Melatonin Lessens Pain from Irritable Bowel Syndrome

Melatonin helps ameliorate abdominal pain associated with irritable bowel syndrome (IBS), report researchers at the National University Hospital in Singapore.1

Best known as a sleep-promoting neurohormone derived from the pineal gland, melatonin is also synthesized in the gastrointestinal tract, where concentrations may be as much as 100 times those in the blood.2 In the gastrointestinal tract, melatonin supports stomach lining repair, prevents ulcerations, and increases microcirculation; researchers have speculated that melatonin may have promise in managing gastrointestinal tract disorders.3

In the recent Singapore study, 40 subjects with both IBS and sleep disturbances were randomly assigned to one of two groups. The study group received 3 mg of melatonin at bedtime for two weeks, while the control group received placebo. Before beginning the study and upon its completion, each subject completed four questionnaires to assess bowel symptoms, psychological status, sleep quality, and level of daytime sleepiness. Each subject also underwent rectal pressure determination and a recorded overnight sleep study.4

After just two weeks of supplementation, the melatonin-supplemented subjects experienced 58% less abdominal pain, compared to 18% in the placebo group. Such pain indicates gastrointestinal tract hypersensitivity and is the most frequent complaint of IBS sufferers. Other parameters of bowel dysfunction improved in the melatonin group, though this difference was not statistically significant. The two groups reported no differences regarding sleep parameters.5 Melatonin thus shows promise in alleviating the gastrointestinal discomfort associated with IBS.

—Linda M. Smith, RN

References

Magnesium May Help Obese Children Avoid Diabetes

Increasing dietary or supplemental magnesium intake may help prevent type II diabetes in obese children, according to a recent study from the University of Virginia.1 While large studies have established a relationship between low dietary magnesium and increased risk for type II diabetes in adults,2 a similar relationship in children has not previously been investigated.

In the Virginia study, 24 obese, nondiabetic children demonstrated significantly lower serum magnesium and dietary magnesium intake than did 24 lean children matched for age and sex. Compared with obese children, lean children consumed more magnesium from leafy green vegetables, fish, beans, yogurt, nuts, and peanut butter. Children with lower levels of serum magnesium and lower dietary magnesium intake had markedly higher levels of fasting insulin and reduced insulin resistance, a precursor to type II diabetes.3 Approximately 27% of healthy lean children and 55% of obese children had low serum magnesium, "indicating that serum magnesium deficiency may be more prevalent in children than previously suspected."4

Magnesium supplementation in people with insulin resistance may improve insulin sensitivity.5 In animal models, increased magnesium intake reduces the rate of developing type II diabetes.6 Magnesium's role in preventing diabetes is unclear, but it is required for enzyme reactions involved in carbohydrate metabolism.

—Laurie Barclay, MD

References
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