MIRECC

MENTAL ILLNESS RESEARCH, EDUCATION AND CLINICAL CENTER

Improving the long-term outcome of patients with serious mental disorders

MindView

Spring 2002

Sleep & Insomnia

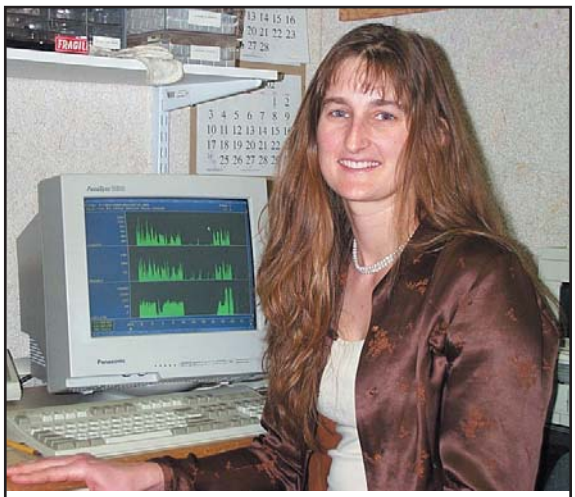
Although we spend nearly one third of our lives sleeping, few people understand the importance of sleep to our health and well-being. Nearly one of every two adults reports having some difficulty sleeping at some point throughout the year. Trouble sleeping, also known as insomnia, can have serious health consequences. There are, however, many ways to improve the quality of sleep, and consequently physical and mental health.

Why Do We Sleep?

Researchers still know relatively little about why we sleep. Healthy sleep is characterized by a decrease in body temperature, blood pressure, and rate of breathing. Although the mind is in a state of rest during sleep, the brain is still very active, in fact, it is just as busy during sleep as it is during wakefulness. During sleep, the brain organizes and stores memories and continues to process past, present, and future activities. While sleeping, the brain repairs damaged tissues and nerve cells restoring it to full capacity.

Getting Enough Sleep?

The average person needs about 8 hours of sleep every night, although the amount varies among individuals. Most people do not get enough sleep, and this lack of adequate sleep can have serious health consequences. For example, sleep deprivation weakens the immune system, increasing the risk of illness. Prolonged sleep deprivation may even cause irritability, mood swings, and other psychiatric problems. Compromised sleep also impairs a person's ability to perform simple tasks, which may lead to more errors at work.



Graduate student Jennifer Martin in front of a computer screen showing sleep/wake activity of a patient.

Is it Insomnia?

Do you watch the hands on the clock move from hour to hour? Do you waken many times during the night or wake early in the morning and have trouble falling back to sleep? Does this restless activity at night interfere with your ability to function during the day? Most people have trouble with sleep once in awhile. If problems sleeping occur frequently, however, you may have insomnia. Insomnia is defined as inadequate sleep or poor sleep quality that causes next day consequences and may be due to difficulty falling asleep, difficulty staying asleep, or unsatisfactory/non-restorative sleep.

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Sleep and Schizophrenia

by Danielle Kukene

People with schizophrenia often have disturbed sleep. Many of the reasons for sleep problems in these patients are the same as the reasons in individuals without schizophrenia. The more common sleep complaints found in patients with schizophrenia include excessive drowsiness during the day and difficulty falling or staying asleep at night. Sleep problems can be so debilitating that they interfere with daily tasks and subsequently decrease quality of life. Despite how common and how distressful insomnia is in people with schizophrenia, there has been limited research on the causes and treatment of disturbed sleep.

Unrecognized or untreated depression, which is quite common in individuals with schizophrenia, can cause abnormal sleeping patterns. Awakening much earlier than one intends is a typical symptom of depression and normal sleeping patterns often resume when the depression is effectively treated. Side effects from medications may also cause sleep problems. Some antipsychotic medications cause severe sedation, which leads to daytime sleepiness and naps. Long naps during the day may lead to difficulty sleeping at night. Other medications may cause an anxious, "jumpy" feeling, making it difficult to sleep at night.

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LETTER FROM THE DIRECTOR

Stephen R. Marder

Sleep Disturbances in Our Patient Population

Serious mental illnesses -- including major depression, bipolar disorder, schizophrenia, substance abuse, and dementia -- are nearly always associated with disturbances in sleep. As a result, providers of mental health services commonly include an assessment of the sleep cycle as an essential part of the evaluation of these disorders. The relationships are complex. For example, depression can be associated with either increased or decreased sleep. Insomnia can be an early sign of relapse in schizophrenia and excessive sleep can be associated with negative symptoms. The assessment is further complicated by medications which are used to treat these illnesses. Some antidepressants -- including fluoxetine -- can cause insomnia as a side effect whereas other agents can be sedating. This is also true for schizophrenia where agents such as clozapine can cause excessive sleeping at night and during the day. Poor sleep can lead to daytime drowsiness or irritability which -- in turn -- can interfere with attempts at returning patients to community life.

This issue of MindView focuses on sleep disturbances as an important target for assessing patients with serious mental illnesses and as a target for treatments. As noted in the article on Sleep and Schizophrenia, the routine evaluation of patients with schizophrenia should include the monitoring of sleep problems and the methods patients use to cope with these problems. In many cases, patients are unaware of the easy, but important steps that they can take to manage sleep disturbances. Caffeinated beverages -- particularly beverages taken late in the day -- can have serious effects on sleep as can excessive napping during the day. The article on Sleep and Insomnia provides advice that can be used by anyone -- including patients with serious mental illnesses -- to improve the quality of their sleep.

Understanding the disturbances in sleep that occur in mental illness may also provide a means for understanding the neurobiology of these disorders. MIRECC studies are focusing on the relations of sleep patterns to the course of serious mental disorders. Researchers within the MIRECC have examined the prevalence of more serious sleep disorders, such as sleep disordered breathing (where patients stop breathing for short time periods during sleep) or periodic limb movements in sleep (where patients kick their legs every 20-40 seconds throughout the night) to better understand some of the consequences in psychosis. They have also compared subjective reports of sleep complaints with objective recordings of sleep to better understand how to interpret complaints of sleep obtained in interviews. By recording sleep with special recording devices, these researchers are able to learn not only about sleep at night, but about napping behavior during the day and how these behaviors are effected by medications. In the future, the results of these types of studies will help in the development of improved treatment approaches for patients with schizophrenia. ◆

MIRECC Conference on

Treating Patients with Psychosis: Improving Functional Outcome

April 12-13, 2002
Radisson Resort & Spa Scottsdale, AZ

Contact: Kathy Arndt for more information Phone: (562) 961-8160 Email: kathy.arndt@med.va.gov

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Scheduled Topics and Speakers

Friday, April 12, 2002

8:30 am	Welcome, Opening Remarks and MIRECC Overview **Stephen R. Marder, M.D.** **Mark H. Wright, Ph.D.**
8:45 am	Keynote Presentation: Long-Term Treatment of Schizophrenia **Samuel J. Keith, M.D.**
11:00 am	Overcoming Obstacles to Treatment of Dual Diagnosis **Andrew Shaner, M.D.**
11:45 am	Involving Families in Recovery Process **Shirley Glynn, Ph.D.**
2:00 pm	Strategies after "Contact": SMI and the Criminal Justice System **John Junginger, Ph.D.**
2:45 pm	Improving Employment Outcomes for People With Severe Mental Illness **Deborah Becker, MED**
4:00 pm	Approaches to Improving Quality of Mental Health Care in the VA System **Alexander S. Young, M.D., M.S.H.S.**

Saturday, April 13, 2002

8:30 am	Psychosis in Older Adults **Laurie Lindamer, Ph.D.**
9:15 am	Treating Older Adults with Psychosis **James Lohr, M.D.**
10:15 am	Neurobiological Basis of Cognitive Deficits in Schizophrenia **David Braff, M.D.**
11:00 am	Cognition, Rehabilitation and Outcome in Schizophrenia **Michael F. Green, Ph.D.**

Sleep & Insomnia

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Insomnia is fairly common--12% of adults persistently have difficulty sleeping. While insomnia affects people of all ages, it becomes more common with age. Women are twice as likely to have insomnia than men, and people suffering from depression, anxiety disorders, or stress are also more likely to experience bouts of insomnia. Health problems, including pain, and use of medications are also associated with poor sleep.

Medications That May Cause Insomnia

- Alcohol
- CNS stimulants
- Beta-blockers
- Bronchodilators
- Calcium channel blockers
- Corticosteroids
- Decongestants
- Thyroid hormones
- Nicotine
- Stimulating antidepressants (MAOI's, buproprion, SSRI's, venlafaxine, protryptyline)

Medications That May Cause Drowsiness

- Analgesics
- Hypnotics
- Antihypertensives
- Antihistamines
- Anticonvulsants
- Tranquilizers
- Sedating Antidepressants (amitriptyline, doxepin, SSRI's, nefazodone, trazodone, mirtazepine)

Insomnia is categorized in three different durations: transient, intermittent, and chronic. Most people have experienced transient insomnia at one time or another. This type of insomnia lasts a few nights and is typically triggered by temporary stress or excitement. Anticipating a job interview or social event may trigger transient insomnia. This type of insomnia requires no treatment and usually subsides after the stressful or exciting event passes. Intermittent insomnia lasts up to three weeks and is typically the result of prolonged stress or anxiety. Sleeping difficulties should go away once the stress is gone, but sometimes requires treatment. Chronic insomnia is defined as sleep problems lasting for three or more weeks. It will usually persist if not treated. Some causes of chronic insomnia are depression or other illnesses that cause pain such as arthritis or cancer. Chronic insomnia may also be the result of behavioral problems such as persistent use of caffeine, alcohol, or tobacco.

Treating Insomnia

Treatment for insomnia begins with the proper diagnosis. Because there are many types of insomnia and many reasons for poor sleep, there are several ways to treat sleep problems. Altering health and lifestyle habits to promote better sleep (also called sleep hygiene) improves all types of insomnia and should be included as part of the overall treatment strategy. Behavioral techniques may include relaxation therapy to reduce anxiety and reconditioning to help associate the bed with only sleeping. Chronic insomnia is more challenging to treat. In addition to changing behaviors, chronic insomnia may require the use of sedative-hypnotics. There are many other techniques that work for people with insomnia, however, the first step is getting to a doctor. Insomnia *can* be treated with proper intervention.

Improving Sleep Hygiene

- Avoid caffeine, alcohol, and tobacco products, after lunch.
- Eat a light snack before going to sleep to avoid hunger.
- Get regular exercise but avoid exercising close to bedtime.
- Go to sleep and get up at the same time each day.
- Avoid daytime naps.

More information on common sleep disorders and sleep hygiene can be found in the book "All I Want is a Good Night's Sleep" by Dr. Sonia Ancoli-Israel. Additional resources can be found on-line at the National Sleep Foundation website, www.sleepfoundation.org and the American Academy of Sleep Medicine, www.aasmet.org. ◆

Sleep & Schizophrenia

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Lifestyle habits, such as consuming too much caffeine or not getting enough exercise, are often significant problems for people with schizophrenia and may contribute to sleep problems. In addition, there is research that suggests that disturbed sleep may be a symptom of schizophrenia. Researchers have compared sleep patterns in individuals without schizophrenia to individuals with schizophrenia. Individuals with schizophrenia, both those receiving antipsychotic medication and those who never received it, exhibited a significant disruption in sleep patterns, such as increased sleep latency (the amount of time it takes to fall asleep) and increased awakenings during the night. Within our MIRECC, Dr. Ancoli-Israel and her colleagues found that disturbed sleep in people with schizophrenia may be related to sleep apnea (sleep disordered breathing). Sleep disordered breathing in combination with an antipsychotic medication was also linked to excessive daytime drowsiness.

Dr. Ancoli-Israel, Dr. Dilip Jeste and graduate student Jennifer Martin, examined sleep/wake activity of older patients with schizophrenia. On average the patients were asleep for 8.5 hours a night and awake for 80 minutes, indicating that they slept only 86% of the night. When asked about their sleep, only 68% of these patients reported being satisfied with their sleep and 29% reported experiencing insomnia. One of the factors that contributes to good sleep is being exposed to bright light (such as sunlight) for about two hours a day. These patients were only exposed to 77 minutes of bright light a day.

Although the causes of sleep problems in people diagnosed with schizophrenia can be complex, a thorough assessment and treatment will most likely improve sleep and consequently, one's daily functioning and quality of life. ◆

THE FACES OF MIRECC

Sonia Ancoli-Israel, Ph.D.

Sonia Ancoli-Israel, Ph.D.

Dr. Sonia Ancoli-Israel *is a Professor in the Dept. of Psychiatry at the U.C. San Diego School of Medicine, Director of the Sleep Disorders Clinic at the VA San Diego Healthcare System and Co-Director of the Education Unit of the VA VISN-22 MIRECC. Dr. Ancoli-Israel received a BA from the State Univ. of New York, Stony Brook, and a Ph.D. in Psychology from U.C. San Francisco.*

Dr. Ancoli-Israel is one of the nation's leading experts in the field of sleeping disorders and sleep research in aging. Among her current interests are the longitudinal effect of sleep disorders on aging, the use of light therapy to improve sleep and behavior in nursing home populations and the relationship between circadian rhythms and cancer. She is President of the Society for Light Treatment and Biological Rhythms and has over 300 publications in the field. She is married and has two children.

What research is conducted at your sleep clinic?

The emphasis of my research has been on sleep in the elderly. We have shown that a sleep disorder called sleep apnea is more common in the elderly than in younger adults. Sleep apnea is a disorder during which people stop breathing during sleep which can lead to hypoxia, excessive daytime sleepiness, and cognitive impairment among other things. We have also shown the sleep apnea is even more common in patients with dementia than in cognitively intact elderly. One of our current studies is examining the effect of treating sleep apnea on cognitive functioning in patients with mild to moderate dementia. We are hopeful that if we can either improve cognitive functioning, or at least delay the decline of cognitive functioning, we might be able to postpone institutionalization.

Who might benefit from a sleep clinic?

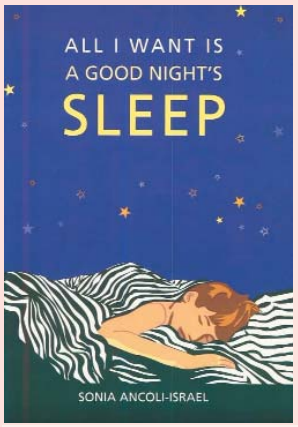
Patients who find that their nighttime sleep problems are interfering with their ability to function during the day should seek help from their health care professionals. If that person is unsuccessful in treating the problem, then the patient should be referred to a sleep clinic. In addition, patients who are excessively sleepy during the day (which means being unable to stay awake while driving, at meetings, at times when it would be inappropriate to fall asleep) should be seen by a sleep medicine expert.

How did you become involved in sleep research?

My training was in psychophysiology - the relation between the mind and the body. Sleep is one of the areas consumed within psychophysiology. I became particularly interested in whether the symptoms often seen in patients with sleep apnea (i.e., snoring, daytime sleepiness, hypertension, cardiological problems, cognitive impairment) might have anything to do with the symptoms often associated with aging (i.e., snoring, daytime sleepiness, hypertension, cardiological problems, cognitive impairment). This led to my first research grant, funded by the National Institute on Aging. I've been doing research in sleep ever since.

You wrote a book called, "All I Want is a Good Night's Sleep". For what audience was the book written?

The book was written for the general public - for people with difficulty sleeping or who are sleeping too much, who want to educate themselves first before seeking help, or to educate themselves on what to expect when seeking help. I had so often heard people say that sleep is not important, or that people with insomnia are just not working hard enough during the day. I wanted to teach the public that sleep is important, and that not sleeping is a serious problem that often has a physiological, not just psychological, cause.



All I Want is a Good Night's Sleep by Sonia Ancoli-Israel, Ph.D.

How is sleep research conducted?

There are many ways to study sleep from questionnaires to full sleep recordings. The "gold standard" is to record sleep by having people sleep in a sleep laboratory while having physiological systems such as brain waves, eye movement, muscle tension, respiration recorded. Some people find the wires a bit disturbing, but others have no trouble sleeping. Newer technology allows this same type of recording to be conducted in the patient's home. ◆

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