



RESTLESS LEGS SYNDROME

Restless Legs Syndrome (RLS) is a common, but under diagnosed, neurological disorder of movement, that affects around 10% of people. It is the cause of disturbed sleep, fatigue and stress as well as poor quality of life.

RLS should be suspect in anyone who has uncomfortable legs at night.

Definition and Diagnosis – is mainly derived from the symptoms

The irresistible need or urge to move the legs that results from uncomfortable leg sensations.

It can spread to other body parts eg arms, torso.

1. Urge to move legs – can be overwhelming/ compelling
2. Motor restlessness with inactivity
3. Relief with movement eg walking, stretching
4. Worsening symptoms in evening and at night

It is often confused with other conditions – only 6 % of people are correctly diagnosed.

Symptoms

Women get this condition more than men.

Sufferers describe - water flowing in the legs, bugs in the bones, electricity in the legs, crawling, creeping, tingling, jittery, burning, deep-seated, ouchies, ants crawling, my legs need to walk, runaway legs.

Symptoms may be present all day but worsen at night and during periods of inactivity. At night, 85% of patients have associated Periodic Limb Movements, which can cause sleep problems that are often reported by the bed partner. These are involuntary, brief, rhythmic jerks of legs lasting 0.5-5 secs and occur every 20-40 secs.

(PLM can also occur in Parkinsons disease and other conditions where dopamine is impaired.)

Sufferers often complain of depression (over 50% chance), anxiety, lack of concentration, daytime drowsiness and impaired ability to work.

It is a strong cause of sleep impairment.

Children can become restless and can be wrongly diagnosed with ADHD. Night time symptoms can be confused with "growing pains"

Cause of RLS

The cause is unclear and the primary type is genetic.

There is impaired Dopamine activity in Substantia Nigra, which is in the brainstem part of the brain.

Low iron in brain - iron is a co factor in dopamine production

Important implications

- Periodic Limb Movements are associated with raised BP and heart rate
- RLS is associated with increased risk of hypertension, heart disease, stroke, migraine, major depressive disorder and panic disorder.

Types of Restless Leg Syndrome

Primary RLS

It can start at any age. It is more insidious than secondary RLS. It is more common in under 40's. Sufferers are likely to have a family member with it.

Secondary RLS

Is more abrupt in the onset.

Typically occurs in association with another conditions:

- Iron deficiency.
 - Iron is needed for dopamine production in the brain. Dopamine, amongst other things, helps control movement.
 - Note – you and your doctor need to get the Ferritin levels (iron level indicator) above 60.
- Pregnancy – especially in the third trimester – up to 30%.
 - Associated with low iron +/- folic acid.
 - In pregnancy, the iron requirement increases 3-4 fold, and the folic acid requirement increases 8-10 fold.
- End stage renal failure, which causes low iron.
- Iron deficiency from other causes eg Cancer, other diseases.
- Gastric surgery, which can cause low iron.
- ADHD, the cause is probably low iron due to poor diet or absorption.
- Folic acid deficit (a small group) Folic acid is also needed for Dopamine production.
- Multiple Sclerosis – 38%
- Rheumatoid arthritis – 31%
- Diabetic peripheral neuropathy (nerve damage to the arms, hands, legs and feet caused by diabetes)

Treatment

If it's the **primary cause** that runs in families, it often responds to Parkinsons drugs like Sinemet or Madopar, which increase dopamine in the brain.

If it's the **secondary cause**, then the underlying cause needs to be treated.

In addition, some interventions could help:

- Weight reduction – obese people are 1.5 times more likely to get RLS.
- Correct deficiencies – Iron, Folic acid, B12, magnesium.
- Nap if possible between 6am – 12 midday when it's milder.
- Have good sleep routine – go to bed early and regularly.
- Do moderate and regular exercise.
- Have hot baths, leg massages and leg vibration.
- Avoid aggravators:
 - Alcohol
 - Nicotine
 - Fatigue / stress
 - Foods
 - Tannins eg wines/ tea which interfere with iron absorption
 - High carbohydrate loads
 - Avoid RLS triggers eg TV, caffeine, nicotine, alcohol close to bedtime

- Avoid drugs that aggravate
 - o Metoclopramide
 - o Neuroleptics
 - o Antidepressants – ironically used to treat the depression they get
 - o Antihistamines – ironically, used as OTC sleep aids
- Drug therapy – if sleep is disturbed at least 3 nights per week
 - o Dopamine agonists
 - o L-Dopa – SE's include sedation, nausea, headache, augmentation (starts earlier, and spreads to other parts of body)
 - o New dopamine agonist – Ropinirole – used for Parkinsons disease
 - o Gabapentin
 - o Benzodiazepines
 - o Opioids - OK in pregnancy