

hould a terminally-ill woman be prosecuted under federal law for using marijuana to alleviate pain from an inoperable brain tumor? The decision handed down by an appellate court in March 2007 was yes. While the court sympathized with Angel Raich, a 41-year-old San Francisco woman who had been using the drug on her doctor's recommendation, they found that she lacked the legal grounds to be exempt from the law.

The use of medical marijuana is currently legal in 12 states, including California. But federal laws, which can override those of the states, still classify cannabis as a highly addictive substance with no medicinal value, thereby rendering the use, sale, and cultivation of the drug illegal.

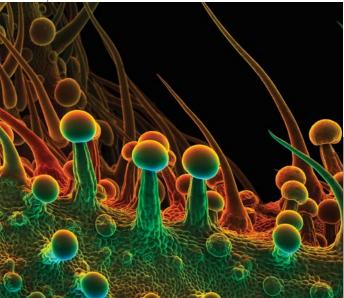
The legal impasse reflects the ongoing debate within the

medical community about the efficacy of therapeutic marijuana. Gregory T. Carter, M.D., clinical professor of rehabilitation medicine at the University of Washington School of Medicine in Seattle, says that while marijuana is not a panacea, it exerts its therapeutic effects with remarkably low toxicity compared to other commonly prescribed medications used for similar purposes.

Marijuana contains more than 60 "cannabinoid" compounds that are similar to the cannabinoids naturally produced by the human body. These compounds help regulate many bodily functions, including pain perception. Although medical studies of marijuana has been limited by legal hurdles and by the dearth of researchers willing to withstand them, there is some evidence in its favor:

Autism

EWAITING ROOM



- ▶ One of the first randomized trials of smoked marijuana showed that it significantly relieved the symptoms of peripheral neuropathy associated with
- ▶ Marijuana has been shown to help alleviate nausea, appetite loss, depression, and pain in patients suffering from cancer, HIV, and amyotrophic lateral sclerosis.
- ▶ Smoking marijuana can reduce intraocular pressure, a common cause of blindness in glaucoma patients.
- ▶ Anecdotal reports suggest that cannabis use may improve not only tics but also behavioral problems in people with Tourette's syndrome.

Still, many health professionals advise caution in prescribing cannabis. The drug carries a high potential for abuse, and some studies have linked its use with lung cancer and respiratory dysfunction. Re-

"People are always saying there's no evidence. I'm saying 'Here it is.""

—DONALD ABRAMS, M.D.

cent research also suggests that heavy and sustained marijuana use in teenagers leads to increased risk of developing psychosis and schizophrenia.

In a legalization controversy polarized as much by myth as politics, some researchers worry that the science is getting lost. Donald Abrams, M.D., director of clinical programs at the Osher Center for Integrative Medicine and head of the recent HIV neuropathy study, hopes that his work will help to tip the scales in favor of more research. "People are always saying there's no evidence. I'm saying 'Here it is."—Sean Chung

utism spectrum disorders (ASDs) are developmental disabilities. People with ASDs can have difficulty initiating social interactions, understanding other people's feelings or talking about their own, and adapting to changes in routine. The cognitive abilities of people with ASDs can range from severely challenged to gifted. Some children diagnosed with these disorders remain mute throughout their lives; others develop language as late as age 9.

1 in 150:

The estimated number of children born with an ASD, according to the Autism Society of America and based on 2007 data from the Centers for Disease Control and Prevention. Although the number has risen over the past decade, it's unclear whether this is due to a change in the way the condition is diagnosed or to a true increase in cases. Some groups interpret the CDC data differently and think the prevalence is lower. The rate of ASDs is lower than the rate of mental retardation but higher than the rates of cerebral palsy, hearing loss, and vision impairment.

4 to 1:

Number of boys who develop autism spectrum disorders, compared to the number of girls.

50:

Percentage of children with ASDs diagnosed between 4 and 5 years of age. Most children with ASDs have documented developmental concerns before reaching age 3.

1 in 4:

Number of children with an ASD who develop seizures, which usually start in early childhood or adolescence.

75:

Percentage of the time an identical twin will have an ASD if the other twin has autism.

3:

Percentage of the time a non-identical twin will have an ASD if the other twin has autism.

2-8:

Percent chance of having a second child with an ASD if you have already had one child with autism.

Source: National Center on Birth Defects and Developmental Disabilities (nimh.nih.gov); CDC Feb. 9 report, the first summary of prevalence data on autism spectrum disorders in the U.S.





OUR KIND OF GUY

Taking Action for Neuropathy

n 2003, Dominick Spatafora was diagnosed with multifocal motor neuropathy, a progressive muscle disorder that causes muscle weakness, cramping, and wasting in the hands and twitching of the legs. Treatment usually consists of intravenous immunoglobulin (IVIg) or immunosuppressive therapy with cyclophosphamide. Most patients who receive early treatment experience little, if any, disability; without treatment, the disease can become increasingly painful and debilitating.

"Right before my thirtieth birthday, I developed a serious tremor in my right hand," recalls Spatafora. "I was diagnosed with amyotrophic lateral sclerosis (ALS) and given three years to live. I received a second diagnosis of ulnar nerve transposition and was told I'd need surgery. Finally, I was diagnosed with multifocal motor neuropathy and started on IVIg immediately.

"IVIg was a miracle drug for me, until

my insurance provider told me that there was a national shortage." Spatafora did some detective work and discovered that the reason for the denial was more an issue of reimbursement than supply. "Meanwhile, I had gone three months without treatment and lost the use of three fingers." He appealed the decision and won.

"The first line of the letter back from the insurance company read, 'Dear Mr. Spatafora: We're pleased to inform you that we're granting you the appeal, but please do not discuss this with any other patients."

"That's when I lost it," Spatafora says. He channeled his anger into forming the Neuropathy Action Foundation (NAF) to educate the public about neuropathy, empower patients to take control of their health care, and teach people how to appeal denials at the state level.

"There are 20 million Americans affected by some form of neuropathy," Spatafora says. "One out of two people with diabetes have it. It's the biggest disease that people have never heard of."

The NAF is holding Neuropathy Action Awareness Day on June 26, 2007 at the University of California at San Francisco. This free event will include seminars and an evening reception and entertainment. Go to neuropathyactionfoundation.org for more info.

OUICK TIPS

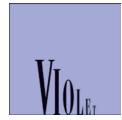
Manage **Neuropathic**

ith summer fast approaching there's no better time to get out and get moving. Exercise - even a little daily walk can reduce neuropathic pain, according to Laurence Kinsella, M.D., professor of neurology, on behalf of the Neuropathy Association. For a painfree summer also try the following:

- **✓** STOP SMOKING. Nicotine has been found to increase pain perception.
- ☑ LIMIT ALCOHOL CONSUMPTION. Limit yourself to four drinks a week. While alcohol may temporarily relieve pain, abuse can worsen pain symptoms.
- **☑** GET YOUR FEET EXAMINED. Have vour doctor check your feet at every visit, especially if you have breaks in the skin or an ingrown nail.
- ☑ CONTROL BLOOD SUGAR. Prolonged exposure to high glucose can cause neuropathy.
- **☑** AVOID EXCESS B6. This vitamin is known to cause neuropathy when used in excess of 100 mg daily.
- For more information, visit the Neuropathy Association's Web site at www.neuropathy.org.

NEUROBICS Can you figure out the common expression represented by each picture?











SEE ANSWERS ON P 15

WAITING ROOM



NEUROLOGY NEWS

Botox After Stroke

efore Hollywood fell in love with **Botulinum Toxin Type A** (BoNTA) for its ability to reduce frown lines, the drug was approved by the FDA for the treatment of crossed eyes, uncontrollable eye blinking, and head and neck pain due to cervical dystonia. At the American Academy of Neurology meeting in May 2007, the results of a 12-month trial of BoNTA for post-stroke spasticity were presented.

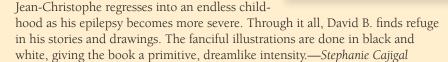
"In this study, treatment with BoN-TA significantly reduced spasticity in the wrist, fingers, and elbow and improved patients' mobility and ability to perform activities such as bathing and dressing," says Elie Elovic, M.D., director of traumatic brain injury research at Kessler Medical Rehabilitation Research and Education Corporation in West Orange, New Jersey and the study's lead investigator.

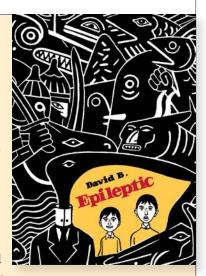
Spasticity occurs when muscles become overactive, making them tight, sometimes painful, and difficult to relax. Anywhere from 19

READING ROOM

Epileptic

onditions like epilepsy impact entire families. This is the theme of *Epileptic*, an autobiographical graphic novel translated from the original French *L'Ascension du Haut Mal*. The placid, postwar childhood of author **David B.**, (born Pierre-Francois Beauchard) is shattered when his older brother Jean-Christophe is struck by epilepsy at age 11. With few effective treatments available, the family ends up in a revolving door of New-Age quacks, and





percent to 38 percent of stroke patients develop spasticity, which can interfere with activities of daily living such as washing and dressing.

Seizure-Tracking

fter 20 frustrating years trying to track his seizures on paper, **Eric Schumacher** decided to take a digital leap.

"I was diagnosed with complex partial seizures at 19," says 39-year-old Eric Schumacher. "My doctor told me to track their duration, severity, and triggers. I jotted things down in a diary, but it was hard to find details when it came time to talk to him." So Schumacher created EpiTrax, a computer program that enables people to store a wealth of information about their seizures and triggers—exercise, mood, sleep patterns, school activities, diet, and more—all in one place.

"I'm impressed with it," says John Stern, M.D., associate professor of neurology at UCLA's Geffen School of Medicine. "Patients can gather detailed information that helps neurologists better understand their conditions, and the reports that EpiTrax produces simplify patient-doctor communication."

In a study of seizure tracking in the journal *Neurology* in 2007, Sheryl Haut, M.D., director of the Adult Epilepsy Program at Albert Einstein College of Medicine in New York City reported that "a significant sub-group of those with epilepsy were able to predict their seizures." Dr. Haut will be repeating the study with an electronic diary.

EpiTrax is available for Windows and can be downloaded at **neomedsoft.com** for \$49.99. Five percent of every sale goes to epilepsy-related services.

EXPRESS YOURSELF THROUGH ART

Do you have a secret talent for drawing, painting, or graphic design? Send us your artwork about living with a neurological condition. One submission will be published in the Nov/Dec issue of *Neurology Now* and the artist will receive \$100. People with epilepsy can also submit art to the Expressions of Courage contest, co-sponsored by the Epilepsy Foundation and Ortho-McNeil (**expressionsofcourage.com**).

NEUROBIC ANSWERS FROM P. 11: BORN UNDER A LUCKY STAR; SHRINKING VIOLET; SECOND NATURE; THREE RING CIRCUS; LESSER OF TWO EVILS.
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