



The AASM Guidelines for the Treatment of Restless Legs Syndrome (RLS) in the Context of Latin America

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Abstract

Restless Legs Syndrome (RLS) represents a significant clinical challenge globally, with management varying by region due to differences in healthcare resources. The American Academy of Sleep Medicine (AASM) has established guidelines for the treatment of RLS;¹ however, their applicability in Latin America is influenced by medication availability, healthcare infrastructure, and the specific characteristics of the region's health systems. The prevalence of RLS in Latin America shows substantial variability among countries. The American Association of Sleep Disorders (AASD), explores diagnostic challenges, emphasizing the importance of evaluating iron status, which remains limited in many regions. Additionally, pharmacological treatment options are examined, highlighting the difficulty in accessing first-line therapies such as gabapentinoids, while dopamine agonists continue to be used despite the risk of symptom augmentation. The frequent use of benzodiazepines and the limited availability of opioids are also discussed. Alternative therapies, including lifestyle modifications and traditional medicine, are considered as complementary strategies in resource-limited settings. Finally, the need to adapt international guidelines to local realities and to promote research to optimize RLS management in Latin America is underscored.

Keywords

- ▶ restless legs syndrome
- ▶ Latin America
- ▶ iron deficiency
- ▶ pharmacological treatment
- ▶ sleep disorders

Introduction

Restless Legs Syndrome (RLS) represents a significant challenge in global clinical practice, and its management varies depending on the resources available in each region. The American Academy of Sleep Medicine (AASM) guidelines provide recommendations based on the best available evidence¹; however, their applicability in Latin America is constrained by medication availability, healthcare services

(such as sleep disorder clinics), and the specific characteristics of regional health systems.

The prevalence of RLS in Latin America varies significantly. A study in Colombia determined the prevalence of RLS among adults in three Colombian cities: Bogota (high altitude), Bucaramanga (moderate altitude), and Santa Marta (low altitude), assessing associations with demographic and health factors such as age, sex, and body mass index (BMI). The overall prevalence was 37.7%, with significant variations

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between cities. Santa Marta, at the lowest altitude, had the highest prevalence (54.5%), while Bucaramanga and Bogota reported lower rates (35.7% and 36.9%, respectively). Age was a key factor, with prevalence increasing from 31.5% in the 18–44 age group to 44.6% in the 45–65 group, reaching 67.5% in those over 65. A notable sex difference was observed, with women having a significantly higher prevalence (45.2%) compared to men (28.8%).² This high prevalence likely reflects the measurement method used, which was the 1995 diagnostic criteria from the International Restless Legs Syndrome Study Group (IRLSSG), which have since been slightly expanded. Argentina has reported a prevalence of 14.8%, more frequent in women and residents of the Buenos Aires Metropolitan Area. RLS was associated with worse sleep quality (OR = 1.72; 95% CI = 1.24–2.40).³ A study in Mexico City reported a prevalence of 4.4% in adults, with higher rates in women and with age.⁴ Another study in 69,830 Mexican women found an RLS prevalence of 15.6%, with an average age of 44.4 years. Prevalence was 7.7% in women under 30 and 17.9% in those aged 60 or older. Although 54.5% reported frequent symptoms, only 18.1% received treatment, suggesting RLS is underdiagnosed in Mexico.⁵ Leite et al. conducted a cross-sectional study in São Paulo, Brazil, to assess the prevalence of restless legs syndrome (RLS) and its association with ferritin deficiency in older adults with dementia. The study included 70 participants (mean age 77.8 ± 9.4 years; 55.7% women) attending a psychogeriatric clinic. The authors found a 15.7% prevalence of RLS in this population. Individuals with RLS exhibited significantly poorer sleep quality, more neuropsychiatric symptoms, higher BMI, and notably lower ferritin levels ($p < 0.05$) compared to those without RLS.

This manuscript is a position statement developed by the Latin American Association of Sleep (ALADS) to contextualize the 2023 AASM Clinical Practice Guidelines on the RLS within the realities of Latin America. It synthesizes evidence from published literature, clinical experience, and regional data, highlighting challenges in access to diagnostics and therapeutics, while offering practical guidance adapted to local constraints. While we reference studies from Latin America, including observational data and case series, our intention is not to replicate the GRADE-based systematic methodology of the AASM, but to comment on its applicability in resource-limited settings and to advocate for future systematic studies in the region using similar standards.

Initial Diagnosis and Management in Latin America

The AASM guidelines give a strongly recommendation for intravenous iron infusion with ferric carboxymaltose, with moderate certainty of evidence for use in RLS patients with low ferritin unresponsive to oral iron. Assessment of iron stores is a key point in the initial evaluation of RLS, as brain iron deficiency is fundamental in RLS pathophysiology. In Latin America, tests for serum iron, ferritin, and transferrin saturation may not be universally available, and

interpretation can be affected by inflammatory factors due to endemic infections or malnutrition.

Intravenous iron access is also limited in several Latin American countries, where formulations like ferric carboxymaltose or ferumoxytol may be unavailable or unaffordable. A Chilean study assessed the effectiveness of IV iron in five patients with severe RLS and low ferritin levels (< 70 mcg/L), unresponsive to conventional dopaminergic or oral iron therapies. All received a single 1g infusion of ferric carboxymaltose in an outpatient setting. A significant symptom severity improvement was observed, with the average severity score dropping from 37.4 to 8 ($p = 0.0003$), with sustained benefits over two years. One patient discontinued prior medication, and the others reduced their treatment by more than half. Mild side effects (headaches in two patients) were reported, with no severe reactions.⁶

In many cases, oral iron supplementation remains the most accessible alternative, despite absorption and tolerability limitations.

Pharmacological Treatments and Availability in Latin America

The AASM Clinical Practice Guidelines utilize the GRADE (Grading of Recommendations Assessment, Development, and Evaluation) framework to rate the strength of recommendations and the certainty of evidence supporting each treatment option.

The AASM guidelines recommend gabapentinoids (gabapentin, pregabalin) as first-line treatment for RLS with a conditional recommendation and moderate certainty of evidence. However, access to these medications varies across Latin America. In certain countries, such as Brazil, pregabalin is classified as a controlled substance, and gabapentin may be subject to dispensing regulations. These controls are primarily in place due to broader public health policies rather than specific concerns about misuse in RLS patients. Instead, many patients in Latin America continue to receive dopamine agonists (pramipexole, ropinirole), which are now conditionally recommended against due to the risk of symptom augmentation (moderate certainty). A Chilean study followed 50 RLS patients for an average of 6.3 years. Initially, 78% were treated with dopamine agonists. Although 60% improved, 34% remained symptomatic, and 6% worsened. The severity scale improved significantly (from 19.2 to 12.5, $p < 0.05$), but 66% experienced augmentation. Patients with augmentation had lower ferritin levels ($p < 0.05$). Strategies included switching agonists, introducing pregabalin or gabapentin, and using opioids. Impulse control disorders were observed in 6% of cases.⁷

Another Chilean study included 10 patients (6 men, 4 women, aged 45–70) with augmentation symptoms on pramipexole (average dose 1 mg), who were switched to rotigotine patches (1–3 mg). All reported marked symptom relief within days. Severity scores improved from an average of 35 (very severe) to 12 (mild) ($p < 0.01$), with sustained effects over 18 months. All patients had baseline ferritin levels averaging 20 mg/dL (normal > 60) and were on oral iron.

The initial agonist doses exceeded recommended limits: ropinirole <4 mg (preferably <2 mg), pramipexole <0.75 mg, contributing to augmentation along with iron deficiency.

Another relevant issue is the prescription of benzodiazepines and opioids in the region. Despite recommendations against clonazepam due to limited evidence, its use remains common due to availability and perceived sedative effects. Similarly, access to opioids like extended-release oxycodone is extremely restricted, making routine use infeasible.

Alternative Treatments and Traditional Medicine

Alternative treatments that complement pharmacotherapy should be considered. Exercise has shown to be effective in reducing symptoms of RLS.^{8,9} Esteves et al. conducted a two-part interventional study in São Paulo, Brazil, to assess the effects of acute and chronic physical exercise on sleep quality and periodic leg movements (PLM) in sedentary adults aged 25 to 63 years (mean age 46.3 ± 13.9 years). Twenty-two participants underwent a maximal effort test and polysomnography (PSG) to evaluate the impact of a single session of acute exercise, followed by a 6-month aerobic training program in a subset of 11 individuals. Acute physical exercise significantly improved total sleep time, sleep efficiency, REM sleep, and reduced wake after sleep onset and PLM index. Chronic exercise led to sustained improvements in sleep efficiency, REM sleep, and PLM severity, with some participants showing complete resolution of PLM symptoms.¹⁰

Traditional medicine and herbal therapies such as valerian, magnesium, and herbal extracts are commonly used in Latin America. Although the AASM guidelines discourage valerian due to lack of evidence, its use is prevalent in populations with limited access to specialized care.

Other Considerations

There is high consumption of potentially addictive substances in Latin America to alleviate insomnia or avoid drowsiness. Examples include cannabidiol (CBD), alcohol, and tobacco, with prevalence rates of 19.8% and 19.9%, respectively, per the ENCODAT 2016.^{8,9} Alcohol and tobacco worsen RLS symptoms and reduce treatment response. Patients with RLS should avoid alcohol, tobacco, and caffeine; there is currently no data to recommend CBD.¹⁰

Although some physical activity protocols benefit RLS symptoms, sedentary lifestyles are prevalent in parts of Latin America. For example, Mexico's 2016 midterm health and nutrition survey found 14.4% of adults failed to meet the WHO recommendation of 150 minutes of moderate to vigorous weekly activity.¹¹ Caffeine consumption should also be avoided in RLS patients; however, high intake of coffee and caffeinated beverages is common worldwide, including in Latin America.

Another cardinal symptom of RLS is "anxiety or restlessness in the legs." The high prevalence of mental health issues (anxiety-depressive symptoms) post-COVID-19 may exacerbate sleep disorders, including RLS. Public health initiatives aiming to reduce RLS prevalence should include strategies to reduce alcohol, tobacco, and caffeine intake while promoting physical activity and mental health.^{12–14}

Socioeconomic factors also impact RLS treatment in Latin America. High rates of night work, limited access to polysomnography, and a shortage of sleep medicine specialists hinder diagnosis and treatment. Sleep hygiene education, cognitive behavioral therapy, and risk factor modification could be feasible, impactful strategies. Online consultations are a viable option for diagnosing and treating sleep disorders such as insomnia or improving CPAP adherence. Telemedicine has helped address the lack of specialized sleep services and could be a practical option in Latin America, though legal and regulatory frameworks still need strengthening.

Final Recommendations

The Latin American Association of Sleep Disorders (ALADS) recommends adapting international RLS treatment guidelines to local realities, considering resource availability and regional health system characteristics. Iron status evaluation (► **Table 1**) is essential due to its role in RLS pathophysiology, though access to tests and treatment with IV iron is limited. Gabapentinoids are therefore recommended as first-line drugs, though access is variable. Many patients continue receiving dopamine agonists despite high augmentation risks and education of both patients and providers is recommended. Benzodiazepines are frequently prescribed, while opioid access is limited. Herbal therapies and sleep hygiene strategies are relevant alternatives in resource-limited settings; telemedicine could be a viable option. Local research is needed to evaluate the effectiveness and safety of these

Table 1 Summary of ALADS Recommendations for RLS in Latin America

Category	Recommendation
Lifestyle	Avoid caffeine, alcohol, and tobacco, especially in the afternoon and evening. Maintain a regular sleep routine with consistent schedules. Engage in regular moderate exercise, avoiding intense activity at night.
Iron	Measure ferritin levels in all RLS patients. Provide oral iron if ferritin <75 ng/mL in adults or <50 ng/mL in children. Use IV iron if ferritin <50 ng/mL or no response to oral iron. Doses: Oral iron 3–6 mg/kg in children; IV ferric carboxymaltose 15 mg/kg up to a maximum of 750 mg in children or 1000 mg in adults.
Medication	Gabapentinoids (Pregabalin, Gabapentin) as first-line for moderate to severe cases. Benzodiazepines (Clonazepam, Diazepam) for severe RLS cases associated with insomnia. Opioids for refractory cases when other treatments have failed. Doses: Pregabalin 150–450 mg, Gabapentin 300–1800 mg, Clonazepam 0.5–2 mg, Tramadol 50–100 mg.

approaches and to study the impact of social determinants of health on sleep in the Americas.

List of Abbreviations

AASM – American Academy of Sleep Medicine
 ALADS – Latin American Association of Sleep Disorders
 BMI – Body Mass Index
 CBD – Cannabidiol
 CI – Confidence Interval
 ENCODAT – Encuesta Nacional de Consumo de Drogas, Alcohol y Tabaco (National Survey of Drug, Alcohol, and Tobacco Consumption)
 IRLSSG – International Restless Legs Syndrome Study Group
 IV – Intravenous
 OR – Odds Ratio
 RLS – Restless Legs Syndrome
 WHO – World Health Organization

All authors have seen and approved the manuscript.

The manuscript does not report on a clinical trial.

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Conflict of Interest

Karem Parejo is president of the Latin American Sleep Association (ALADS)

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