

Diphenhydramine Use in Insomnia

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Is diphenhydramine an effective sleep aid in mild, stress-related, short-term insomnia?

Who asked the question?

The patient is a 26 year old female. During a medication review, she was complaining about lack of sleep. She is in good health with a balanced diet and regular exercise. She has a history of short-term, mild insomnia. Her stress levels have been higher than normal. She is in the midst of planning a wedding.

Drug Information Response:

Insomnia is a sleeping disorder.¹ It is a disruption of the sleep pattern.¹ Insomnia can be caused by bad sleeping habits, acute life stresses, or some medications.¹ However, the elimination of outside stressors is not an efficient method to relieve insomnia.⁶ These patients turn to pharmacological alternatives. Also known as Benadryl, diphenhydramine is a first-generation nonselective antihistamine. Antihistamines are H1 receptor blockers.² Diphenhydramine acts as a histamine antagonist by inhibiting the binding of histamine to H1 receptors found in the gastrointestinal tract, uterus, blood vessels, and bronchial muscle.² Recommended dosage for insomnia in an adult patient is 25-50mg PO at bedtime. Diphenhydramine via oral route has a quick onset of action between 15-30 minutes. Its duration of action ranges from four to six hours with its maximum sedating effect between hours one to three.² By blocking the binding of histamine, diphenhydramine has anticholinergic and antimuscarinic properties. The antimuscarinic effect acts as a CNS depressant which causes the sedating symptoms. Insomniac patients using diphenhydramine have reported concurrent nights of uninterrupted sleep.⁴ Sedations are caused by delay of CNS synapses.² Diphenhydramine is typically safe, but should be avoided in patients with cardiac disease, asthma, or who may become pregnant.² Side effects of diphenhydramine include dry mouth, blurry vision, drowsiness, and constipation.² Another possible side effect of diphenhydramine is drowsiness the following day, though it has found to be uncommon.⁵ Although diphenhydramine gives the sedating effect, the sleep quality can be decreased. Diphenhydramine is not to be used more than seven to ten consecutive days. It is also recommended to have a “skip day” after two to three days of consecutive use. Chronic use of diphenhydramine can lead to drug reliance as well as tolerance.² Use of diphenhydramine as a sleep aid is to acquire better sleeping habits. It is not to be used as a long-term solution.

Final Recommendation:

After review of medications commonly used in treatment of short term insomnia patients, the patient should take diphenhydramine and engage in healthy sleeping habits. An effective regimen for use of diphenhydramine as insomnia treatment is as follows: Implement good sleeping habits. Take 25mg of diphenhydramine PO before bedtime for three days. Do not take medication on day four and reevaluate sleep quality. If treatment is effective, patient will see improved ability to fall asleep and feeling more restful in the morning. If sleep quality has not improved, continue healthy sleep habits and repeat medication routine but with increase dosage of 50mg diphenhydramine. If sleep quality does not improve after second cycle, contact medical care provider.

References:

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