medication name, how much and when you took EACH different medication you took tonight to help you sleep. Include medication available over the counter, prescription medications, and herbs (example: “Sleepwell 30 mg 11 pm”). If every night is the same, write “same” after the first day.

15. **Comments:**
    - If you have anything that you would like to say that is relevant to your sleep feel free to write it here.
Sleep hygiene: Basic rules for a good night's sleep

- Sleep only as much as you need to feel rested and then get out of bed
- Keep a regular sleep schedule
- Avoid forcing sleep
- Exercise regularly for at least 20 minutes, preferably 4 to 5 hours before bedtime
- Avoid caffeinated beverages after lunch
- Avoid alcohol near bedtime: no "night cap"
- Avoid smoking, especially in the evening
- Do not go to bed hungry
- Adjust bedroom environment
- Avoid prolonged use of light-emitting screens before bedtime
- Deal with your worries before bedtime

Stimulus control therapy rules

1. Go to bed only when sleepy.
2. Do not watch television, read, eat, or worry while in bed. Use bed only for sleep and sex.
3. Get out of bed if unable to fall asleep within twenty minutes and go to another room. Return to bed only when sleepy. Repeat this step as many times as necessary throughout the night.
4. Set an alarm clock to wake up at a fixed time each morning including weekends.
5. Do not take a nap during the day.