CONDITION

Restless legs syndrome

Restless legs syndrome causes an urge to move the legs, usually during rest and at night

WHAT IT IS
Movement-related condition causing uncomfortable urges in the legs

BODY SYSTEM
Nervous system

MAIN SYMPTOMS
Urge to move, leg discomfort, evening worsening, disturbed sleep

WHAT CAUSES IT
Often unknown; genetics, low iron, or another condition

HOW IT IS DIAGNOSED
Clinical symptom criteria; blood tests identify contributing causes

MAIN TREATMENT
Iron correction, lifestyle measures, and symptom-controlling medicines

CAN IT BE CURED?
No - symptoms can often be controlled

IS IT AN EMERGENCY?
No - routine assessment is usually appropriate

LONG-TERM OUTLOOK
Often manageable, though symptoms may come and go

Overview

Restless legs syndrome, or RLS, is a condition that causes a strong urge to move your legs. The urge usually begins or becomes worse while you are resting. Movement brings at least temporary relief.

Symptoms tend to be most noticeable in the evening or at night. This timing can make it difficult to fall asleep, stay asleep, travel, or sit through activities such as a film or long meeting.

RLS is considered a nervous system condition, but its exact biology is not fully understood. Iron use within the brain and dopamine, a chemical involved in movement, appear to play important roles. Having low iron in the blood is not required to have RLS.

The condition is different from ordinary muscle cramps. It is also different from periodic limb movements of sleep, which are repeated leg movements that happen while a person is asleep.

The two can occur together, but one does not prove the other.

RLS is not usually dangerous. However, frequent symptoms can disrupt sleep and affect concentration, mood, work, relationships, and quality of life. Treatment can often reduce this impact.

Symptoms

The main symptom is an urge to move the legs. It is often accompanied by an uncomfortable feeling deep inside them. People describe this feeling in different ways, including crawling, pulling, tingling, aching, buzzing, itching, or an internal restlessness.

RLS usually follows a recognisable pattern:

Both legs are often affected, although the feeling may move between them or be stronger on one side. More severe RLS can also affect the arms or begin earlier in the day.

Some people have symptoms only occasionally. Others experience them on most nights. Long periods of sitting, including flights and car journeys, may bring them on.

RLS sensations can delay sleep because remaining still feels difficult. Symptoms may return after you get back into bed. A bed partner may also notice repeated kicking or jerking during sleep, but these movements are not necessary for an RLS diagnosis.

Painful muscle tightening is more typical of a leg cramp. Numbness that remains present, marked weakness, joint pain, or skin irritation may point to a different cause and should be assessed separately.

- Symptoms begin or become worse during rest, such as sitting or lying down
- Walking, stretching, rubbing, or moving the legs provides temporary relief
- Symptoms are worse in the evening or at night
- Another problem, such as a leg cramp or uncomfortable position, does not fully explain them

Causes and risk factors

For many people, no single cause is found. This is sometimes called primary or idiopathic RLS. It often runs in families, particularly when symptoms begin earlier in life. Inherited traits can increase susceptibility, but they do not determine exactly when symptoms will start or how severe they will become.

Low iron stores can cause or worsen RLS. Iron is needed for several brain functions, including systems involving dopamine. Your iron stores may be low even if a standard blood count does not show anaemia.

RLS is also associated with:

Pregnancy-related symptoms often improve after delivery, although this is not guaranteed.

Certain medicines can trigger or worsen restlessness. Examples include some sedating antihistamines like cetirizine or loratadine , anti-nausea medicines that block dopamine, antipsychotic medicines, and some antidepressants like sertraline or fluoxetine . Not everyone taking these medicines develops RLS. Do not stop a prescribed medicine suddenly; a clinician can review its benefits and possible alternatives.

Sleep loss may intensify symptoms. Some people also notice worsening after alcohol, nicotine, or caffeine, although triggers differ from person to person.

- Pregnancy, especially later pregnancy
- Chronic kidney disease
- Iron loss from heavy menstrual bleeding or bleeding in the digestive tract
- Conditions that affect peripheral nerves
- Some neurological conditions

Diagnosis

There is no single scan or laboratory test that confirms RLS. Diagnosis is based mainly on your description of the symptoms, their timing, what brings them on, and whether movement relieves them.

A clinician may ask how often symptoms occur, whether they disturb sleep, and whether relatives have similar problems. They may also review your medicines and examine your legs and nervous system to look for other explanations.

Blood tests are commonly used to check iron stores. These may include ferritin, which reflects stored iron, and transferrin saturation, which helps show how much iron is available for use. A complete blood count and tests for kidney function may also be appropriate. These tests do not confirm RLS, but they can identify conditions that contribute to it.

Other problems can resemble RLS. These include leg cramps, nerve damage, arthritis, vein problems, medication-related inner restlessness, and discomfort from remaining in one position.

A sleep study is not routinely needed to diagnose RLS. It may be considered when another sleep condition, such as obstructive sleep apnoea, is suspected or when the diagnosis remains uncertain.

Treatment and management

Treatment depends on how often symptoms occur, how much they affect sleep and daily life, and whether there is a contributing cause.

If iron stores are low or below the level considered appropriate for someone with RLS, a clinician may recommend iron replacement. This may be taken by mouth or, in selected cases, given into a vein. Iron should not be started solely on the assumption that it will help. Too much iron can be harmful, and treatment should be guided by blood tests and follow-up monitoring.

Simple measures may help with mild or occasional symptoms. These include walking, stretching, massage, a warm bath, or using heat or cold on the legs. Regular daytime physical activity and consistent sleep hours may also help. Very intense exercise close to bedtime worsens symptoms for some people.

It can be useful to record when symptoms happen and whether they follow caffeine, alcohol, nicotine, sleep loss, or a particular medicine. You do not need to avoid every possible trigger if it does not affect you.

When symptoms remain frequent or seriously disrupt sleep, medicines may be considered. Options include medicines that affect calcium channels in nerve cells, such as gabapentin-type medicines. They can cause sleepiness, dizziness, unsteadiness, or swelling and need careful selection, especially if you have kidney problems or take other sedating substances.

Medicines that act on dopamine, including pramipexole, ropinirole, and rotigotine, can improve symptoms but are now used more selectively. Over time, they can cause augmentation . This means RLS begins earlier in the day, becomes more intense, or spreads to other parts of the body. They can also cause compulsive behaviours in some people, such as uncontrolled gambling or shopping.

Severe RLS that has not responded to usual treatment may require specialist care. Other medicines are sometimes used in carefully selected cases because they need closer monitoring.

Any suspected sleep apnoea, kidney disease, nerve condition, or source of ongoing iron loss may need treatment alongside RLS.

Complications

The main complication is ongoing loss of sleep. Poor sleep may contribute to daytime tiredness, difficulty concentrating, irritability, low mood, and reduced performance at school or work. Driving or operating machinery while very sleepy can be unsafe.

Frequent symptoms can make travel and other activities involving prolonged sitting difficult. They may also disturb a partner's sleep.

Medicine-related augmentation is an important longer-term complication. It is not simply the original condition getting worse. Signs include symptoms starting progressively earlier, needing more movement for relief, or spreading beyond the legs. Increasing a dopamine medicine without assessment can make this cycle worse.

Compulsive behaviour, excessive sleepiness, falls, or confusion can occur with some medicines. New problems after starting or changing treatment should be reported promptly.

Prevention

RLS that is inherited or has no identifiable cause cannot currently be prevented.

Some episodes may be reduced by identifying and treating low iron, avoiding personal triggers, getting adequate sleep, and reviewing medicines that may worsen symptoms. These steps do not guarantee that RLS will stop.

Do not take iron routinely to prevent RLS unless testing and clinical advice show that replacement is appropriate.

During pregnancy, RLS cannot always be prevented. A maternity clinician can assess iron status and help choose measures that are suitable during pregnancy.

Living with it and what to expect

RLS often has a long-term, changeable course. Symptoms may be absent for weeks or months and then return. In other people, they become gradually more frequent. An individual course cannot be predicted with certainty.

When RLS begins earlier in life and runs in a family, it may progress slowly over years. RLS linked to pregnancy, low iron, or a medicine may improve when that factor resolves or is addressed. Symptoms related to chronic kidney disease may continue and need ongoing management.

Most people remain physically active and continue their usual work, relationships, and travel.

Planning can make prolonged sitting easier. An aisle seat, movement breaks, stretching, and scheduling travel earlier in the day may help.

Follow-up is useful if you take medicine or iron. It allows your response, side effects, iron levels, and possible augmentation to be reviewed. Return for routine reassessment if symptoms begin earlier in the day, spread to the arms, disturb sleep more often, or stop responding to your usual plan.

When to get medical help

Arrange a routine appointment if the urge to move your legs repeatedly disrupts sleep, affects daytime functioning, or is becoming more frequent. Assessment is also appropriate during pregnancy, after a medicine change, or if you may have iron loss.

Contact a clinician promptly if treatment causes severe sleepiness, confusion, falls, compulsive behaviour, or a clear pattern of symptoms starting earlier and becoming stronger.

RLS itself is not usually an emergency. Seek urgent assessment for symptoms that are not typical of RLS, such as a suddenly swollen, red, painful leg or new weakness and loss of sensation.

Call emergency services for chest pain, severe difficulty breathing, sudden one-sided weakness, or thoughts of immediate self-harm. These symptoms are not expected features of RLS and need emergency care.

Common questions

Why do my legs feel restless only at night?

RLS follows a daily body rhythm and is usually strongest in the evening or at night. Rest also brings out the symptoms, so they often begin when you sit down or go to bed.

Is restless legs syndrome caused by poor circulation?

Usually not. RLS is linked more closely to the nervous system and the way the brain handles iron and dopamine. Swelling, skin colour changes, cold feet, or pain brought on by walking may suggest a circulation problem instead.

Does magnesium help restless legs syndrome?

There is not enough reliable evidence to recommend magnesium as a standard RLS treatment unless you have a confirmed deficiency or another reason to take it. Magnesium can also cause side effects and may be unsuitable with some kidney problems.

Can low iron cause RLS even if I am not anaemic?

Yes. Iron stores can be low enough to contribute to RLS even when your haemoglobin and standard blood count are normal. Ferritin and transferrin saturation provide more information about iron stores and availability.

Will restless legs syndrome go away?

It may improve when linked to pregnancy, low iron, or a medicine that can be safely changed. RLS without a reversible cause often comes and goes over many years. Treatment can still make symptoms more manageable.

What is the difference between RLS and leg cramps?

RLS creates an urge to move, usually with uncomfortable sensations that improve during movement. A cramp causes a sudden, painful tightening of a muscle. Stretching may help both, but their symptoms and patterns are different.

Sources

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