

Periodic Limb Movement Disorder

What is periodic limb movement disorder (PLMD)?

Periodic limb movement disorder (PLMD) is a condition that was formerly called sleep myoclonus or nocturnal myoclonus. It is characterized by repetitive limb movements that occur during sleep and cause sleep disruption. The limb movements usually involve the lower extremities, consisting of extension of the big toe and flexion of the ankle, the knee, and the hip. In some patients, the limb movements can occur in the upper extremities as well.

The limb movements occur most frequently in light non-REM sleep. The repetitive movements are separated by fairly regular intervals of 5 to 90 seconds. There can be significant night-to-night variability in the frequency of limb movements.

What causes PLMD?

The exact cause of PLMD is unknown. However, several medications are known to make PLMD worse. These medications include some antidepressants, antihistamines, and some antipsychotics.

Many individuals have periodic limb movements in sleep (PLMS), observed in about 80 percent of patients with restless legs syndrome (RLS). PLMS can occur in over 30 percent of people aged 65 and older and can be asymptomatic. PLMS are very common in patients with narcolepsy, REM behavior disorder, and Parkinson's disease.

True PLMD – the diagnosis of which requires periodic limb movements in sleep that disrupt sleep and are not accounted for by another primary sleep disorder including RLS – is uncommon.

What are some of the symptoms of PLMD?

Most patients are actually not aware of the involuntary limb movements. The limb jerks are more often reported by bed partners. Patients experience frequent awakenings from sleep, non-restorative sleep, daytime fatigue, and/or daytime sleepiness.

How do I know if I have PLMD?

The diagnosis is based on the clinical history as well as an overnight polysomnogram (PSG). This is a test that records sleep and the bioelectrical signals coming from the body during sleep. Respiratory monitoring during the PSG allows one to rule out the presence of sleep disordered breathing as a cause for the disrupted sleep and excessive muscle activity. Occasionally, additional sleep laboratory testing is useful. Blood work may be ordered to check on iron status, folic acid, vitamin B12, thyroid function, and magnesium levels.

Who gets PLMD?

PLMD has been less extensively studied than RLS. The exact prevalence is unknown. It can occur at any age; however, the prevalence does increase with advancing age. Unlike RLS, PLMD does not appear to be related to gender.

As with RLS, some medical conditions are associated with PLMD. These include uremia, diabetes, iron deficiency, and spinal cord injury.

How is PLMD treated?

First, certain products and medications should be avoided. Caffeine often intensifies PLMD symptoms. Caffeine-containing products such as chocolate, coffee, tea, and soft drinks should be avoided. Also, many antidepressants can cause a worsening of PLMD.

Generally, there are several classes of drugs that are used to treat PLMD. These include dopaminergic agents (Parkinson's disease drugs), anti-seizure medications, benzodiazepines, and narcotics. Current treatment recommendations consider the anti-Parkinson's medications as a first line of defense. Medical treatment of PLMD often significantly reduces or eliminates the symptoms of these disorders. There is no cure for PLMD and medical treatment must be continued to provide relief.

RESOURCES:

The Cleveland Clinic Guide to Sleep Disorders by Nancy Foldvary-Schaefer, DO
