



Capitol Sleep Medicine Newsletter

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Restless Legs Syndrome

Restless legs syndrome (RLS) is a common sleep disorder that affects about ten percent of the general population¹. It is characterized by uncomfortable sensations in the legs described as creepy, crawly, tingling, pulling, but rarely painful. These sensations usually occur in the calves or the thighs but may even include the arms. Symptoms occur when the patient with RLS lies down, sits, or relaxes for prolonged periods of time, such as when lying down to go to sleep, while riding in a car, or while watching a movie. People with RLS describe an irresistible urge to move the legs. Getting up to walk around, rubbing or massaging the legs may bring relief, however the relief only lasts temporarily. RLS symptoms tend to be worse later in the day, however they may occur whenever the patient is stationary for a protracted period of time. People with RLS may find it difficult to fall asleep and may not sleep well. They may have kicking movements throughout the night known as periodic limb movements. This combination may make patients feel sleepy during the day.



- Low iron levels or anemia. The symptoms may improve once the iron level or anemia is corrected.
- Chronic diseases like kidney failure, diabetes and peripheral neuropathy may also be associated with RLS.

How is RLS Diagnosed?

RLS is a clinical diagnosis based on the above symptoms. Sometimes a sleep study is needed if there is a concern that the patient may have periodic limb movement disorder, obstructive sleep apnea, or if another sleep disorder is suspected. Sometimes blood work is required in order to look for low ferritin levels, as well as thyroid, kidney, or liver problems.

How is RLS Treated?

RLS used to be treated with benzodiazepine medications such as clonazepam. This type of medication is only very rarely used today as it is relatively ineffective at alleviating the periodic limb movement arousal index. Clonazepam may cause respiratory suppression and has a half live of approximately 20 hours and thus may worsen sleep apnea^{3, 4} and daytime sleepiness. Today treatment usually starts with dopaminergic agonist medications such as ropinirole^{5, 6} or pramipexole⁷ that were initially marketed for the treatment of Parkinson's disease. Currently ropinirole is the only medication to have the FDA indication for the treatment of Restless Legs Syndrome.

What causes Restless Legs Syndrome?

In about sixty percent of cases, the cause is unknown. In these cases there is usually a strong family history of the symptoms. Clinical observations support a central role of the dopamine system in the pathophysiology of RLS. Both striatal and extrastriatal brain regions may be involved². In other cases, certain factors may be associated with RLS:

- Pregnancy. Some women may experience RLS during pregnancy. The symptoms usually disappear after delivery.

¹ Chest. 2006 Jan;129(1):76-80

² Brain. 2006 Aug;129(Pt 8):2017-28. Epub 2006 Jul 1

³ Respir Med. 2002 Sep;96(9):693-9

⁴ J Sleep Res. 1999 Dec;8(4):321-2

⁵ Mov Disord. 2006 Jul 27

⁶ Mayo Clin Proc. 2006 Jan;81(1):17-27.

⁷ Neuropsychobiology. 2004;50(1):65-70.

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