

Murray W. Johns

Toorak, Melbourne

Night Sedation

There are potentially many problems in prescribing night sedation for long term use, including limited efficacy, hangover effects, toxicity and drug withdrawal insomnia

1. General Principles of Night Sedation

Night sedation is commonly prescribed in order to bring a patient's pattern of sleep and wakefulness into conformity with what is believed to be 'normal' or desirable. Unfortunately it has proved difficult to give an objective description of what is universally desirable as a 'good night's sleep', for this is highly subjective.

Most people base their description of how good or bad a night's sleep has been on how long they thought it took them to fall asleep initially, how frequently they woke during the night, and how long it took them to go back to sleep again. To a lesser extent their description may be based on the intensity and content of dreams, and how well they felt next morning. The duration of sleep on a particular night may also influence a particular patient when making comparisons with other nights.

However, there is wide variation in the usual amount of sleep obtained by different healthy people, some sleeping only 3 to 4 hours per night, others 12 hours. The average is about 7.5 hours per night,

but this does not represent a requirement to be met by everybody.

Some patients request night sedation on the basis of unreasonable expectations about sleep or a fear of sleeplessness. Such fears were heightened in the late 1960s and '70s when it was thought that failure to sleep or to dream for several nights produced psychosis. That has proved to be quite wrong. Indeed, there are no serious consequences of sleep deprivation apart from drowsiness. Simply to allay a patient's fears about sleeplessness significantly reduces the need for night sedation in many cases.

Many people – particularly the elderly, who are the most frequent users of night sedation – are really seeking less wakefulness rather than more sleep when they request night sedation. They seek the oblivion which sleep provides as an escape from the anxiety or boredom of wakefulness. They may want to sleep from 8pm to 8am, but this is usually impossible without oversedation.

Many people who take hypnotic drugs, and that is about 10% of the adult population, take them intermittently and have few problems with their use. Almost any hypnosedative marketed today will help

*About the author: Dr M.W. Johns is currently in private general practice in Melbourne. He has previously carried out extensive research into normal sleep habits, insomnia and hypnotic drugs in Australia and Britain.
Author's address: Dr M.W. Johns, 601 Toorak Road, Toorak, Victoria 3142 (Australia).*

. . . Night Sedation

Table I.
Summary of the principles of optimum use of night sedation

Define the nature of the sleep problem in terms of:

- a) The degree of sleep disturbance
- b) Physical illness disturbing sleep, especially sleep apnoea
- c) Drugs disturbing sleep
- d) Psychological stress and psychiatric illness

Allay fears of sleeplessness

Encourage general measures to improve sleep, e.g. regular exercise, relaxation, hot milk drinks

Prescribe the minimum amount of sedation necessary for your therapeutic goal

Review regularly the patient's use of sedatives

Withdraw hypnosedatives slowly to avoid drug withdrawal insomnia and nightmares

improve the sleep of the 'occasional insomniac', if such treatment is necessary. However, there are important problems to be aware of with the contin-

uous and long term use of these drugs for chronic insomnia – their short-lived efficacy, their 'hangover' effects, their dependence potential, and their tendency to exacerbate insomnia when withdrawn. Hypnotic drugs can also worsen some sleep disorders, notably sleep apnoea. In order to make optimum use of night sedation, or indeed to decide whether it should be used at all in a particular patient, it is essential first to define the problem. The following considerations provide a basis for this:

1.1 The Degree of Sleep Disturbance

Ask questions about the usual times of going to bed and of getting up, the usual delay before falling asleep, the frequency of night awakenings and of daytime naps. The patient may be helped in this by writing down the details in a daily sleep diary for a week or two. Remember that poor sleepers have some good nights interspersed with bad nights. The upper limit of normal for the delay before falling asleep initially (sleep latency) is about 30 minutes. A normal limit for night awakenings is much more difficult to define and increases with age. For

. . . Night Sedation

example, the elderly may remember waking twice per night without complaining of poor sleep as many a young adult would.

1.2 Physical Illness and Sleep Apnoea

Is there a physical illness which is disturbing sleep, such as left ventricular failure, chronic obstructive airways disease, thyroid disease, organic brain disease or the pain of arthritis? If so, treat this illness appropriately and the patient's sleep will improve. Obstructive sleep apnoea is associated with very restless, fragmented sleep and with loud snoring between apnoeic periods, often with arterial oxygen desaturation. Patients in whom sleep apnoea is suspected should be referred to a sleep laboratory for investigation. Hypnotic drugs are contraindicated.

1.3 Drugs

The use and abuse of some common drugs is associated with sleep disturbance, perhaps as the only presenting symptom. Caffeine ingested in sufficient quantity disturbs sleep, and that quantity may be as few as 6 cups of coffee per day, which

many people exceed habitually. The possibility of alcoholism or addiction to other drugs needs careful consideration as a cause of sleep disturbance. Some prescription drugs such as β -blockers and pseudoephedrine disturb sleep when taken at night.

1.4 Stress and Psychiatric Illness

Is the sleep disturbance due to temporary stress or change of circumstances, e.g. a change from day-to nightshift at work, impending examinations, or a family bereavement? Or is there a long-standing disorder involving old age and cerebral arteriosclerosis with social isolation and boredom? Alternatively, is the sleep disturbance part of a psychiatric illness such as anxiety neurosis, or depressive illness which may not be obvious? If so, then these conditions must be diagnosed and treated on their own merit, whether or not that entails treatment specifically for sleep disturbance.

2. Initiating Therapy

An important first step in treating anyone who does in fact have disturbed sleep is to explain to

. . . Night Sedation

them that they do not necessarily need 8 hours of sleep a night and to reassure them that no great harm will result from being awake during the night. Many people can then find something to occupy their minds for longer at night and need less sedation. Regular exercise in the early part of the day, relaxation exercises at night and a hot milk drink are also helpful.

The ideal hypnotic drug would be rapidly absorbed, quickly inducing several hours of restful sleep but having no more residual effect the next day than is desirable for the particular patient, able to maintain its efficacy with continued use, but not to accumulate in the body. Currently the drug of first choice for the majority of patients is one of the benzodiazepines given in the appropriate dose. The distinction between anxiolytic and hypnotic drugs is not clear-cut (see Guide Chart on page 131).

Benzodiazepines do not suit everyone and some patients will prefer chloral hydrate. For geriatric patients or those who must operate machines, or others for whom a 'hangover' effect the next day is undesirable, the shorter-acting drugs, e.g. chloral hydrate or temazepam, are preferable to longer-acting hypnotics. However, many chronic insomniacs are anxious during the day and the prolonged effect of drugs such as flunitrazepam or bromazepam may be an advantage. Nightmares, including those which benzodiazepines sometimes induce, are usually controlled by the addition of promethazine (25-50mg) at night. Patients suffering from organic brain syndrome may be better treated with the more sedating phenothiazines such as chlorpromazine or thioridazine or with chlormethiazole rather than with a benzodiazepine.

There is no longer any good reason to treat sleep disorders with barbiturates of any kind, or with methaqualone or glutethimide. Those difficult insomniacs who seem resistant to all other treatments, in my experience, usually respond to a sedative tricyclic drug such as trimipramine (25-100mg) combined with flunitrazepam (1-2mg). All of these drugs must be considered capable of producing dependence, but the benzodiazepines are relatively safe because of their low toxicity in overdosage.

3. Continuing Therapy

One of the disturbing findings from research in sleep laboratories in the 1970s was that many hypnotics, including the barbiturates and chloral hydrate, cease to be effective after only a week or two of continuous use. However, some benzodiazepines such as flurazepam retain their efficacy over longer periods. What is not yet clear from laboratory experiments is how this problem of short-lived efficacy affects the intermittent user of hypnotics, in contrast to those patients who take them every night.

Where possible, night sedation should be prescribed on a short term basis, without repeat prescriptions, so that progress can be monitored. Prolonged treatment is best terminated by gradually reducing the dose by half over a period of about 2 weeks

In recent years much emphasis has been placed upon the problems of hypnotic drugs affecting the duration and distribution of particular sleep stages during the night. This is especially so of rapid eye movement (REM) or dreaming sleep and of stages 3 and 4 or 'delta-wave' sleep, but its clinical significance remains unclear. However, most hypnotics inhibit REM sleep to some extent initially and then cause a rebound which may be associated with nightmares or simply with fragmented sleep when the particular drug is not taken after a few nights' use. This drug withdrawal insomnia is reversed rapidly by starting the drug again, which leads many

. . . Night Sedation

patients to believe that they can't sleep without it. The newer benzodiazepines such as flurazepam may be better than nitrazepam, and are certainly better than barbiturates in this respect.

4. Terminating Therapy

Where possible, night sedation should be prescribed on a short term basis, without repeat prescriptions, so that progress can be monitored. Prolonged treatment is best terminated by gradually reducing the dose by half over a period of about 2 weeks, perhaps prescribing chlorpromazine or promethazine during that time. This minimises drug withdrawal insomnia which could otherwise be expected in most patients. Some patients may experience more profound disturbances including tremor, vomiting, confusion, toxic psychosis and convulsions after sudden withdrawal of any of the hypnotics.

5. Undesired Effects

Any of the hypnosedative drugs can have undesired effects. These include drowsiness, ataxia, blurred vision, headache, skin rashes, and paradoxical excitement or aggressive behaviour. Patients should be warned that alcohol and antihistamines potentiate many of these effects. Ataxia during periods of wakefulness through the night, when a patient may need to go to the toilet, is a frequent cause of falls which result in fractures of the femur or wrist.

It is not yet certain that the commonly used hypnotics can be used with safety during pregnancy. Benzodiazepines cross the placenta to the fetal circulation and also enter maternal breast milk.

Night sedation is contraindicated in acute respiratory insufficiency.

Interactions between sedatives and anticoagulants can make the control of the latter difficult.

A Current Therapeutics Guide*

Oral Hypnotics A Guide to Selection

Principal indications	Drug	Hypnotic dose (mg) ^a	Half-life (h) ^b	Brand names
Short-acting hypnotic, mild to moderate insomnia	Temazepam	10-30	5-8	Euhypnos Normison Temaze
	Chloral hydrate	500-1000	7-10	Chloralix Dormel Noctec
	L-Tryptophan	500-1000		Bioglan Neuroremed Trypto-Sleep Vita Glow
Mild to moderate insomnia, continuing as a daytime anxiolytic	Lorazepam	1-2.5	9-16	Ativan
	Bromazepam	3-6	8-19	Lexotan
	Clobazam	5-60	18 (50)	Frisium
	Diazepam	5-10	24-50 (50-100)	Antenex Ducene Pro-Pam Valium
	Oxazepam ^c	15-30	6-8	Alepam Benzotran Murelax Serepax
Moderate to severe insomnia continuing as a daytime anxiolytic	Flunitrazepam	2-4	13-19 (25-30)	Rohypnol
	Nitrazepam	2.5-10	18-34 (?)	Aloderm Mogadon Dormicum
	Flurazepam	15-60	(47-100) ^d	Dalmane
Sedative, hypnotic in geriatrics, confusional states and alcohol withdrawal	Chlormethiazole	192-384	3-9	Hemineurin
Antipsychotic, hypnotic in patients suffering from organic brain syndrome	Chlorpromazine	25-100	16-30	Largactil Protran
	Thioridazine	20-75	26-36	Aldazine Melleril
Antidepressant, hypnotic	Trimipramine	25-100	8-12	Surmontil
<p>a The dosage is the usual dose given for insomnia in an adult patient. Geriatric patients and children generally require a reduced dose.</p> <p>b Half-life shown is for parent drug, that in parenthesis for active metabolites.</p> <p>c Since the absorption of oxazepam is slow and variable, the dose should be administered earlier in the evening if it is being used primarily as a hypnotic.</p> <p>d Flurazepam is metabolised very rapidly into its active metabolite, desalkylflurazepam.</p>				

* Guide prepared in consultation with Dr M.W. Johns.