

## Restless legs syndrome

Restless legs syndrome (RLS) is a sleep-related movement disorder that involves an almost irresistible urge to move the legs at night. This urge tends to be accompanied by unusual feelings or sensations, called “paresthesia,” that occur deep in the legs. These uncomfortable sensations often are described as a burning, tingling, prickling or jittery feeling. In some people these unpleasant feelings become painful.

The symptoms of RLS worsen when lying or sitting still and can be relieved at least temporarily, and often immediately, by walking or moving the legs. The urge to move the legs increases in the evening or at night, with relief tending to arrive in the morning. Onset occurs at all ages, from early childhood to late adult life. In children, RLS often is misdiagnosed as “growing pains.” It can be especially difficult for young children to describe the unpleasant sensations involved with RLS.

Symptoms may vary widely from one day to the next, and they are provoked by long periods of inactivity. Symptoms are most common in the legs but may progress to the arms and other parts of the body. In mild cases, RLS may occur with great irregularity and long periods of remission. Symptom progression involves greater intensity, more rapid provocation by rest, and the expansion of symptoms to involve more nights and more time during each night.

People with RLS often have *periodic limb movements*, a closely related sleep disorder that occurs when muscles involuntarily tighten, twitch or flex while you are still. Periodic limb movements in sleep occur in 80 percent to 90 percent of people who have RLS.

### Prevalence

- RLS affects 5 percent to 10 percent of adults.
- The prevalence of RLS in children is unknown.

### Types

- **Early-onset RLS** starts before the age of 45 years, producing symptoms that progress gradually. The daily occurrence of symptoms usually is not present until the age of 40 to 65 years.
- **Late-onset RLS** advances more quickly and occurs more often. Symptoms may appear daily from the time that they begin, or they may progress rapidly over a period of about five years until they occur with regularity.
- **Primary RLS** occurs independently of other disorders but may be exacerbated or triggered by other factors.
- **Secondary RLS** is precipitated by other disorders and resolves when the other disorders are treated.

### Risk groups

- **Women** are between 1.5 times and two times more likely than men to have RLS.
- Treatment for RLS usually is sought after the *age of 40 years*.
- **Iron deficiency** and all conditions that produce it increase the risk of RLS, with iron deficiency appearing to be a common factor for most secondary causes. Brain iron deficiency may be a primary pathology of RLS.
- Several **medications** may precipitate or aggravate RLS, including nonprescription allergy and cold medications that contain antihistamine (Benadryl), most antidepressants (Elavil, Prozac), and major tranquilizers (Haldol, Mellaril, Thorazine).
- More than 50 percent of people with primary RLS report a pattern of the disorder in their *family*. First-degree relatives of a person with RLS are three times to six times more likely to have it.
- Secondary RLS clearly has been shown to exist in *pregnancy* and *end-stage kidney disease*.

## Effects

- RLS symptoms can cause *severe sleep disturbances*. It can hinder a person from being able to go to sleep or return to sleep after an awakening. Severe cases of RLS may be associated with sleep times of less than five hours per night. This sleep deficit is greater than that which is reported for almost any other persistent disorder. Mild cases of RLS cause less sleep disturbance, with patients typically being able to sleep much better in the early morning.
- Repeated leg movements during the night also can *disturb the sleep of the bed partner*.
- RLS often causes a *reduction in daytime energy*.
- Increased rates of *depression and anxiety* have been reported for people with RLS.

## Treatment

For mild cases of RLS, symptoms may improve with the implementation of a regular daytime exercise program. The use of hot baths, leg massages and heating pads also may reduce symptoms. It is important to avoid drinking alcohol in the evening. Although alcohol can decrease the time it takes to fall asleep, it leads to more awakenings during the night. This can exacerbate the awakenings that occur because of RLS.

RLS patients with low ferritin levels may see symptoms improve by increasing iron stores in the body through oral or intravenous iron treatments.

RLS often is treated with one of these types of medications:

- **Dopamine agonists**

Examples: ropinirole (Requip), pramipexole (Mirapex), pergolide (Permax)

These drugs are considered the first-line treatment for RLS and commonly are used to treat Parkinson disease. They affect the brain's level of dopamine, a neurotransmitter that plays a critical role in the functioning of the central nervous system.

Other dopaminergic medications containing the ingredient levodopa (Sinemet) have been used to treat RLS, but they are less effective and have more side effects than the dopamine agonists.

- **Benzodiazepines**

Example: clonazepam (Klonopin)

These drugs are much less effective at reducing the symptoms of RLS, but they do improve sleep quality. Small doses of benzodiazepines may be used to counteract the stimulating effect that can result from dopamine agonists.

- **Anticonvulsants**

Example: gabapentin (Neurontin)

Considered less potent than the dopamine agonists, gabapentin remains an effective option in mild cases of RLS or for people who are unable to tolerate dopamine agonists. It also can be useful for RLS patients who experience painful sensations.

- **Opioids**

Examples: codeine, propoxyphene (Darvon)

These narcotic pain relievers are used most often for patients with severe cases of RLS that do not respond to other treatments.