THIS WAY IN

# Overmedicating for ADHD?

BRIAN SHUMWAY/REDUX

Does your child have difficulty staying focused, sitting still, or finishing a task? If so, he or she could be one of the three- to five-percent of school-age children who are diagnosed each year with attention deficit hyperactivity disorder (ADHD). Left untreated, ADHD can impact your child's ability to learn and make friends. The condition frequently occurs with depression and anxiety disorders, antisocial behavior, and substance abuse.

Although the jury is still out on the safety and effectiveness of various ADHD therapies, clinicians have learned a great deal since the National Institute of Mental Health launched its "Multimodal Treatment Study of Children with Attention Deficit Hyperactivity Disorder" (MTA) study more than a decade ago.

In that study, researchers at six university medical centers evaluated the three leading ADHD treatments in nearly 600 elementary school children, ages seven to nine. The children were randomly assigned to one of four groups: medication-only (methylphenidate); behavioral treatment-only; a combination of medication and behavioral treatment; and supportive services in communities and schools. (Behavioral treatment consisted of weekly parent training for six months, biweekly consultation provided to the child's teacher for three to four months, and an eight-week summer treatment program for the children.) The MTA study monitored the children closely for up to 14 months and then followed up one and two years later. After the 14 months of assigned treatments were completed for the original study, families were free to choose their child's treatment.

The first findings from this study, published in December 1999, indicated that long-term combination treatment or medication-only were both better in reducing ADHD symptoms than behavioral treatment-only or supportive services. These benefits lasted for up to 14 months.

Four reports that followed up on 485 children from the MTA study were published in the August 2007 issue of *Journal of the American Academy of Child and Adolescent Psychiatry*. These reports showed that most children treated for ADHD continued to show improvement three years after starting treatment. However, after the 14 months of controlled treatment ended, the initial advantages of medication (whether alone or in combination) over behavioral treatment-only or supportive services gradually diminished. Two years after the study ended, continuing medication treatment was no longer associated with better outcomes.

William E. Pelham, Jr., M.D., University at Buffalo Distinguished Professor of Psychology, Pediatrics, and Psychiatry and co-author of the MTA study, says that the MTA study is consistent with a large body of literature that fails to find any evidence of beneficial effects of stimulant medications on ADHD children's long-term outcomes.

A study by the Mayo Clinic, "Long-Term School Outcomes for Children with Attention-Deficit/Hyperactivity Disorder," published in the *Journal of Developmental and Behavioral Pediatrics* in 2007, found that long-term treatment of ADHD with stimulant medication is associated with decreased rates of school absenteeism (by one day per year) and less likelihood of repeating a grade.

> Drugs can help make kids **more available** to education/behavior interventions.

This study examined the effects of

medical stimulants such as methylphenidate (Ritalin), maternal age, socioeconomic background, and special-education services on academic outcomes. The study looked at the medical and school records of 370 children diagnosed with ADHD at the Mayo Clinic. The children treated with stimulants typically began taking medication in elementary school and received it for an average of 30.4 months.

Dr. Pelham suggests a few limitations of the Mayo Clinic study, including the fact that the researchers reviewed records rather than conducting face-to-face examinations with children, parents, and teachers. Plus, the study location (a mostly white, middle-class county) may not be representative of the entire population. The MTA study focused on families in real-time and from a wide range of ethnicities and economic status.

So what should parents take away from these two studies?

"Medication is a useful short-term adjunct for ADHD kids who are being treated with appropriate evidence-based behavioral and psycho-educational interventions when those interventions are insufficient," Dr. Pelham states. "But parents should not expect long-term benefits from medication. And, if treatment begins with medication, it undermines the probability of parents and schools engaging in appropriate non-drug treatments."

"Stimulants are useful for ADHD, but do not use them forever and try kids off of them—for example, during summers," recommends Isabelle Rapin, M.D., professor of neurology and pediatric neurology at Albert Einstein College of Medicine in Bronx, NY. "Drugs do not cure ADD with or without hyperactivity, but they can help make kids more available to education/behavior interventions, which are key."

Dr. Pelham adds, "Parents should insist that doctors hook them up with appropriate providers of evidence-based psychosocial treatments and that their insurance pays for those treatments. I'm concerned that medication is being increasingly used as the first and sole intervention of ADHD, and that parents are being told that it will help in the long run, when the evidence is very clear that it will not." —*Elizabeth Stump*

**QUICK TIPS**

## Managing Neuropathy

One of the most overlooked ways of managing a chronic health condition is to become active in the patient community. Getting involved allows you to give and receive valuable support and contribute to finding better treatments for your condition.

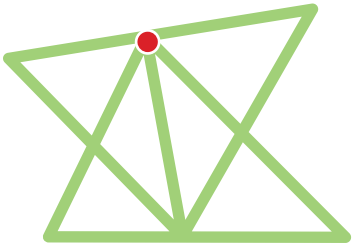
☑ SPREAD THE WORD: Sharing what you know about neuropathy and how it impacts your life can enlighten others about the challenges you are experiencing. It can also alert them to symptoms they might not have thought to tell their doctor about.

☑ ATTEND A PATIENT SUPPORT GROUP: Through The Neuropathy Association's national network of over 135 patient support groups across the U.S., patients can reach out to other patients locally to exchange experiences, share tips for coping, and offer mutual support. Visit **neuropathy.org** for an updated directory.

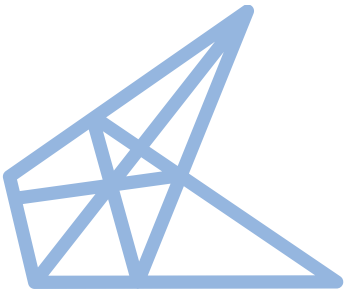
☑ CONSIDER ENROLLING IN A CLINICAL TRIAL: Go to **ninds.nih.gov** and search under "neuropathy" for a full list of clinical trials.

This May 11-15, 2009, has been designated "National Neuropathy Week." If you are a neuropathy patient—or someone who cares for and about a person who is—you can get involved by calling the Neuropathy Association at 212-692-0662 or e-mailing them at **info@neuropathy.org**. For more information on neuropathy, see Resource Central, page 37.

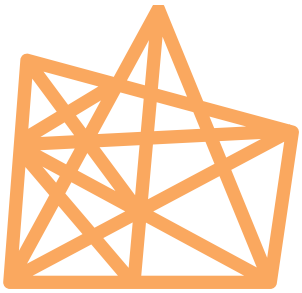
**NEUROBICS** Stakeout



**EASY** The diagram above represents a city street map. One police officer is positioned at the red dot. Add **one** more officer so that every point on every street can be seen by at least one of the two patrolmen. Officers can see only down the streets; tall buildings prevent them from seeing across the blocks.



**CHALLENGING** Position **three** police officers at separate locations on the map so every point on every street can be seen by at least one officer. To solve the problem, two of the officers must be able to see each other.



**DIFFICULT** Position **four** police officers on the map so that every point on every street can be seen by at least one officer. Hint: Three of the officers are on the same street.

SEE ANSWERS ON P. 13.

CW LAWRENCE/ISTOCKPHOTO

# THE WAITING ROOM

**BY THE NUMBERS**

## Primary Lateral Sclerosis

Primary lateral sclerosis (PLS) is caused primarily by degeneration of the upper motor neurons in the brain and spinal cord. When those neurons stop working, muscles become weak as well as spastic or stiff, reflexes become hyperactive, and maintaining balance becomes difficult. There are also lower motor neurons in the spinal cord, which are spared in PLS.

PLS is often referred to as a benign form of amyotrophic lateral sclerosis (ALS). In PLS, because only the upper motor neurons are affected, the muscles don't atrophy or waste away as in ALS. While more than half of ALS patients die within three to five years of diagnosis, PLS patients can live for up to 20 years with the disease.

There is no cure for PLS. One or more drugs to control tight, spastic muscles are usually prescribed along with assistive devices such as walkers or wheelchairs. Speech therapy is effective for those who have difficulty talking.

**1856:**

The year that Dr. Jean-Martin Charcot of France first encountered a patient who had severe spasticity but no muscle wasting. After the patient's death, the autopsy revealed extensive scarring in the spinal columns (involving the upper motor neurons)—what we now call PLS.

**500:**

The number of people in the U.S. who have PLS. Some doctors think the incidence rate may be as high as 2,000 because PLS is so difficult to accurately diagnose.

**50:**

The median age of onset for PLS. The disorder usually begins in the legs, but it may also start in the tongue or the hands.

**4:**

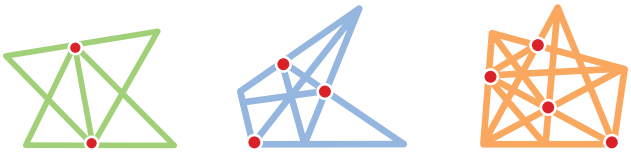
The average number of years it takes before a person is definitively diagnosed with PLS.

**1:**

Number of active PLS studies currently listed on **clinicaltrials.gov**.

Source: the Spastic Paraplegia Foundation (**sp-foundation.org**).

**NEUROBIC ANSWERS FROM P. 9:**



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**READING ROOM**

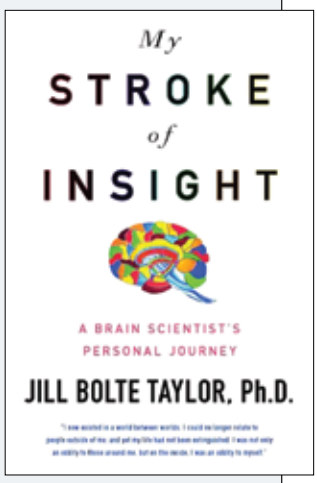
## *My Stroke of Insight*

(by Jill Bolte Taylor)

Jill Bolte Taylor was a healthy 37-year-old neuroanatomist at Harvard when, one morning in 1996, she suffered a massive stroke in the left hemisphere of her brain. In four hours she lost her ability to walk, talk, read, write, and remember parts of her past.

Yet Bolte Taylor not only recovered completely—a process that took eight years—but regards her stroke as a positive event that left her with a sense of peace, a less-driven personality, and new insight into the meaning of life.

In *My Stroke of Insight: A Brain Scientist's Personal Journey* (Penguin Group, 2008), Bolte Taylor, 49, shares lessons learned from a stroke patient's perspective, including tips for doctors, nurses, caregivers, and other stroke survivors. Perhaps most surprisingly, she recalls feeling an intense sensation of inner harmony and deep connection during the stroke that has remained with her. She believes this state of awareness is available to all people if they know how to look for it.




Today, Bolte Taylor—an adjunct professor at Indiana University Medical School—speaks widely to corporate and other groups about these insights; has appeared on Oprah Winfrey's TV program and *Soul Series* Web cast; and has a movie deal in the works. She also is developing a neurological rehabilitation device that incorporates virtual reality, biofeedback, and gaming. (To see Bolte Taylor speak about her experience, go to **ted.com** and type her name in the search window.)

One of Bolte Taylor's goals with the book, she says, was to reach doctors-to-be while they were still in school, to "influence the way they perceive the ability of the brain to recover." Some neurologists tell stroke patients most recovery occurs within the first six months post-stroke, leaving little hope for further improvement—advice with which Bolte Taylor strongly disagrees.

Among the lessons Bolte Taylor has for medical professionals and caregivers: Don't accept timetables for recovery, have hope in the brain's plasticity and ability to be repaired, and appreciate the value of sleep in the healing process.

"I've been given twelve years I almost didn't have," says Bolte Taylor. "To me, that is precious, sacred time. I wake up every morning, wiggle my toes and my fingers, and say to them, 'Good morning, girls; thanks for another great day.'" —*Lorna Collier*