

'I'M NOT SLEEPING WELL'

I'm not sleeping well, doctor.

ALISON BENTLEY

MB CHB

Lecturer and researcher

School of Physiology

University of the Witwatersrand

Johannesburg

Alison Bentley has been involved in sleep research and sleep medicine in South Africa since 1986. She was the founding chairperson of the Sleep Society of South Africa in 1990 and now represents Africa on the governing council of the World

Association of Sleep Medicine. She is currently completing a PhD degree on restless legs syndrome.

Words guaranteed to strike fear into the heart of any busy doctor. Research shows that doctors will then ask an average of 2.5 questions before reaching for the prescription pad. Many patients end up on hypnotics for the next 10 years, which leads to increasing doses or swapping of brands to maintain effectiveness and, ultimately, dissatisfied patients. Many doctors have been told that insomnia is secondary to an underlying disorder and that treatment of that disorder will result in resolution of the insomnia. Recent evidence shows that, while a secondary cause does hold for some insomniacs, many patients have a self-sustaining primary insomnia, independent of other disorders.

The main symptom of insomnia is insufficient sleep to carry out the full range of daily functions. Therefore, patients who sleep for only 5 hours and never feel tired during the day are naturally short sleepers. They need to find something to do for the other hours of the night, yet many, particularly the elderly, will want medication to remove the hours from the day. Use of medication to extend the hours of sleep unnaturally will quickly result in tolerance and increasing dosages.

SECONDARY INSOMNIA

The secondary insomniac can be excluded by assessment of some common underlying conditions. While patients believe that all sorts of conditions may lead to insomnia there are only a few categories:

- depression and anxiety
- conditions causing nocturnal pain or breathlessness
- side-effects of medication and substance abuse
- less common but usually obvious medical conditions, such as hyperthyroidism
- frank sleep disorders, such as obstructive sleep apnoea and restless legs syndrome (RLS), must also be excluded.

Depression and anxiety

Depression is usually an easy diagnosis to make but insomnia may be a presenting symptom of depression and start before the frank mood disorder. Typically the sleep disturbance in depression is of falling asleep quite well and then waking during the night with a subsequent inability to go back to sleep. If there is anxiety associated with the depression then sleep-onset difficulties can also occur. Patients with insomnia are often reluctant to accept that depression is the origin of their sleep disturbance. A simple trial (for 3 nights only) of hypnotics will usually convince them of the underlying disorder. Patients with primary depression feel no lifting of the daytime mood after a good night's sleep while primary insomniacs feel significantly better. Treatment of the primary depression usually results in resolution of the insomnia. Hypnotics may need to be prescribed for the first 2 weeks, before the treatment effect of the antidepressants begins.

Conditions causing pain and chronic pain syndromes

Pain, whether from arthritis, angina or headaches, will interfere with sleep continuity. Acute pain during sleep needs to be very severe to interfere with the important sleep stages. Therefore the associated psychological impact of the pain, such as depression related to ongoing chronic pain, may play a more important role in the sleep disruption so often seen in patients with chronic pain. Fibromyalgia (FM) is a unique situation as far as sleep is concerned, with very specific changes in the EEG that produce a situation of unrefreshing sleep. Decreased amounts of sleep appear to increase the amount of pain felt during the day. There is no good research evidence to indicate whether analgesic or hypnotics provide better sleep when pain causes insomnia.

Side-effects of medication and substance abuse

Any insomnia that starts close to the beginning of a course

of medication must be considered to be caused by that medication until proved otherwise. Many medications can cause sleep disruption, sometimes unexpectedly, and often by unknown mechanisms. Other drugs, not usually considered as medications, must be considered, such as caffeine and alcohol as well as all recreational drugs which by definition are 'uppers' or 'downers'. The uppers cause insomnia as a direct drug effect and the downers cause insomnia as a withdrawal effect.

Specific sleep disorders

RLS is a common neurological problem, often runs in families and produces significant changes in sleep continuity. It is easy to diagnose on history alone (see box) and relatively easy to treat. The underlying disorder is a functional drop in dopamine secretion in the basal ganglia, producing the sensory and motor dysfunction that is typically worse in the evening. The uncomfortable sensation causes delayed sleep onset. Treatment with low-dose dopamine replacements or agonists in the early evening results in resolution of the symptoms. Try starting with a carbidopa / levodopa 25/100 combination (e.g. Sinemet), in the evening before the onset of symptoms. Alternatively, patients get great relief from small doses of any of the dopamine agonists such as pergolide or pramipexole.

PRIMARY INSOMNIA

The insomniac who has none of these underlying disorders, but describes a situation of lying in bed, perseverating on various topics until late into the evening or early morning, must be considered to have a behavioural problem or primary insomnia. These patients have a good response to hypnotics but complain of feeling helpless and out of control if they take them continuously.

The psychological impact of insomnia can be significant. The inability to sleep is often seen as unnatural and the sufferers worry about the problem

Four diagnostic questions for restless legs syndrome

- Do you have the urge to move your legs, sometimes accompanied by an uncomfortable feeling in them?
- Is the sensation relieved, even partially, with movement of the affected limbs?
- Is the sensation worse in the evening?
- Is the sensation worse when at rest?

all day. They start to worry about the coming night's sleep from midday and by the time evening comes they can be in a state of anxiety about their inability to fall asleep. Taking hypnotics is seen as a failure which leads to a self-sustaining performance failure in falling asleep unaided.

Two components are involved in maintaining the insomnia – a psychological anxiety and a physiological response to this anxiety, including raised muscle tone and respiratory rate. Most techniques to resolve the insomnia act on both of these responses, for example 'counting sheep' to distract the brain from the alerting thought process and muscle relaxation techniques to counter the physiological response.

My experience is that patients use these techniques sporadically and not well. They place too much emphasis on the techniques and not on the basic principles of good sleep. My approach to resolving this type of insomnia is to institute a behavioural regimen based on a cognitive-behavioural approach designed to improve sleep quality gradually over a period of 4 - 6 weeks. The plan has just 3 or 4 principles used together, and the patient needs to commit to the process for at least 4 weeks:

- Sleep restriction. Most insomniacs spend too much time in bed trying to get a longer period of sleep. Restricting their sleep makes them sleepier and more likely to fall

asleep at the correct time. Most should be advised to be in bed for only 6 hours, for example between midnight and 06h00, although the actual times may change. Most insomniacs will object to this shortened period but need to be reminded that they are sleeping less than this amount of time anyway.

- Sleep hygiene. Sufferers of insomnia need to increase the likelihood of falling asleep by removing all interfering variables, e.g. the television, from the bedroom. They must also have no caffeine after midday and only 1 glass of alcohol – generally reducing all stimulants or depressants which may interfere with falling asleep.
- A critical factor in sleep hygiene is to limit the time that the insomniac spends in bed simply trying to fall asleep – they try too hard. The limit is 15 minutes. At any time, if the insomniac goes to bed and switches off the light to go to sleep, he/she has 15 minutes to fall asleep. If they are not asleep by this time they should get out of bed and perform some relaxing activity, such as watching TV or reading a book, until tired again. This should take about 30 - 45 minutes and they may go back to bed, but the 15-minute rule applies again.

- Sleep diary. All information relevant to their sleep should be written down. The essential information is the time of going to bed, time of waking up, and length of time awake during the night.

These procedures should be followed for the next 2 weeks. What is likely to occur is that they may go to bed at 00h00, only to get up at 00h15, go back to bed at 01h15 and get up again at 01h30, and so on. Eventually at 03h00 they may fall asleep within 15 minutes. What insomniacs will tend to remember is that they only had 3 hours sleep – what they need to recognise is that they fell asleep in 15 minutes. You need to find these good oints at the repeat consultations and point them out to the patient.

Many patients find this process difficult as they may have 4 consecutive nights of very short sleep. To help them through the initial weeks of the treatment it is useful to prescribe a hypnotic every third night. The times of going to bed and getting up remain the same, the patient just takes a hypnotic 15 - 20 minutes before bedtime to guarantee a good night's sleep. The dose and brand of hypnotic should be appropriate for the time spent in bed and must work well.

The choice of hypnotic can be difficult. The best hypnotic is one that is short acting and will definitely put the patient to sleep at night for at least 4 - 6 hours without leaving him/her feeling drugged the next day. Most doctors have a preferred hypnotic; my preferred medications are zolpidem and zopiclone. If patients are already on a hypnotic it is not necessary to change them onto something else but rather to reduce their current dose.

Continuation of this process, with repeat short consultations every 2 weeks, results in gradual (over 8 weeks) improvement of the insomnia. The purpose of the consultations is simply to reassure patients that they are doing well and to revise the treatment plan slightly if necessary. The hypnotic can be tailed off as sleep improves on the nights in-between. If the behavioural process does not produce improved sleep after 4 weeks then the diary will be of great use if the patient is referred to a sleep specialist.

Further reading

Barriere G, Cazalets J, Bioulac B, Tison F, Ghorayeb I. The restless legs syndrome. *Prog Neurobiol* 2005; **77**: 139-165.

Lavigne G, McMillan D, Zucconi M, Pain and sleep. In: Kryger M, Roth T, Dement W, eds. *Principles and Practice of Sleep Medicine*, 2005, Philadelphia: Elsevier, 1246-1255.

Morin C. Cognitive-behavioral approaches to the treatment of insomnia. *J Clin Psychiatry* 2004; **65** (suppl16): 33-40.

Riemann D, Voderholzer U. Primary insomnia: a risk factor to develop depression. *J Affect Disord* 2003; **76**: 255-259.

Tishler M, Barak Y, Paran D, Yaron M. Sleep disturbances, fibromyalgia and primary Sjogren's syndrome. *Clin Exp Rheumatol* 1997; **15**: 71-74.

Questions to ask someone with primary insomnia

• How much sleep do you think you actually get per night?

The idea of a restricted sleep period as part of therapy may be easier to accept when actual sleep is already shorter than this.

• What time do you go to bed at night and rise every morning?

The patient may be spending a lot of time in bed but not actually sleeping.

• How do you cope during the day?

Patients who do not feel sleepy during the day are not insomniacs – just short sleepers.

• Is there anything physical which prevents you from falling asleep at night?

Answers regarding pain, breathlessness, drug consumption and probing for RLS will help find any secondary causes of insomnia.

• Did anything start or end around the time that your sleep problem started?

This question covers the start of medication as well as life events.

• Do you find yourself feeling sleepy before going to bed, only to wake up when you switch off the lights?

This is a classic feature of the behavioural type of primary insomnia.

• Have you tried sleeping tablets and what was the response?

This is useful information to obtain. Firstly to differentiate between primary insomnia and depression, but also because resistance to hypnotics is unlikely to occur in primary insomniacs. The amount and timing of the medication is important if patients mention that sleeping tablets don't work. Many insomniacs take hypnotics 2 hours before going to bed. With the newer hypnotics, as mentioned above, this would imply that at bedtime the medication has passed its peak and is therefore less effective.

IN A NUTSHELL

Secondary insomnia is less common than primary insomnia.

Secondary causes of insomnia include:

- depression and anxiety
- conditions causing nocturnal pain or breathlessness
- side-effects of medications and substance abuse
- less common but usually obvious medical conditions, such as hyperthyroidism
- frank sleep disorders such as obstructive sleep apnoea and restless legs syndrome (RLS).

The main symptom of insomnia is insufficient sleep to carry out the full range of daily functions.

The patient who sleeps for only 5 hours a night, but is not sleepy during the day, is a 'short sleeper' and not an insomniac.

Primary insomniacs have a good response to hypnotics, but feel out of control if they use them continuously.

Two components are involved in maintaining the insomnia – a psychological anxiety and a physiological response to this anxiety, including raised muscle tone and respiratory rate.

A behavioural regimen based on a cognitive-behavioural approach designed to improve sleep quality gradually over a period of 4 - 6 weeks is often helpful.

A hypnotic can be prescribed for use every third night during this regimen - zolpidem and zopiclone are preferred.

Referral to a sleep specialist may be necessary if this approach does not work.