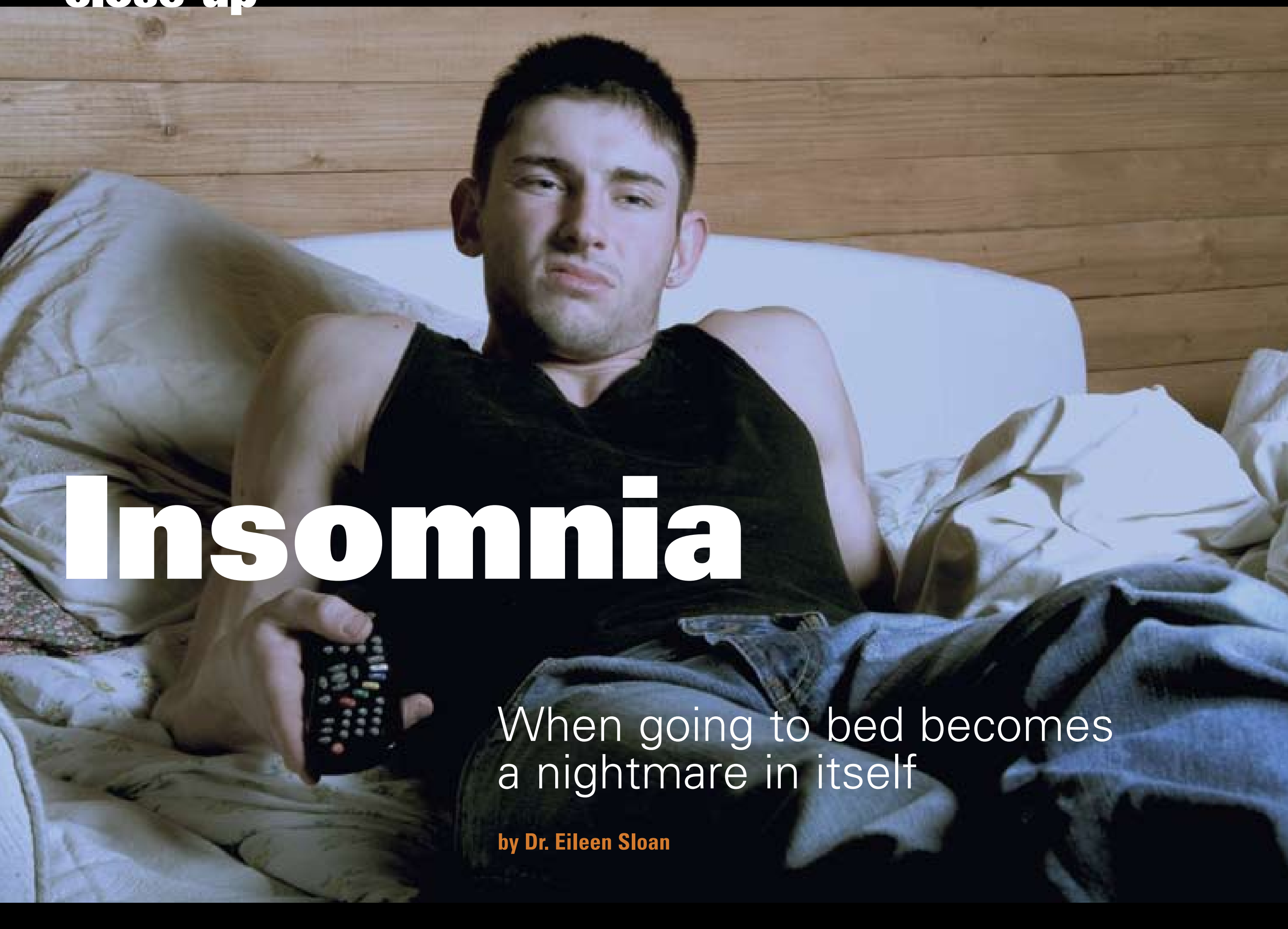

Insomnia

When going to bed becomes a nightmare in itself

by Dr. Eileen Sloan

Sleep disturbances can wreak havoc on our lives. Whether we have trouble falling asleep in the first place or wake up repeatedly during the night, the result is a tomorrow marked by fatigue, lack of motivation, irritability and poor concentration. Most people suffer bouts of insomnia from time to time — the odd bad night here and there is nothing to worry about. However, if insomnia continues for a prolonged period, it's important to address it, since ongoing sleep disruption can impact psychological well-being and physical health.

Insomnia symptoms affect almost a third of all adults and are more common in women, older adults and shift workers. Younger people more often have trouble falling asleep, while older people may have difficulty staying asleep. Some people suffer insomnia throughout their lives. For others, it may be brought on by stressful life events or conflicts. Health problems are an important contributor to sleep disturbances. Stress or illness can bring on temporary episodes of insomnia: psychological and behavioural factors play an important role in how long those episodes will last. For the already worry-prone individual with insomnia, anxiety about sleep and the consequences of lack of sleep can make the problem worse.

Eileen Sloan, MD, FRCPC is a psychiatrist specializing in HIV/AIDS at Mount Sinai Hospital, and Assistant Professor of Psychiatry at the University of Toronto.

Insomnia and HIV

Insomnia is common in all adults but even more so in people with HIV, affecting up to 70% at some point. Insomnia reduces quality of life and, for some people, makes adherence to HIV treatment more difficult. There is some evidence that HIV infection itself, especially in its later stages, leads to changes in sleep. Other contributors to increased sleep disturbances with HIV are the effects of certain antiretroviral (ARV) medications and antibiotics used to treat opportunistic infections, as well as stress and depression (both of which are common in people with HIV).

HIV medications

The non-nucleoside reverse transcriptase inhibitor (NNRTI) efavirenz (Sustiva®) is the ARV most asso-

© 2009 Parkhurst, publisher of Relay. All rights reserved.

ciated with sleep disturbances. Its effects include difficulty falling asleep, frequent wakening and vivid dreams or nightmares. Some people are much more bothered by these side effects than others, possibly as a result of their slower metabolism of this drug. The effects usually decrease within two to four weeks, but some people either stop taking the drug or miss doses due to bothersome side effects in this initial stage of treatment.

Mental health issues

Major depression and generalized anxiety disorder (GAD) are more common in people living with HIV, especially in the period soon after diagnosis. Both are commonly associated with sleep disturbances. There may be significant overlap in symptoms between each of these conditions and so-called primary insomnia. Excessive worrying is common to both GAD and primary insomnia. Depression is marked by loss of interest in normal activities, while insomnia makes it more difficult to act on these interests; the distinction can sometimes be difficult to make.

Evaluating sleep disturbances

A sleep history and sleep diary are important tools when trying to tackle sleep disturbances with your doctor. The total amount of sleep people need is highly variable, but objective measures of sleep are valuable in some situations. However, the first important step to diagnosing and treating a sleep problem is information about how severe and how frequent your sleep disturbances are, how long they last and what consequences they have on your daytime life. You should keep a sleep diary every day for at least one week before starting treatment and then throughout your treatment. The diary should detail the time you went to bed, the time you fell asleep, when you woke up in the middle of the night and how long you stayed awake, the time you woke up, when and how long you napped during the day, and your total estimated sleep time.

Questions your doctor may ask you about sleep

- When did the problem start and was it associated with a certain event, e.g. death of someone close to you, diagnosis of HIV?
- Is the insomnia initial (trouble falling asleep), middle (frequent waking during the night), or late (early wakening)?
- How long has it lasted?
- Is it recurrent or persistent?
- What is your typical sleep schedule?
- What factors make sleep better or worse?
- How do you feel in the daytime and how does insomnia affect your daily life?
- Medical, psychiatric and environmental contributing factors
- Alcohol, prescription and recreational drug use

When referral to a sleep clinic may be appropriate

After taking a history about the insomnia, your doctor may refer you to a sleep disorders clinic if, for example, he or she suspects you may have obstructive sleep apnea (interruption in your breathing) or another physiological disturbance during sleep. Ensure that the clinic you're referred to offers consultation and follow-up with a sleep specialist who will assess the problem, discuss the findings from the sleep study and determine the best course of action.

Treating insomnia

The first step is to remove factors that may be contributing to insomnia. Obviously, if there's a specific sleep disorder, such as obstructive sleep apnea, this should be treated. When HIV treatment is a contributing factor, you should talk to your doctor about the possibility of taking your ARVs at a different time of day and about the risks and benefits of changing treatment. You may be encouraged to stick with treatment a while longer to see if the effects on sleep are relieved over time.

Treatment can include psychological and behavioural therapies, medications and alternative therapies such as yoga, acupuncture and herbal remedies, though this last group hasn't been researched very thoroughly. You should address sleep hygiene (the routines you establish around going to sleep) to prevent the problem from coming back.

Psychological and behavioural therapies

The aim of these approaches is to change factors that provoke sleep disturbances. Even when there's another primary cause for insomnia,

continued on page 12

© 2009 Parkhurst, publisher of Relay. All rights reserved.

continued from page 9

psychological and behavioural factors contribute to perpetuating the patterns and must be addressed. The different methods used are described in the sidebar below. It can be difficult to start putting these techniques into practice, but it's worth the effort. These methods have been shown to decrease the time it takes to fall asleep and the number of awakenings during the night, and to improve sleep quality in 70% to 80% of people with insomnia who don't have other contributing medical conditions. They're also effective in reducing symptoms in people whose insomnia is caused by medical conditions. (It should be noted that studies haven't been conducted specifically in people living with HIV).

Pharmacological sleep aids

Medication ("sleeping pills") can produce faster results than behavioural and psychological therapies, but the benefits are usually lost after medication is stopped, whereas the effects of behavioural therapies are better maintained over time. There may be benefits to combining the two approaches. Some studies have found that starting with behavioural therapy and adding medication later has a more lasting effect. But for some people, medication can be helpful in the initial stage of treatment to break the vicious cycle of insomnia and provide some relief. Drug therapy for insomnia should be discontinued under supervision after a few weeks to prevent dependence and rebound effects. Occasional use may be needed after the initial treatment phase, and ongoing behavioural therapy is essential to maintain benefits.

Psychological and behavioural treatments for insomnia

Stimulus control therapy

A set of instructions to strengthen the association between the bed/bedroom and sleep and re-establish a consistent sleep/wake schedule:

1. Go to bed only when sleepy.
2. Get out of bed when unable to sleep and return to bed when you feel ready to fall asleep again.
3. Use the bed/bedroom for sleep only (no reading, watching TV, etc.)
4. Get up at the same time every morning.
5. No napping.

Sleep restriction therapy

A method designed to restrict time spent in bed to the actual sleep time, thereby producing mild sleep deprivation (i.e. if you're only getting a total of three hours sleep a night, you should start out with being in bed for only three hours). Time in bed is then gradually increased over a period of a few days/weeks until optimal sleep duration is achieved. This is a very difficult method to use, but it can be highly effective.

Relaxation training

Clinical procedures aimed at reducing somatic tension (e.g. progressive muscle relaxation) or intrusive thoughts (e.g. imaginary training, meditation) that interfere with sleep. Most relaxation requires some professional guidance initially and daily practice over a period of a few weeks.

Cognitive therapy

A psychotherapeutic method aimed at reducing worry and changing faulty beliefs and misconceptions about sleep, insomnia and daytime consequences. Other cognitive strategies can also be used to control intrusive thoughts at bedtime and reduce excessive monitoring of the daytime consequences of insomnia. This approach is usually combined with behavioural stategies.

Sleep hygiene education

General guidelines about health practices (e.g. diet, exercise, substance use) and environmental factors (e.g. light, noise, temperature) that may promote or interfere with sleep. This may also include some basic information about normal sleep and changes in sleep patterns with aging.

These behavioural and cognitive procedures can be used singly or in combination.

Morin, C. M., & Benca, R. M. Insomnia: Nature, diagnosis, and treatment. In S. Chokroverty and P. Montagna (Eds.), *Handbook of Clinical Neurology* (3rd ed.) 2009. Philadelphia, PA: Elsevier.

© 2009 Parkhurst, publisher of Relay. All rights reserved.

The drugs most commonly prescribed to promote sleep are hypnotics or benzodiazepene receptor agonists (BZRAs), which reduce the amount of time it takes to fall asleep and decrease awakenings during sleep. However, there's a risk of dependence with most hypnotics and they aren't meant to be taken for more than a few weeks. They also produce significant side effects, notably dizziness, drowsiness, amnesia and stomach problems. An alternative is to use certain antidepressants that also have a sedating effect. While sedating antidepressants aren't approved for insomnia, their use in treating insomnia has increased steadily over the past decade.

Of the BZRAs, benzodiazapenes such as triazolam (Halcion®), temazepam (Restoril®) and flurazepam (Dalmane®) produce more rebound insomnia and withdrawal symptoms than non-benzodiazepines. Zopiclone (Imovane®) is the only non-benzodiazepine currently available in Canada.

Drug treatment for insomnia is complicated by important interactions between ARVs and many insomnia drugs. When treating insomnia in HIV, doctors must also consider the possibility of impaired kidney and liver function that can slow the elimination of medications used to treat insomnia. Doctors are also reluctant to prescribe benzodiazepines to people with a history of addiction, as they can create tolerance and withdrawal is difficult.

Drug interactions

The protease inhibitor (PI) ritonavir (Norvir®) is the ARV most commonly reported to interact with insomnia drugs as it uses the same metabolic pathway as many of the BZRAs. As a result, BZRA concentrations can be increased dramatically, raising the risk of adverse effects from the insomnia medication. Other PIs including fosamprenavir (Telzir®), as well as atazanavir (Reyataz®), indinavir (Crixivan®), nelfinavir (Viracept®) and saquinavir (Invirase®) can also increase concentrations of insomnia drugs to a lesser extent.

Among benzodiazepines, triazolam stays in the bloodstream for a shorter period and is less likely to cause daytime drowsiness. However, it uses the same metabolic pathway as a number of PIs; ritonavir has been shown to increase the time triazolam stays in the blood from three hours to 41 hours. Temazepam may be preferred over other benzodiazepines for use in people with HIV, as there's no evidence that it interacts significantly with commonly used ARVs or antibiotics.

The non-benzodiazepene hypnotics zolpidem (Ambien® in the US) and zaleplon (Sonata® in the US),

which aren't available in Canada, can be used cautiously alongside ritonavir and other PIs, but will stay in the bloodstream slightly longer in people using these ARVs, so lower dosage of the sleep drug and consideration of an increased risk of side effects are warranted. The non-benzodiazepine hypnotic eszopiclone (Lunesta®, not available in Canada) is metabolized by the same pathway as ritonavir and ketoconazole (Nizoral®) and should be used with caution.

Other sleep drugs

While they haven't been studied and aren't approved for use in insomnia, certain antidepressants such as doxepin (Sinequan® or Adapin®) and mirtazapine (Remeron®), antipsychotics (e.g. quetiapine [Seroquel®]) and anticonvulsants (e.g. gabapentin [Neurontin®]) are also used to treat the condition. Given the difficulties of using some of the other insomnia drugs in people with HIV, especially if taking PIs, these may be an option. All drugs can have potential side effects.

Medications for insomnia may be useful. It is thanks to a team of researchers at Duke University, that we now have this rough guide to what treatment strategies may be best for people living with HIV. However, basic sleep hygiene can help most people reduce the severity of insomnia significantly. Avoiding caffeine, sugar, nicotine and exercise in the hours before you go to bed, reducing stressors, practising relaxation techniques and yes, drinking warm milk, should be your first line of defense.

If you want to find out more, see the book *Overcoming Insomnia and Sleep Problems: A Self-help Guide to Cognitive Behavioral Technique*s by Colin A. Espie. It includes a week-by-week guide to treating insomnia. R

© 2009 Parkhurst, publisher of Relay. All rights reserved.