

Studies Show

Efficacy and safety of exogenous melatonin for secondary sleep disorders and accompanying sleep restriction: meta-analysis. 2006 British Journal of Medicine; 332:385-88

Melatonin for Sleep Problems

What is the problem and what is known about it?

As much as 20% of the U.S. population has sleep problems. Regular sleep problems affect quality of life, safety, productivity and healthcare use.

While there are many types of sleep problems, two are studied here. First, secondary sleep disorders are sleep problems due to drug and alcohol abuse and other medical problems. The other, sleep restriction, is poor sleep due to such things as air travel (jet lag) and shift work.

Melatonin is a hormone that is thought to effect the sleep-wake cycle.

There is no perfect “sleeping potion”. Alternative medicine treatments have been used more and more to treat sleep problems. These treatments often have fewer side effects than more traditional sleep aids. Side effects include daytime drowsiness and extra sleepiness. Melatonin supplements are one of the most popular alternative treatments.

Why was this study done?

To find out how useful and safe melatonin supplements are in treating sleep problems.

Who was studied?

A review of information from research articles (in English) from 13 medical databases was done. All ages of patients were studied – from children to the elderly. Also, information from the meetings of the Associated Professional Sleep Society from 1999-2003 were reviewed.

How was the study done?

To be part of this study, past studies had to include patients who had a secondary sleep disorder or sleep restriction. They also had to compare the effects of melatonin versus a placebo (sugar pill). Finally, they had to report on one or more of the following:

- The amount of time spent between lying down to sleep and actually falling asleep.
- The amount of time spent asleep as a portion of total time spent in bed.
- The amount of time spent awake in bed after falling asleep for a time.
- The amount of time spent in rapid eye movement (REM) sleep.
- Total sleep time.
- Sleep quality.

What did they find?

They could not prove that melatonin is really useful in treating secondary sleep disorders. They did find an increase in the amount of time spent asleep as a portion of the total time

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spent in bed. However, the effect was less than 10 minutes more of time spent asleep for 8 hours spent in bed. This result is too small to be truly important.

Also, they found that the studies listed many side effects from using melatonin for a short time period. Patients reported having headaches, being dizzy, being sick to their stomachs and being drowsy. However, these side effects happened as often with the placebo (sugar pill) as with melatonin. As a result, this study suggests that melatonin supplements are safe to use for a short time. However, more studies are needed to decide its safety when used for long periods of time.

What are the problems with the study?

It is hard to compare the results of the different studies reviewed as different study designs were used in each. In addition, results found in studies in other languages than English were not looked at.

What does the study mean?

This review can help guide doctors and patients in decisions about using melatonin supplements in the treatment of sleep problems. Given the high toll that sleep problems place on people and on society, experts in the fields of traditional and alternative medicine must keep looking for better treatments. These need to be safe to use and have few side effects.

Resources

- **American Academy of Sleep Medicine:** www.asda.org, 507-287-6006
- **National Sleep Foundation:** www.sleepfoundation.org, 202-347-3471