



May 2010 (updated May 2015)

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A program of the Hartford
Geriatric Nursing Initiative

Restless Legs Syndrome

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Restless Legs Syndrome (RLS) is a common condition that geriatricians and primary care providers can easily manage. This issue of Elder Care will review the most important information needed to diagnose and treat RLS.

What is RLS?

Patients with RLS suffer from a strong urge to move their legs or other body parts. Since the urge is brought on by rest and is worse in the evening, it results in significant sleep disruption and can lead to debilitating daytime somnolence.

How Common is RLS?

RLS is estimated to affect 10-15% of all adults, and up to 25% of those over 65. Older adults with RLS tend to have more severe symptoms than younger people because of the natural progression of the disease.

Diagnostic Criteria

There are no physical exam or lab findings that definitively identify RLS, so expert panels have developed specific clinical criteria to help diagnose the condition. Diagnosis is based on history alone, and there are four "essential criteria" that must be present to make the diagnosis: (1) a strong urge to move the legs or other body parts that (2) is brought on by rest, (3) gets worse in the evening, and (4) gets better with activity. These essential criteria are defined by the URGE mnemonic: U=urge to move, R=rest-induced, G=gets better with activity, and E=evening or night-time accentuation.

In addition to the essential criteria, there are both supportive and associated clinical features that further help with diagnosis. Supportive clinical features include a family history of RLS, a response to dopaminergic therapy, and an association with periodic leg movement disorders.

Associated clinical features include the worsening of symptoms over time and the presence of sleep disturbance. Supportive and associated clinical features do not have to be present to make the diagnosis. They are simply characteristics that help support a diagnosis of RLS and differentiate it from other movement disorders that can mimic RLS. Table 1 has a summary of a few other movement disorders that can be confused with RLS.

Table 1. Some Conditions That Can Mimic RLS *	
Condition	What is Different than RLS
<i>Conditions that occur during sleep</i>	
Hypnagogic jerks	Sudden, brief, involuntary jerks of arms or legs, typically at onset of sleep
Sleep-related cramps	Involve specific muscle groups. Relieved (or partially relieved) by stretching
<i>Pain syndromes</i>	
Neuropathic pain	Pain may occur during periods of activity, rather than only during rest
Peripheral vascular disease	Claudication evoked by activity, rather than by rest
Painful-legs/moving-toes syndrome	Continuous/semi-continuous involuntary toe movement with associated leg pain, usually in patients with spinal cord or foot/leg injuries
<i>Drug induced syndromes</i>	
Neuroleptic-induced akathisia	Day or nighttime restlessness (in patient taking neuroleptic) that is generalized, immediately relieved with movement, and recurs after stopping movement
Normal positional discomfort	Alleviated by change in body position without need for repetitive body movements
* Adapted from Moyer Reference	

TIPS FOR TREATING RESTLESS LEGS SYNDROME

- Always check a ferritin level in patients with suspected RLS, and give iron therapy if ferritin is <50 µg/L.
- Recommend non-drug treatment as first-line therapy. It includes good sleep hygiene practices, daytime exercise, and avoiding substances that can aggravate RLS.
- If drug therapy is needed, consider the newer agents, pramipexole and ropinirole, as they are less apt to cause rebound and augmentation than are levodopa/carbidopa.
- Prescribe chronic opioids or benzodiazepines only for severe cases that don't respond to other treatments.

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Continued from front page

Secondary Causes

Occasional cases of RLS are due to one of four identifiable conditions: iron deficiency, renal failure, medication side effects and, in younger adults, pregnancy. Screening for these secondary causes with a history, physical, and laboratory exams can eliminate these treatable causes of RLS. Ferritin levels should be checked in all patients with RLS symptoms and iron replacement therapy given if levels are <50 µg/L, even if the patient is not anemic.

Treatment

Non-drug treatment options include instituting good sleep hygiene practices, increased daytime physical exercise, mentally stimulating activities, and avoiding stimulants and other substances that can exacerbate symptoms (Table 2).

Drug treatment aims to replace dopamine and includes levodopa/carbidopa and the newer dopaminergic agents (pramipexole, ropinirole). The main advantage to using the

newer agents instead of levodopa/carbidopa is a lower incidence of rebound and augmentation.

Rebound occurs when patients experience a worsening of their symptoms if the medication wears off. This is a particular problem with levodopa/carbidopa as the drug lasts only 4-6 hours; increased symptoms can occur in the middle of the sleep period. Augmentation occurs when patients on dopaminergic therapy begin to experience their RLS symptoms earlier in the day compared to before therapy was started. Both of these are major concerns in treating RLS with dopamine replacement.

Alternative drug treatments include opioids, gabapentin, and benzodiazepines. Therapy with these alternative medications must be individualized to each patient's symptom severity, comorbidities, and medication tolerance and response. Figure 1 provides a stepwise approach to drug therapy based on symptom frequency and severity.

Antihistamines	Glucocorticoids	Selective serotonin reuptake inhibitors
Caffeine and other stimulants	Lithium	Tricyclic antidepressants
Calcium-channel blockers	Phenothiazines	

Figure 1. Stepwise Approach to Treatment of Restless Legs Syndrome *

STEP 3 Refractory Symptoms (Changing Therapy)	First: change to a different dopamine agonist Next: consider changing to gabapentin or adding an opioid or benzodiazepine or benzodiazepine agonist Also: consider a "drug holiday" from dopamine agonists; use opioids or different dopamine agonist in the interim Finally: consider high potency opioids for severe/resistant cases (eg. hydrocodone, oxycodone, methadone)
STEP 2 Daily Symptoms (Daily Therapy)	First-line treatment: dopamine agonists Second-line treatment: gabapentin Third-line treatment: opioids or opioid agonists
STEP 1 Intermittent Symptoms (As-Needed Therapy)	First-line treatment: carbidopa/levodopa Second-line treatment: dopamine agonists (pramipexole or ropinirole) Occasional use: low-potency opioids; benzodiazepines; opioid or benzo agonists

References and Resources

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Supported by: Donald W. Reynolds Foundation, Arizona Geriatric Education Center and Arizona Center on Aging

This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number UB4HP19047, Arizona Geriatric Education Center. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.