TALLAHASSEE
PULMONARY CLINIC

Pulmonary Medicine-Critical Care Medicine-Sleep Medicine

Facts About Restless Legs

What is Restless Legs Syndrome?

If you have restless legs syndrome (RLS), you may recognize these symptoms:

- An urge to move the legs, often accompanied by uncomfortable sensations in the legs, usually described as a creeping or crawling feeling, but sometimes as a tingling, cramping, burning or just plain pain. Some patients have no definite sensation, except for the need to move. (The arms may also be affected, but that's much less common.)
- The need to move the legs to relieve the discomfort, by stretching or bending, rubbing the legs, tossing or turning in bed, or getting up and pacing the floor. Moving usually offers some temporary relief of symptoms.
- A definite worsening of the discomfort when lying down, especially when you're trying to fall asleep at night, or during other forms of inactivity, including just sitting.
- A tendency to experience the most discomfort late in the day and at night.

Sleep disturbances are common with RLS and are a major effect. The sleep disturbances can range from mild to severe, but sleep problems are often the reason that people suffering from RLS seek a doctor's help. If leg twitching or jerking is also present, a related disorder called periodic limb movements during sleep (PLMS) may be the cause. With PLMS, the leg movements may be severe enough to awaken you. In RLS, PLMS-like symptoms can sometimes occur during wakefulness, as well as in sleep.

How common is RLS?

According to the National Center on Sleep Disorders Research, "restless legs syndrome is a common, underdiagnosed, and treatable condition." Recent research suggests it affects about 10% of adults in North America and Europe with rates increasing with age. Lower prevalence has been found in India, Japan and Singapore, indicating that racial or ethnic factors are associated with RLS.

What causes RLS?

The cause of RLS is still unknown, but the symptoms tend to worsen over the years and become more severe in middle-to-old age. The fact that it occurs three to five times more frequently in first-degree relatives of people with RLS than in people without RLS suggests that heredity may be involved. Pregnancy or hormonal changes may temporarily worsen RLS symptoms. Some cases of RLS are associated with iron deficiency anemia or nerve damage in the legs due to diabetes, kidney disease, alcoholism, or Parkinson's disease. Certain medications, including most antidepressants and many over-the-counter cold medications, may worsen restless legs symptoms. Paxil and Elavil can dramatically worsen RLS; whereas Trazodone, Wellbutrin, and Prozac seem to be safer in RLS. Stress, diet or other environmental factors may play a role for some people. All of these cases are said to be *secondary RLS.* If there is no family history of RLS and no associated condition causing the disorder, RLS is said to be *idiopathic*, meaning without a known cause.

Because RLS patients were found to respond positively to treatment with levodopa, scientists have been investigating whether RLS is caused by dopamine deficiency. Dopamine is a chemical found naturally in the central nervous system where it largely functions as a neurotransmitter.

RLS can begin at any age. Many individuals with RLS can trace their symptoms back to childhood, when they may have had "growing pains" in their legs or a history of hyperactivity because they had difficulty sitting quietly.

Is RLS serious?

The symptoms of RLS can range anywhere from bothersome to incapacitating. Fluctuations in severity are common, and occasionally the symptoms may disappear for periods of time. Anxiety as bedtime approaches, frustration with nighttime awakenings, moodiness and depression, difficulty concentrating, and excessive daytime sleepiness have all been reported in association with RLS. RLS can also affect marital, family and social relations as well as having an adverse effect on school, work or other activities. Another effect can be increased drowsiness while driving or great difficulty performing overnight shift work.

How is RLS diagnosed?

The International RLS Study Group has established the following clinical criteria for diagnosis of RLS:

- A compelling urge to move the limbs.
- Motor restlessness; for example, floor pacing, tossing and turning, and rubbing the legs.
- The symptoms may be worse or exclusively present at rest, with variable and temporary relief by activity.
- Symptoms are worse in the evening and at night.

Other associated features commonly found in RLS include:

- Sleep disturbances and daytime fatigue.
- Normal neurological exam in primary RLS.
- Involuntary, repetitive, periodic, jerking limb movements, either in sleep or while awake and at rest.

Can RLS be treated?

Most cases of RLS respond well to medical treatment. Dopamine agonists are the first-line drugs for most RLS patients, but there are a number of pharmacological treatments for RLS, including:

- Iron (ferrous sulfate), which may be helpful for patients with a serum ferritin level of < 50 mcg.
- Dopaminergic agents, which include dopamine precursor combinations such as Sinemet (carbidopa-levodopa). These may be used on a prn basis (as needed) and are useful for persons with intermittent RLS because dopamine agonists may take longer to have an effect.
- Dopamine agonists such as Requip (ropinirole) and Mirapex (pramipexole), which are helpful in moderate to severe RLS. Recent reports indicate dopamine agonists can markedly improve the symptoms of restless legs.
- Opioids such as codeine, Hycodan (hydrocodone), Oxycontin (oxycodone), Darvocet (propoxyphene), and Ultram (tramadol), which can be used intermittently. These medications have also been used successfully for daily therapy.
- Benzodiazepines such as Klonopin (clonazepam) and Restoril (temazepam), which are helpful in some patients when other medications are not well tolerated. Benzodiazepines may be prescribed to help improve sleep as well.
- Anticonvulsants such as Tegretol (carbamazepine) and Neurontin (gabapentin), which can be considered when dopamine agonists have failed. They may be useful in those with coexisting peripheral neuropathy and/or when RLS discomfort is described as pain.
- Clonidine, which may be useful in hypertensive patients.

Where do I go for help?

Seek professional medical advice. You may wish to begin by consulting your family physician or by making an appointment for an evaluation at a sleep disorders center in your area. Two other sites to look at include the National Sleep Foundation (www.sleepfoundation.org) and the Restless Legs Syndrome Organization (www.rls.org).

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