

## Restless Leg Syndrome

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True restless leg syndrome (RLS), diagnosed when other disorders such as stroke, spinal cord lesions, degenerative neurological diseases, sleep apnea, and medication side-effects have been ruled out, can be a frustrating condition for patient and clinician.

### Occurrence

RLS has been estimated to occur in between 2.5 percent and 15 percent of the population.<sup>1</sup> This number rises to 20 percent or more in pregnant<sup>2</sup> and dialysis patients.<sup>3</sup>

### Diagnosis

The hallmark signs and symptoms of RLS are irresistible urges to move one's legs. This happens when sitting or lying down, and is exacerbated at night and relieved by movement. If the patient does not move voluntarily, involuntary spastic movements or twitches may occur.<sup>4</sup>

### Treatment

Common medical treatments include dopaminergic agents, opiates and sedatives.<sup>4</sup> These have been employed with varying amounts of both success and side-effects.

### Nutritional Support

There have been a few case reports involving folic acid, vitamin E and tryptophan supplementation, along with caffeine removal.<sup>5</sup> Overall, success rates with nutrition have been marginal, at best.

A few years ago, a paper was published stating that a high percent of people with RLS seemed to be iron-deficient, even in the absence of a frank anemia.<sup>6</sup> Low brain levels of iron may be a particularly important cause.<sup>7</sup> A recent review<sup>4</sup> referred to a 1954 *British Medical Journal* paper (that I could not find), that reported 21 of 22 patients were cured with iron supplementation. What was most interesting was that subjects' serum iron levels were within normal limits prior to supplementation.

Iron is a mineral best absorbed on an empty stomach, and 100 mg of vitamin C will improve its absorption. I generally dose 60-90 mg of elemental iron daily until normal serum levels are achieved. Occasionally, blood work will not be practical. When this happens in my practice, I instruct the patient to take 60 mg of elemental iron per day for a week to 10 days. If he or she does not have low iron levels, supplementation is not enough to cause a toxic reaction. Conversely, if the patient has symptoms of iron deficiency, such as RLS (or fatigue and low energy), seven to 10 days will be long enough to determine if there is a marked change in his or her symptom complex. In those cases with positive responses, I strongly urge patients to follow up with blood work to establish iron levels, when they are asymptomatic.

## Iron Levels

Serum ferritin levels of 18 mcg/l or less, or an iron saturation percentage of less than 16, is a strong indicator of iron supplementation for patients with RLS.<sup>4</sup> Supplementation should continue until saturation is 20 percent, or ferritin is more than 50 mcg/l.<sup>4</sup>

## Conclusion

Clearly, not every patient with true RLS in the absence of other pathology will be iron-deficient. However, it appears a significant percentage of individuals with RLS will benefit from increasing their iron levels.

## References

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AUGUST 2003