

Psychopharmacology for the Clinician Psychopharmacologie pratique

To submit questions for this regular feature, please send them to the Journal of Psychiatry & Neuroscience / Revue de psychiatrie & de neuroscience, Canadian Medical Association, 1867 Alta Vista Dr., Ottawa ON K1G 3Y6, Canada; fax 613 729-9545; jpn.office@sympatico.ca. Please include details of any relevant case and your name, address, telephone and fax numbers as well as your email address.

Is tryptophan a natural hypnotic?

A 63-year-old woman was in good physical and mental health but was disturbed by the fact that she had difficulty falling asleep and woke several times each night. She did not want to take a drug because of her concern that she might become addicted. She had heard that tryptophan is a natural dietary hypnotic and wanted to try it.

Tryptophan, at a dose of 1 gram taken 45 minutes before bedtime, will decrease the time taken to fall asleep in those with mild insomnia and in those with a long sleep latency. At this dose, it has no effect on sleep architecture, and no effects on alertness the next day have been detected. In patients with moderate or severe insomnia, tryptophan is not as effective as standard hypnotics. Although the effect of tryptophan on sleep has been studied only over the short term, its effect is not likely to change over time, given that a 1-

gram dose taken at bedtime will be completely metabolized before the end of the night.

As might be expected with a compound that is a component of the diet, side effects of tryptophan are few and mild, nausea being the most common. No withdrawal effects have been reported when tryptophan use is discontinued. In rare cases, tryptophan can interact with other drugs that potentiate serotonin function, and this can result in the serotonin syndrome. The normal daily dietary intake of tryptophan is about 1 gram, so taking it as a hypnotic will double the daily intake.

The use of tryptophan as a hypnotic is not a "natural" treatment, and taking tryptophan in tablet form is not a "dietary" treatment. Tryptophan is thought to act by increasing the synthesis of its metabolite serotonin. When tryptophan is ingested as part of the diet, it is accompanied by other large neutral amino acids that compete for the system that trans-

ports them all into the brain. As a result, dietary intake of tryptophan, unlike tryptophan in tablet form, does not raise brain tryptophan levels. Thus, the popular myth that a bedtime glass of milk has a hypnotic effect because of its tryptophan content is incorrect.

In Canada, tryptophan is regulated as a drug, although in the United States tryptophan, like many naturally occurring compounds, is regulated as a dietary supplement.

The interest of this patient in a natural treatment would be better served by ensuring that she adhered to good sleep hygiene, and only if this did not work, should tryptophan be considered.

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Competing interests: ICN Canada, which sells tryptophan under the brand name Tryptan, has provided tryptophan and placebo free for the author's studies on the effects of tryptophan.

The information in this column is not intended as a definitive treatment strategy but as a suggested approach for clinicians treating patients with similar histories. Individual cases may vary and should be evaluated carefully before treatment is provided.