

LETTERS FROM MAINE

Too Many 'Raveled Sleeves'

Since we first met when I was in high school, Will Shakespeare and I have never been what you would call close. From time to time, though, I bump into an observation of his that suits my mood. One such passage, I'm told, comes from Macbeth:

Sleep that knits up the raveled sleeve of care, The death of each day's life, sore labour's bath, Balm of hurt minds, great nature's second course, Chief nourisher in life's feast.

Like the presidential candidate who had to keep reminding himself that it was the economy that concerned the voters, we pediatricians should continually remind ourselves that sleep deserves a spot at the top of our priority lists. And I'm not talking about getting house officers more sleep-friendly schedules or about building barricades of algorithms with which nurses can shield us from worried parents in the middle of the night. I'm urging that we acknowledge that sleep deprivation is the cause of many of our patients' complaints and problems.

Homo sapiens are not a nocturnal species, as witnessed by the fact that we have poor night vision, but since the opening of the first 'round-the-clock power plant in New York City in 1882 we have been artificially pushing back the night and eroding our opportunities for restorative sleep. A poll by the National Sleep Foundation found that adult Americans are now averaging

6.8 hours of sleep on week nights, which is more than an hour less than most sleep experts believe we need.

Quoted in an article in Harvard Magazine, Dr. Robert Stickgold, a cognitive neuroscientist specializing in sleep research at Harvard University said, "We are living in the middle of history's greatest experiment in sleep deprivation. . . . It's not inconceivable to me that we will discover that there are major social, economic, and health consequences to that experiment" ("Deep into Sleep," July-August 2005;107:25-33; available online at www.harvardmagazine.com/on-line/070587.html).

A sleep researcher at the University of Chicago discovered that sleep-deprived students produce half the number of antibodies in response to a viral challenge in the form of a flu vaccine. I'm not sure where she found a control group of well-rested college students, but I'm not surprised by her data.

The same sleep-deprived subjects also had evidence of insulin resistance and reduced levels of leptin, an endogenous appetite inhibitor. It makes one wonder how much of our obesity problem and the

emergence of metabolic syndrome in children may be the result of sleep deprivation.

Hyperactivity, irritability, and reduced attention span are all symptoms of sleep deprivation.

We shouldn't be surprised that stimulant medications have become so popular with parents and educators. An improvement in a student's performance when he starts taking amphetamines doesn't necessarily mean that medication was the best first choice.

Not wanting to get out of bed in the morning can be a symptom of depression, but depression is also a major symptom of sleep deprivation.

This can be a difficult chicken-and-egg situation to sort out, but, again, it makes me suspect that some of the surge in mental illness that I have witnessed during the last 30 years is the result of our inability to create and enforce sleep-friendly schedules for ourselves and our children.

In my experience, nocturnal and late-day leg pains—the kind that were once incorrectly labeled "growing pains"—are clearly the result of sleep deprivation. The same is true of migraine headaches and cyclic vomiting. So far, I have never had to

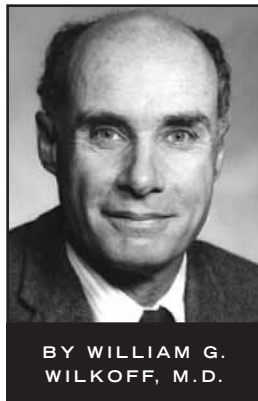
prescribe Imitrex (sumatriptan) because an aggressive approach to sleep and lifestyle management has always succeeded in those families who have made a serious effort to change the way they spend their days and nights.

It hasn't been easy for them, though. The erosion of our sleep has been so insidious that most parents don't realize that their families' schedules are providing insufficient opportunity for sleep.

School administrators and the organizers of extracurricular activities often seem oblivious to the situation and think nothing of scheduling activities, games, and practices at an hour that makes it impossible for children to get an adequate night's sleep (and a meal with their families).

Those of you who are regular readers of these epistles know that sleep deprivation is one of my favorite bandwagons. But the recent data about sleep-deprived metabolic syndrome and the relationship between sleep deprivation and immunity have prompted me to issue another reminder that we pediatricians should be taking thorough sleep histories and advocating for more sleep-friendly schedules for our young patients. ■

DR. WILKOFF practices general pediatrics in a multispecialty group practice in Brunswick, Maine. To respond to this column, write to Dr. Wilkoff at our editorial offices.



BY WILLIAM G. WILKOFF, M.D.

GUEST EDITORIAL

After Katrina: Musings by a Displaced Academic Cardiologist

My entire professional career, except for 2 years in the U.S. Army, has been centered in New Orleans—at Tulane Medical School, the U.S. Veterans Affairs Medical Center, and for the past decade on the faculty of Louisiana State University. Although the city has weathered many storms, nothing prepared us for the destruction following Hurricane Katrina.

In addition to the massive physical toll that Hurricane Katrina has taken on the Gulf Coast, the storm has also displaced patients, medical education, and clinical research.

At LSU, I supervised cardiology in two large clinics at Charity Hospital in New Orleans. The patients there were among the poorest people in the city, and you probably saw them in the continuous news coverage after the storm. These patients, who were always so grateful for the care they received, have lost not only their homes, but their connection to their health care system.

And many of the private practice patients are gone as well. We simply have no idea where most of them are at this point. In many ways, they were like members of our families, and now they are out receiving care, but from strangers.

The conditions in the aftermath of the storm have been especially hard on patients with heart failure, hypertension, and other cardiovascular diseases. Some are without their medications and many are unable to follow their diets. Add to that blistering heat and humidity and unimaginable emotional stress.

The situation has also displaced medical students, fellows, and house staff from the two major universities in the area—LSU

and Tulane University. In many cases, medical students are taking classes on other campuses or at different universities. However, the situation is more complex for fellows and house staff, who are required to do a certain volume of cardiovascular procedures to attain certification.

Another casualty of the storm is the research that was ongoing at the two universities. The storm damage

and flooding will have a tremendous impact on basic medical research. Materials stored for genetic testing as part of a clinical trial are likely destroyed. All of the basic medical research infrastructure will have to be rebuilt. Records may be lost, experimental animals in vivariums may be gone, and equipment may be damaged.

It's too early to know how the research will be affected. Some larger clinical trials with centers around the country will be less affected, while solo investigator-initiated studies may be lost, depending on where and how the information was stored.

While some of our lab results and other tests were stored electronically at LSU, much of the information was kept in paper records. The deciding factor in whether one's research and patient information is saved will be the location of the office. For instance, I believe that my own records have survived the storm because the water did not reach the third floor of my medical school. The need for electronic medical records is all too obvious now.

In the aftermath of this storm, we need to begin thinking about both our recovery and the need for preparedness should a disaster of this magnitude strike again.

I am optimistic that LSU's Charity Hospital, which has been a part of the New Orleans scene since 1736, will continue to be a fixture in the new city. The physical facility may need to be renovated, but the indomitable spirit will persist.

The challenge for the city's academic medical community will be to play a role in how the city is rebuilt. Our hospital and medical school leaders must be at the table and have a say in how medical care is restored to the city. The medical schools will need to make long-term plans that

will mesh the medical center with the rebuilding of the city's fabric.

Medical institutions are accustomed to preparing their facility to respond to an emergency, but there's a need to prepare also for disruption or even destruction of the facility itself in a crisis.

We need to be able to relocate patients and staff quickly. In this hurricane, many of the first responders also had to deal with the disruption of their families and homes. Physicians and other responders should at least be able to know what to do and where to go when the worst happens.

On a personal note, I stayed in my home in Metairie, La., during the storm but left the next day, as the floodwaters moved into the area. I got in my car and drove to Houston, and have been living in a hotel ever since. I hope that by the time you read this, I will have returned home.

In the meantime, I have been heartened by calls and messages from colleagues around the country, and I want to thank everyone for their concern. The road to recovery will be long, but I believe the city of New Orleans will thrive again—and so will its strong medical tradition. ■

DR. GILES is professor of medicine at the Louisiana State University and director of the program in cardiovascular research. He is also the president of the American Society of Hypertension.



BY THOMAS GILES, M.D.