

# HOW TO GET A GOOD NIGHT'S SLEEP

**D**r. Daniel Wagner, of the Sleep-Wake Disorders Center of New York Hospital-Cornell Medical Center, says that a major factor in treating a person's insomnia is cleaning up their "sleep hygiene"—the things they do to try and fall asleep are some of the best ways to a better night's sleep. Here are a few pointers:

- Don't spend too much time in bed.
- Don't start taking pills to get to sleep—they won't cure your problem, and can make it worse.
- Instead of lying there wide awake,

get up and do a quiet and non-stimulating activity until you feel tired—like reading or watching TV in another room of the house. (Wagner advises reading the dictionary.)

- Do not do something that will reward you for staying awake, like cleaning the house so you don't have to do it the next day.
- Cut out caffeine, starting in the afternoon, and don't use alcohol in the evening.
- Don't exercise or do exciting or upsetting things before bedtime, because you have to prepare the

brain to slow down or relax. Some doctors believe that some exercise earlier in the day may help you sleep, but never before bed.

- Try to develop a standard time for going to bed—usually when you really feel sleepy.
- Remove diversions from your bedroom. Don't read, eat or watch TV in bed.
- Don't bring your problems to bed. If you turn off the lights and turn on your worries, you are going to have problems getting to sleep. Also, if you are having trouble sleeping

**I**f you're like an estimated 70 million other Americans, trying to get to sleep and stay asleep is quite a problem.

In recent years, it has been discovered that sleep problems can take on many forms, but they all have one thing in common—they can be treated. Help is available in nearly every case, and some of the problems and cures may surprise you. Rapid developments in sleep research make it clear that it is possible to get a restful night's sleep.

"Insomnia is certainly the most common sleep complaint in the general population; at least 30 percent report that they have insomnia," says Dr. Mark Mahowald, director of the Minnesota Regional Sleep Disorder Center at the Hennepin County Medical Center in Minneapolis. "In contrast, the majority of people seen at a sleep disorder center have excessive daytime sleepiness, probably because insomnia is seen by many people to be psychological and just isn't taken very seriously."

Mahowald and other sleep disorder specialists are out to change public perceptions about insomnia and the more than 200 identified sleep disorders.

In fact, sleep study is one of the medical community's fastest-growing and most exciting fields. As recently as 1972, sleep disorder

## SLEEP DOCTORS MAKE DREAMS COME TRUE

**Americans can finally rest easy as discoveries conquer insomnia and other night horrors**

by Lisa Arcella

centers did not exist. Now nearly every state has an accredited center, and medical schools are finally adding the science of sleep to their curricula. And why not? We spend about a third of our lives in a state of sleep, and how well we perform that task affects our well-being.

Sleep disorders can run the gamut from nightmares to night terrors to narcolepsy. Sleepwalking, head banging, teeth grinding, leg kicking and many breathing disorders are just some of the things going bump in the night—in our own beds. A good example of a sleep disorder on the increase is one where the individual probably isn't even aware that he or she has a problem. Sleep apnea usually

strikes middle-aged, overweight men who snore, but it can happen to anyone. Literally on the brink of death every night, patients actually stop breathing about 400 times, sometimes for up to two minutes. To start breathing again, they gasp for air and awaken slightly, though indiscernably, many times during the night. This can lead to hypertension, heart attacks and even death. During the day they are extremely sleepy; they make errors in judgment, have lagging reactions and are potentially dangerous—especially on the roads. But once it is discovered, doctors can treat it several ways, including surgery.

Perhaps one of the most reassuring discoveries researchers have



because of a big event the next day, don't worry. Your lack of sleep for one night isn't likely to impair your performance under stress.

- Don't overeat before bed.
- Although some doctors dispute its value beyond the placebo effect, the old-fashioned remedy of drinking a warm glass of milk before bed may help you nod off. Milk contains an amino acid called tryptophan, which does cause drowsiness in some people. Tryptophan is also available at health food stores. In any case, it can't really hurt; unless, of course, you're allergic to milk and milk products.
- Choose a comfortable mattress. Make sure there is enough fresh air circulating in your room.
- Quiet down before bed; it might help to develop a certain ritual like brushing your hair a certain number of times.

made is that there is no proven connection that sleep deprivation leads to psychological or psychotic problems—a concern that often continues to keep many insomniacs awake at night, believing their inability to sleep will lead to mental illness. "People can do incredible things in their sleep," Mahowald continues. "We've had people [visit our research center] who have driven cars in their sleep, sleepwalked through second story windows and fractured vertebrae, and loaded shotguns during sleep—yet despite incredibly complex behavior, there is no evidence of psychological problems."

In his book, *Why We Sleep* (Oxford University Press, 1988), Dr. James Horne of England's Loughborough University documents the

longest sleep deprivation study done on a human being. In 1964, a 17-year-old California boy, determined to beat the world record, went 264 hours—or 11 days—without sleep. By day nine, it was clear that his thoughts were fragmented; he did not form complete sentences, was irritable, uncooperative, couldn't concentrate, had blurry vision and mild paranoia (believing researchers were trying to trick him), but at no time did he have true psychotic behavior.

After reaching his goal, the boy went to sleep for 14 hours and, after awakening, all of the problems he had with speech, memory, etc., had disappeared. Most importantly, the boy did not develop any psychological problems. So, for the average person, missing a few nights of sleep isn't likely to lead to madness—maybe just a little aggravation.

#### WHY DO WE SLEEP?

That's one question no one seems to be able to answer just yet, but one of the major discoveries in sleep research occurred in 1951. Before that, scientists believed that sleep was a passive state where the brain rested. Then the discovery of Rapid Eye Movement, or REM, proved that the brain is, in fact, very active when the body sleeps.

Sleep comes in two forms—REM and non-REM sleep, which cycle four to six times nightly. Non-REM also follows four stages during the night: stage one, stage two (most deep sleep occurs during the first two cycles—deep in that it is the time when it is most difficult to wake someone up), delta sleep and REM sleep. In most sleep disorders, one or more of the stages is broken for some reason.

In a good night's sleep, we will drift off into non-REM sleep for one-and-a-half to two hours; then our eyes begin to move and our bodies become paralyzed. It is during this REM period that we do most of our dreaming (although rarely, some people will be able to mysteriously break through this REM-paralysis and act out their dreams—like actually running or jumping, for example). There are usually several periods of REM and non-REM



sleep throughout the night, although about 80 percent of the night is spent in non-REM.

Although many researchers have speculated that REM sleep helps the brain store what we learn during the day, the question of why we sleep remains a puzzle.

### PLAYING THE CATCH-UP GAME—HOW MUCH IS ENOUGH?

Research has proven that if we are left in rooms without conventional time cues (normal clocks, TV sets, etc.), the human body will function on a 25-hour cycle—not 24—which explains why most people have an easier time staying up late than getting up early. Therefore, our body clocks and the rhythms they generate—known as circadian rhythms, that regulate our sleep/wake cycles—are already off by an hour. Modern life, with its external clocks, is in a constant struggle with our internal clocks. Primitive man (and even pre-wristwatch man) probably never experienced all the problems we find today with sleep.

**Infants sleep about 14 hours compared to adults who average 7.5 hours and 6 hours for the elderly.**

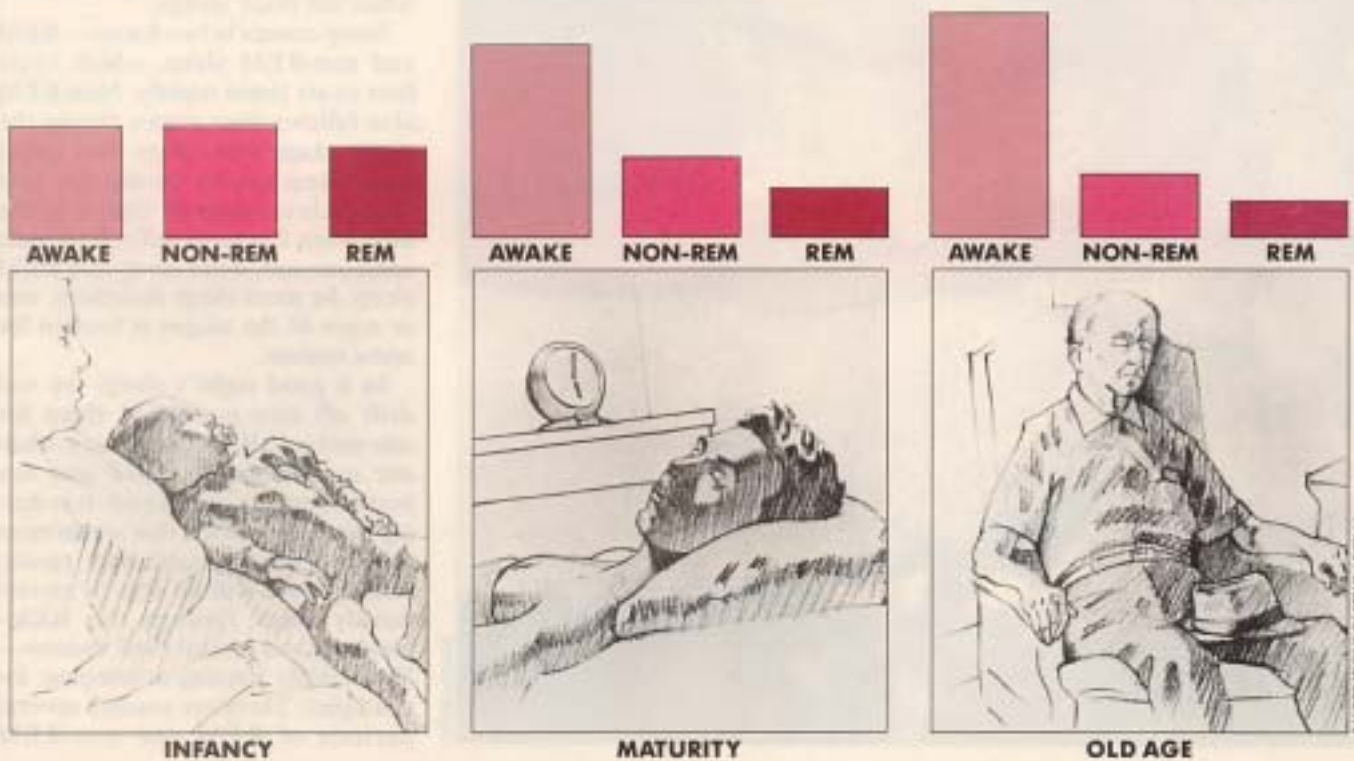
Then, of course, many people abuse their sleep cycles and accumulate what is known as a sleep debt. Dr. William Dement of California's Stanford University says that people who build up a large sleep debt are a danger on the highways, in the operating room, flying an airplane or any other place they happen to be. As the body tries to cash in on that debt, people could fall asleep at the wrong times.

Some rare individuals need only four hours sleep every night and can function quite normally (although many doctors agree that some people who say they can function well with so few hours of sleep are really fooling themselves), while other rare cases may need up to ten hours sleep to function well. The norm is between 6½ to 8½ hours per night. Problems occur when we go against our natural clocks. If your circadian rhythms tell your body that you need about eight hours sleep and prefers the hours of 11 p.m. to 8 a.m., and you go to sleep at 1 a.m. and set your alarm for 6 a.m., you are fighting two of your body's natural tendencies.

"The amount of sleep your brain can take is not something you can voluntarily control. It is something

that is built into you, much like being able to see is built into you," says Dr. Daniel Wagner, a neurologist at the Sleep-Wake Disorders Center of New York Hospital-Cornell Medical Center in White Plains. "The problem is that we tend to abuse it a lot and jostle it around by sleeping late, getting up early, going to bed late and so forth. We assault it with things like alcohol and caffeine and do all kinds of stuff that batters it, and yet sleep goes on happening in most people and our bodies are fairly tolerant of all these things we do. But people with insomnia often do these things to an extreme or are especially vulnerable to them—they vary their schedules too much and then spend too much time in bed trying to sleep. Some insomniacs seem to feel it's an athletic event—it's not, in that it's not something that if you practice more, you'll get better at.

"What *is* under our control is the schedule in which we sleep and the amount of time we spend in bed trying to do it, what substances we take before bedtime that may have an effect because they are still in our bloodstream and our brains when we are trying to sleep," Wagner continues. "For example, alco-





hol has an initial sedating effect; when it wears off it has an arousing effect. So a nightcap may be fine, except that it's going to wear off in a few hours and you are going to wake up and it won't be fine."

Doctors also advise against taking such stimulants as nicotine (cigarettes) and caffeine (coffee, soda, chocolate) before bed. There is evidence that our tolerance for caffeine decreases as we age. So someone who has had coffee with dinner their entire lives without incident may not suspect that caffeine keeps them awake.

Getting up and going to sleep at varying times may lead to sleep problems—commonly a condition experienced by most of us known as the "Monday Morning Blues." What happens when you keep a normal schedule during the week but stay out late Friday night, sleep in Saturday morning, stay out even later Saturday night and sleep even later Sunday morning? "It's like you slept and got up in a different time zone, then shifted back to your regular time zone to get up Monday morning," says Wagner. "It's the same thing as jet lag, because the time we get up sets our internal clock to the time zone we're in."

"If you [live in New York and] get up two hours later than you usually do, that's like getting up in Denver. Two days later you have to get up in New York again. We know from the example of jet lag that when people get to a new destination, they have trouble going to sleep; and when they come back, they have trouble staying asleep—it's because of the sleep/wake stages of our internal clock. We are not meant to suddenly find ourselves in Denver or, for that matter, stay up late and sleep late on weekends."

Trying to tamper with our internal clocks can be a particular problem for people who work late night shifts and pilots who often have to fly across several time zones. In fact, United Airlines recently convened a medical panel to study scheduling changes needed to reduce fatigue in pilots who are flying between the hours of 11 p.m. and 8 a.m. (in their home time zones). Although air travel continues to be

## HOW TO FIND HELP

**M**ost sleep specialists agree that any sleep-related symptom that's present for more than a few weeks and whose cause you can't pinpoint should be looked into by a sleep specialist.

To find a reputable sleep center in your area, contact the American Sleep Disorders Association (ASDA). There are about 100 centers across the country which meet rigid ASDA scrutiny. They will also provide a list of accredited members upon request. They can be reached at 604 2nd Street, South

West, Rochester, Minnesota 55902, 507-287-6006.

Dr. Mark Mahowald of the Minnesota Regional Sleep Disorder Center also suggests asking these three questions at any center you choose to visit: 1. Are you accredited by the ASDA? 2. How many physicians do you actively have on your staff, and how long have they been in practice? 3. How many people with this problem have you seen? If there are three labs in your city, choose the one with the largest staff and greatest experience. Shop around!

among the safest forms of travel and there is no evidence to prove any crash has been due to fatigue, the fear is that a crew will have their judgment impaired enough to turn a minor problem into a serious accident.

Under that same theory, most serious traffic accidents occur in the early morning hours. There has also been some discussion that early morning sleepiness may have been behind the Chernobyl nuclear disaster and the Bhopal gas leak.

"We have to operate hospitals and nuclear reactor plants with shifts," admits Dr. Debra Myers, director of the Sleep Disorders Diagnostic Center at the Methodist Hospital of Indiana in Indianapolis. "The idea is to make it safe for those involved by adjusting their body's biological rhythms, by trying to turn their days into nights—and nights into days—as much as possible, and to do it in an orderly fashion so that you aren't changing their schedules." When shifts do change, it is less traumatic for the estimated 60 million shift workers in the U.S. to move forward in a clockwise motion—nights to mornings, mornings to afternoons and afternoons back to nights—in a gradual manner instead of one week of nights to one week of days and back again.

One procedure being developed that may help shift workers and jet lag victims is phototherapy—a treatment where exposure to bright lights at certain points can alter our biological clocks.

### WHY WORRY?

Most sleep specialists advise against taking sleeping pills and other medications to help you sleep. You may eventually build up a tolerance to such medications. They will not cure insomnia and can lead to drug addiction. "Insomnia is just a symptom of a wide variety of disorders, most of which are diagnosable, says Mahowald, "and to administer a sleeping medication without going after the cause is like giving narcotic pain killers to someone suffering from pain without trying to find out what's causing the pain."

Long term insomnia and many of the sleep disorders should be treated by professionals, but Mahowald notes that insomnia can often be perpetuated simply because we let the condition worry us. "Insomnia can be related to various things—stress or illness, for example," he says. "It may go on for two or three nights of normal insomnia, and then some individuals start worrying that it may happen again and may even start worrying in the afternoon. By the time they go to bed, you can be sure it will happen again because they are so panicked."

"The conditioned insomniac learns to associate the bed with the angry, frustrated feeling of going to bed rather than the pleasant good feeling associated with falling asleep."

So relax, and remember; when you have a sleeping problem, you don't have to take it lying down—but it helps. ☆