HeadWise®

A Voice for People with Migraine and Headache Disorders
From the National Headache Foundation

Silver Lining
Treatment for migraine and depression

Patches, gels & injectibles
New tools for your treatment toolbox

5 RARE CHILDHOOD HEADACHES

The Page Turner

Author Andrew Levy on his migraine book—and pain

PLUS

TIPS FOR STAYING HYDRATED AND HEADACHE-FREE

STRESS AND HEADACHE AMONG MILITARY CHILDREN

HEADACHES TRIGGERED BY PLEASURE

$6.99

Volume 2, Issue 2 • 2012
www.headaches.org

NATIONAL HEADACHE FOUNDATION

Get *Head Wise* at home – Become a member today!

NATIONAL HEADACHE FOUNDATION

If you think a headache is just a headache, think again. Millions of Americans suffer from migraines, cluster headaches and other serious headache disorders. Chances are, headache disorders affect you or someone you love.

Join the cause by becoming a member of the National Headache Foundation, the world's largest voluntary organization for the support of people with migraine and headache disorders. For more than 40 years, the NHF has assisted millions of individuals seeking education and treatment for their various conditions.

Individual membership:	**$20 per year**
Professional membership:	
Physician:	$125 per year
Allied health:	$75 per year

With your membership, you'll receive:

A subscription to *Head Wise* magazine

The NHF News To Know monthly e-newsletter

Access to a wealth of headache research, support and information

Plus, your donation will support the NHF and help advance headache advocacy, education and research

To join, go to www.headaches.org/store/membership or call 1-888-NHF-5552.

contents

FEATURES

26

Down but Not Out

When migraine arises alongside depression, the combination can be suffocating. Thankfully, a variety of treatments are available to reduce pain and restore hope.

By Jackie Walker Gibson

32

7 Ways to Avoid the Summer Headache

The summer months bring fun and sun and a new set of triggers. Grab a seat in the shade and read these seven tips to keep you hydrated, protected and headache-free.

By Allecia Vermillion

36

A Novel Discovery

Author Andrew Levy's book on migraine has received praise from many migraineurs. Find out how he copes with his own headaches, and why he thinks evolution is responsible for the migraine brain.

By Katie Morell

Head Wise®

The National Headache Foundation • www.headaches.org

Mission
The National Headache Foundation exists to enhance the healthcare of individuals with headache. It is a source of help to their families, physicians and allied healthcare professionals who treat them, and to the public. The NHF accomplishes its mission by providing educational and informational resources, supporting headache research, and advocating for the understanding of headache as a legitimate neurobiological disease.

Vision
The National Headache Foundation is the premier educational and informational resource for individuals with headache, their families, physicians, allied healthcare professionals, and health policy decision makers. The NHF advocates for those experiencing headache. The organization employs the most effective means to disseminate information and knowledge about headache.

Publishing Partner
Imagination Publishing
600 W. Fulton St., Suite 600
Chicago, IL 60661
312-887-1000
www.imaginepub.com

Publisher
James Meyers
jmeyers@imaginepub.com

Editorial Director
Sarah Stone Wunder
swunder@imaginepub.com

Editor
Jackie Walker Gibson
jgibson@imaginepub.com

Director of Production
Kelley Hunsberger
khunsberger@imaginepub.com

Production Manager
Allison Bratnick
abratnick@imaginepub.com

Design Director
Doug Kelly
dkelly@imaginepub.com

Senior Art Director
Gretchen Kirchner
gkirchner@imaginepub.com

Senior Art Director
Tiffany Toft
ttoft@imaginepub.com

Director of Advertising Sales
Scott Reimer
sreimer@imaginepub.com

ADVERTISING SALES
Head Wise is represented nationally by M.J. Mrvica Associates, Inc.

Ad Agency
Amy Reuter
M.J. Mrvica Associates, Inc.
2 W. Taunton Ave.
Berlin, NJ 08009
Email: areuter@mrvica.com
Tel: 856-768-9360
Fax: 856-753-0064
www.mrvica.com

Head Wise (ISSN 2167-4280), Volume 2, Issue 2 is published quarterly by Imagination Publishing, Inc., 600 W. Fulton St., Suite 600, Chicago, IL 60661.
Periodicals postage paid at Chicago, IL 60699 and at additional mailing offices.

Postmaster
Send address changes to
Head Wise, NHF, 820 N. Orleans St., Ste. 411, Chicago, IL 60610

Send Us Your Feedback
We welcome your comments. Please indicate your name, address and phone number. Letters may be edited for clarity and space.

Mail: Seymour Diamond, MD
Executive Chairman
National Headache Foundation
820 North Orleans, Suite 411
Chicago, IL 60610
Email: sdiamond@headaches.org

Head Wise is sent to members of the National Headache Foundation. For information on membership, call 888-NHF-5552.

Check out additional *Head Wise* and NHF content at www.headaches.org.

NATIONAL HEADACHE FOUNDATION

Volume 2, Issue 2 • 2012

contents

IN EVERY ISSUE

4 NHF news
Learn what's happening in and around the National Headache Foundation.

6 reader mail
You ask. We answer. Get expert advice from leaders in the field.

9 you said it
Our readers have spoken. See what they have to say about *Head Wise*.

40 wise words
Read how migraine and headache sufferers are living life to the fullest.

DEPARTMENTS

10 research
THE HEADACHE TOOLBOX
Pills aren't the only option for treating headaches. Learn about patches, injectibles and gum treatments that could provide relief, without turning your stomach.

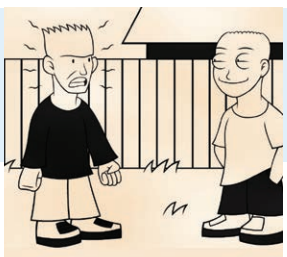
14 self help
BLINDED BY THE LIGHT
Bright light is a common migraine trigger. Use these tips to block it out.

20 invisible wounds
THE TOLL STRESS TAKES ON MILITARY CHILDREN
When a parent is away at war, a child's fears and worries can trigger new headaches. Communication is key to managing stress and bonding as a family.

22 growing pains
STRANGER THAN FICTION
Howard Jacobs, MD, describes five rare childhood headache disorders that require a trip to the emergency room, including one disorder that mimics the distorted imagery of "Alice in Wonderland."

25 know your headache
THE ROMANCE BUSTER
If the very activity that is intended to bring pleasure triggers head pain instead, you may be experiencing sexual headache. Learn to identify this disorder and find relief.

COVER PHOTOGRAPHY BY STEPHEN SIMONETTO



DID YOU KNOW?
Cartoonist Greg Fiering created the comic strip "Migraine Boy," which first appeared in 1992 in Seattle's *Hype* magazine. Migraine Boy's look included lines of pain radiating from his head and a fixed frown. Animated clips featuring the cranky character appeared on MTV in the late 1990s.

Benefit Success

Dr. Seymour Diamond with Master of Ceremonies John Garcia of ABC-7 News in Chicago

Dr. Seymour Diamond with the Marine contingent at the benefit

The National Headache Foundation (NHF) hosted its annual fundraising benefit, *Galaxy of Hope: Raising Headache Awareness to New Heights*, April 14, 2012, at the Adler Planetarium in Chicago. About 290 people attended the event, where John Garcia of ABC-7 News (WLS TV-Chicago) was master of ceremonies and auctioneer. Congratulations are in order for:

- The winner of a bottle of 1995 Carruades de Lafite Pauillac wine (worth $500): Susan Benton of Palo Alto, Calif.
- The winner of the annual raffle: Paula Dill of Moraga, Calif.

The event was a great success and will help the NHF fulfill its mission. The NHF would like to thank the event co-chairs, June Barnard and Katie Biggs, as well as the following sponsors:

Platinum Level
Allergan, Inc.
Dr. and Mrs. Seymour Diamond
The Walter S. and Lucienne Driskill Foundation
Elise & Marc Lefkowitz

Gold Level
Mary and James Beasley
Headache Care Center, Springfield, Mo.

Silver Level
Marsha and Chad Beste
Dr. and Mrs. José Biller
Drs. Kathleen and Roger Cady
Coordinated Benefits Company, LLC
Diamond Headache Clinic, Ltd.
Rosalind Franklin University of Medicine & ScienceHealth Monitor Network
Imagination Publishing
IntraMed Educational Group
Julie and Charles McKain
MAP Pharmaceuticals, Inc.
Dr. and Mrs. Vincent Martin
Jennifer and David Metz
PuraMed Bioscience
Provena Health–Resurrection Health Care
Debra, Jill, and Dr. Alan Rosenberg
Schuman, Simon & Grodecki, Ltd.
Law Offices of James M. Staulcup, Jr.
Zogenix, Inc.

Gold Winner: *Head Wise*
Imagination Publishing, NHF's publishing partner, won an EXCEL award from Association Media & Publishing, a membership organization serving the needs of association publishers, business operation executives, communications professionals, designers and content generators and the media they create. Imagination won the gold award for magazine design excellence for *Head Wise*.

Migraine Awareness Month

It is just short of 50 years that I've dedicated my career to headache research and treatment. During this time, we have seen a renaissance in therapeutics available for those experiencing headache. Most patients consulting a headache specialist or a physician knowledgeable about headache can now expect that their headaches can be controlled and possibly prevented. Yet there are millions of individuals who experience migraine but have not availed themselves of treatment (both pharmaceutical and behavioral) that can help them through their lifetime. It is my hope that Migraine Awareness Month, with its mission to "Help Make Migraines Visible," will motivate migraineurs to seek the resources available to them, such as the National Headache Foundation (NHF). It is our goal to not only educate those experiencing migraine, but also raise awareness to their family, friends and employers.

This year, in celebration of Migraine Awareness Month, the NHF hosted four chat rooms in June. Information on upcoming chat rooms is available on our website, www.headaches.org. Also, a public event was held on June 21 at the Newberry Library in Chicago. The program included presentations from four speakers and focused on raising awareness about various types of headache. Please visit our website for information on this program and other efforts to make migraines and other headaches visible.

—Seymour Diamond, MD
Executive Chairman and Founder

Support the Libby Fund

Libby Kandel, now 16, began getting migraines when she was just 10 years old. Eventually she developed a severe headache that rendered her unable to speak or use her right hand. She was diagnosed with hemiplegic migraine, a rare form of migraine sometimes accompanied by temporary motor paralysis on one side of the body and/or numbness on one side of the body.

So far, no treatment has brought Libby relief. In August 2011, she decided to form the Libby Fund at the NHF to increase public awareness and funding for research into causes and cures of hemiplegic migraine. A fundraiser was held March 18, 2012, in Scarsdale, NY. To learn more about the Libby Fund and donate to the cause, visit www.headaches.org/content/libby-fund.

Libby's parents, Emily and Paul Kandel, welcome attendees at the fundraiser for the Libby Fund.

Mark Green, MD, a member of the NHF Board, presents at the fundraiser for the Libby Fund.

Global Awareness

When you suffer from headache, you feel that you are alone with your pain. The International Association for the Study of Pain (IASP) is dedicating the next year to changing that perception.

IASP launched the 2011–2012 Global Year Against Headache to bring much-needed attention to the painful, often disabling condition. The campaign, which lasts until October 2012, will focus on providing headache education for health care professionals and government leaders, as well as general public awareness across the globe. The goal is to mobilize IASP's 7,000+ members and 86 national chapters to forge partnerships with other organizations and improve pain treatment for all types of headache sufferers.

Global Year Against HEADACHE Oct 2011 - Oct 2012

Announcement:

NHF is saddened to report the loss of **Donald W. Lewis, MD,** an active member of the headache community and chairman of the Eastern Virginia Medical School Department of Pediatrics. Dr. Lewis passed away from a cerebral hemorrhage on February 17, 2012, at the age of 60.

Chat with a Headache Specialist

NHF is hosting several live chats in 2012, offering members and visitors to the NHF website a chance to interact with headache specialists in an online environment. Each chat is assigned a topic and a headache specialist who answers questions in real time. Since the first chat in December 2011, NHF has hosted more than 10 live chats on topics such as fibromyalgia, stroke, allergy headache and more. Remaining topics for 2012 tentatively include:

- Pregnancy and headache
- Sexual headache
- Eye and headache
- Sports and headache
- Medication overuse
- And more

The number of participants for each chat is limited. To be a part of an upcoming chat, register on the NHF website at www.headaches.org/content/nhf-chat-room. If you have ideas for new chat topics, send an e-mail to info@headaches.org.

reader mail

You ask. We answer.

Tired of searching the Internet for answers? It's time to learn from those in the know. In every issue of *Head Wise,* our experts respond to reader-submitted questions about migraine and headache disorders.

BREATH OF FRESH AIR

My father has a variety of medical conditions, including Parkinson's disease and diabetes. He has severe headaches almost every day. His doctors continue to prescribe more and more medications, which are not working. He has had every test imaginable to rule out any serious medical issue that may be causing the headaches. He has tried acupuncture and Botox®, which provide minor temporary relief.

I have read many articles on oxygen offering relief for chronic headache pain. For some reason none of his many doctors are willing to even attempt this therapy. They just continue to prescribe more medications and, as you can imagine, he is using many medications already. Do you have any recommendations on how to convince any of his doctors to try oxygen treatments? My father's headaches are completely debilitating. He often can't even hold his head up.

—Debra K.

I'm sorry to hear that your father is having so many health issues. Extensive testing does not usually lead to headache control, unless it reveals an abnormality on MRI scanning, a carotid ultrasound or a blood test known as an erythrocyte sedimentation rate (sed rate). If he is on many painkillers, he will continue to have headaches, overshadowed by medication overuse headaches (formerly called "rebound" headaches). According to the International Headache Society, medication overuse headaches occur when a migraineur is taking combination analgesics (e.g., Excedrin®) or narcotics for 10 or more days per month, for more than three months. Medication overuse headaches can also be caused by the use of simple analgesics (e.g., Tylenol®) for 15 or more days per month. Even Botox will not help people with medication overuse headaches.

Episodic use of oxygen has been very helpful in cluster headaches but not of much value in other headache types. You need to begin with a proper diagnosis before considering treatment plans. If outpatient treatment fails, inpatient headache care is a viable option.

It sounds like you are looking for a rational approach to your father's debilitating headaches, and I strongly recommend that he see a board-certified headache specialist. His other illnesses may have an impact on medication choices, so a careful history and physical examination will be very important, as well as a careful assessment of other factors such as sleep apnea, depression and other conditions that might worsen a headache condition.

—Edmund Messina, MD, Michigan Headache Clinic, East Lansing, Mich.

The National Headache Foundation has a list of headache specialists who may be of help. See www.headaches.org or call 888-NHF-5552.

BLOCK OUT

I get three to four migraines per month, sometimes with aura, sometimes without. I find that my biggest triggers are my menstrual cycle and stress. Given this, which medication is more effective for migraine prevention: beta blockers or calcium channel blockers?

—Heather G.

There is no single answer to that question since these medications are selected on a very individualized basis. I think most headache specialists, myself included, would probably select a beta blocker before the calcium channel blocker, unless there are issues such as heart failure, asthma or other diagnoses that would be contraindications. Personally, I consider these medications second-line or "helper" drugs to add benefits to more commonly used first-line agents, such as amitriptyline or nortriptyline or the anti-epilepsy agents (e.g., topiramate or valproate) and others.

Since you mention a relatively small number of headaches per month, a straight abortive plan (using triptans) may fit your needs—especially if you can eliminate some of your triggers—rather than using a daily preventive medication.

Stress and the decline of estrogen levels at the end of a menstrual cycle will make migraines more likely to occur. Stress reduction techniques such as meditation, auto-relaxation or yoga are very helpful. Others find counseling for stress management or coping skills helpful. In extreme menstrual headache situations, gynecologists can offer non-estrogen strategies for eliminating menstrual cycles. Remember, the treatment of headache does not involve only medication; lifestyle and other factors must also be managed.

—Edmund Messina, MD, Michigan Headache Clinic, East Lansing, Mich.

SEVERE AND SWOLLEN

My 41-year-old son has been plagued with headaches for almost 15 years. His headaches were treated locally in Upstate New York; and then he traveled to Detroit where he was diagnosed with cluster headache and treated with Methergine®. It somewhat worked, but then the headaches began to trouble him severely once again.

He has since had a CT scan and MRI and received treatment locally, plus he has been diagnosed with chronic paroxysmal hemicrania. The headaches are very severe, and sometimes he curls up in a fetal position on the bathroom floor. Sitting across from him, you can see the change in his face: swollen eyelids, etc. He is now on a new medication (but not indomethacin, which the Internet says is the drug of choice), but that too is not working all that well.

He works in a dangerous, stressful job (as a therapy aide at a psychiatric hospital for the criminally insane), and we are not in a metropolitan area where there is great health care. He needs to work, doesn't have a ton of time to travel here and there, and of course, there is always medical insurance, which plays a large part in care and treatment for anything. Is there anything he can do? Help he can obtain? A study to partake in?

—Charlene R.

Cluster headaches are much more common than chronic paroxysmal hemicranias (CPH), particularly in males. The headaches are very similar, but cluster headaches usually occur once or twice a day for 20 minutes to two hours, whereas CPH attacks are much briefer and occur more often in a day. Both have eye tearing and nasal congestion and are very severe. CPH typically responds to indomethacin, whereas cluster headaches generally do not.

Your son needs to be seen by a headache specialist, as both of these syndromes need to be managed by experienced clinicians in headache medicine.

—Mark Green, MD, Mount Sinai School of Medicine, New York City

VARIETY SHOW

I'm in a vicious cycle of chronic migraines/daily headaches/cluster headaches. I'm trying to keep functioning by using pain medications only when I have no choice, while trying desperately to avoid rebound headaches. Does it do any good to vary the meds from day to day (Advil® one day, Fioricet® the next, aspirin the next, etc.)? I have Zomig®,

but I can no longer tell when my headaches are migraines and am afraid to take it in case it doesn't work—and then if it doesn't work, I'm afraid to take something else. Any advice? I don't remember the last day I didn't have a headache, and my life has turned into daily battles of trying to function. I'm being treated at a VA medical center and they don't have a headache specialist. I've learned more from your website than my doctors. Any ideas you have will be greatly appreciated!
—Linda D.

I suspect you started with episodic migraine headaches at some point in time. When the headaches become chronic or are present on a daily basis, migraine will evolve into a different type of headache, losing its basic characteristics of sensitivity to light and sound and nausea. It will start to present as a dull daily headache that worsens during the day.

Almost any medication used on a daily basis over time will cause rebound headache, and it is reasonable not to use any abortive medication more than two days per week. I suggest keeping a headache diary or calendar to note the type, incidence and severity of the headache and the medication you take for relief. If you have not done so, I would eliminate all caffeine, NutraSweet® and MSG from your diet. Pay particular attention to your sleep pattern, and do not skip meals. Furthermore, your level of anxiety or depression may need to be addressed.
—Gary E. Ruoff, MD, Westside Family Medical Center, Kalamazoo, Mich.

CAFFEINE JOLT

I have been suffering with daily migraines for more than 20 years. I am 69 years old. I have tried all kinds of medications, visit a chiropractor twice a week and have been using Excedrin Extra Strength® for the last two years. The medication has not completely removed my headaches, but they last only about an hour or two. I use ice packs religiously, which help. Once in a while I will get a really bad headache that lasts for hours.

I recently went to see a neurologist whom I found on the National Headache Foundation website (headaches.org), and he put me on Maxalt®. Six pills cost me $62—very costly. I have gone back to Excedrin®. I make sure to eat something when I take over-the-counter medications and recently had my blood levels checked, but I worry about liver or kidney problems from taking Excedrin every day. Do you think that I have arthritis in my neck? That is where it starts, and it goes up to the crown of my head. I had a scan of my head to rule out tumors as well. Unfortunately, the neurologist said I could possibly be a candidate for Botox®, but not until I try Maxalt for three months. Any advice?
—Terry S.

You state that you have had daily headaches for 20 years. Did these headaches start suddenly one day and never resolve, or did they appear gradually? I suspect part of your problem is a long history of caffeine ingestion, which needs to stop. Caffeine is a double-edged sword: it initially helps headaches, but then causes medication overuse headaches, which makes things worse.

It would be smart to have a scan of your neck. Arthritis or disc pathology may cause cervicogenic headaches, which tend to start at the base of the neck and radiate upward to the back of the head. The use of trigger point injections around the neck and shoulders may help. Trigger point therapy may also relax your neck and help your chiropractor address any spasm you are having in your neck. Non-pharmacological therapy with heat and range-of-motion exercises may also be beneficial. Once you break the cycle of daily headaches, the resultant episodic headaches can be handled by headache-specific medication, which do not include barbiturates or narcotics.
—Gary E. Ruoff, MD, Westside Family Medical Center, Kalamazoo, Mich.

Do you have a question for the NHF experts? Send it to info@headaches.org, and it could appear in our next issue.

you said it

New Discovery

"I received a bundle of *Head Wise* magazines in the mail today. I really enjoyed reading the magazine. When I saw it, I thought, 'What perfect timing!' I am scheduled to attend a health fair for a local company and have been asked to bring material specific to migraine and headache. I would love to bring this magazine!" —KATHY M.

"At my doctor's appointment today, I found a magazine called *Head Wise*, a very informative issue on migraines and a great link to the National Headache Foundation." —GLORIA K.

"I saw your magazine at the doctor's office yesterday…how do I subscribe?" —VICKI Z.

HW: We are so glad you found us! If you stumbled across this magazine and would like to subscribe, visit www.headaches.org and click "Become a member" at the top right of the home page. By joining the National Headache Foundation, you will receive a subscription to ***Head Wise****. (For more information, see the inside back cover)*

Positive Thinking

"(Regarding the article 'Happy Thoughts' from the Winter 2011 issue of *Head Wise*), I believe it is offensive and truly diminishes us as patients. I ask other readers to join me and request that you kindly print an apology and a retraction. The fact that you would actually stand behind this article is disgraceful and discouraging to all of us who are suffering." —AMY B.


naturally headache free

Happy Thoughts

You can begin to control headache pain by reining in your negative thinking.

Make Your Own Positive Affirmations

Follow these five simple guidelines for writing your own positive affirmations.

"There is some really good information in ('Happy Thoughts'). I have had a constant headache for almost two years, and I have different types of migraines. I choose to endure these headaches not suffer from them. Positive thinking does help." —APRIL I.

"It is very difficult to stay positive when the headache is 24/7, the experts cannot help you, medications don't help and one of the experts actually tells you that sometimes the headache just goes away on its own. It is very discouraging." —TEENA L.

HW: Thank you to everyone who provided feedback on this article. We apologize if this article was offensive. The intention was not to position positive thinking as a cure for migraines or headaches, or to minimize anyone's experience of migraines or headaches. We know that finding effective treatment can be very difficult and that relief cannot be achieved solely by thinking positively alone. This article was included to highlight one of the tools that can be helpful in coping with—but not curing—chronic migraine or headache.

If you have comments or suggestions about *Head Wise,* send them to info@headaches.org or post them on the NHF Facebook page.

The Headache Toolbox

New delivery systems help build out the toolbox of headache treatments.

By Jackie Walker Gibson

THE PRIMARY TREATMENT for headache is medication in pill form. But as many people with headache know, it's not the only option, and it might not be the best option, depending on how pills react with your gastrointestinal (GI) tract.

"People with migraine will manage multiple attacks of migraine over decades of time, so it is essential to understand that not all attacks of migraine are created equally," says Roger Cady, MD, associate executive chairman of the National Headache Foundation and founder and director of the Headache Care Center, Inc. in Springfield, Mo.

Dr. Cady notes that while some migraines are severe from the start, others develop more slowly. Some migraines are associated with severe symptoms such as nausea or vomiting and others with less intense symptoms. Some migraineurs have unique treatment needs because of their obligations and responsibilities that may lie ahead. "Consequently it is important that migraineurs have the right therapeutic tools to match their treatment needs," he says.

With seven triptans on the market, Dr. Cady notes that migraine patients often find themselves on a "merry-go-round of switching from one pill to another in pursuit of successful migraine control. The reality is that what many patients with migraine need is not another pill but a better, more effective means of delivering their migraine medication."

Nausea is a common symptom of migraine and also a common side effect of medication. According to the February 2012 issue of the journal *Headache*, 92 percent of migraineurs experience nausea during a migraine, and 31 percent of migraineurs report this symptom as interfering with their ability to take oral medications.

Fortunately, many new and novel products are available or being developed to meet migraineurs' needs.

Injectable medications provide one delivery system that may be prescribed to provide quick relief. The needleless injection—one new form of injectable approved by the FDA—propels medicine into the fat of the skin in one-tenth of a second, fast enough to push it through the skin but without the sting of a sharp needle.

Patches also bypass the GI tract, but their efficacy depends on the delivery method. Lidocaine patches are local anesthetics that (like some topical creams) can reduce pain in an area by temporarily dulling feeling. "Lidocaine patches are not commonly used as a treatment for migraine," Dr. Cady says. "They can be used to relieve muscle pain or skin sensitivity, but are not very

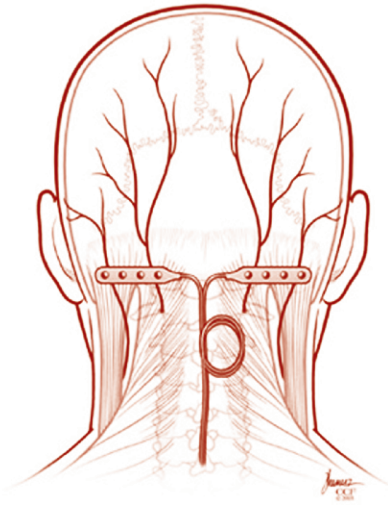
effective as a treatment for the headache itself. Lidocaine drops or nasal sprays have been used to treat cluster headaches."

Sumatriptan patches that use a tiny electrical current to deliver sumatriptan through the skin are also under development, Dr. Cady notes. The disposable patch works by applying a mild current to the skin, through which medicine flows to the tissues. The *Headache* study revealed that the patch could bring relief from nausea within one hour and relief from migraine in two hours. NuPathe®, whose previous transdermal sumatriptan patch Zelrix™ was not approved by the FDA, is currently developing a new patch called NP101 SmartRelief™ that has not yet hit the market.

Another delivery method still under investigation is anti-inflammatory gel. The gel contains ketoprophen, a nonsteroidal anti-inflammatory drug (NSAID), and can be rubbed on the gums during a migraine attack. Researchers have been investigating the theory that the NSAID in the gel will interfere with pain signals running along the trigeminal nerve, which has branches in the gums. "If researchers are going to conduct studies on the gel for treatment of migraine, they're going to have to show that it actually relieves migraine, not just the symptoms of migraine, in order to get FDA approval for the treatment of migraine," Dr. Cady says.

Whether you're treating headache or associated symptoms, Dr. Cady says the most important thing is to keep multiple tools at your disposal to treat each headache type. "Most of my patients have a tablet that's their mainstay of treatment, but it's an uncommon situation that a pill is the only tool a patient needs," he says. "Health care professionals and patients need to discuss those times when their migraine medications didn't work as well as they'd hoped. In that discussion, the need for alternate delivery methods becomes obvious. I try to build a therapeutic toolbox for my patients so they know how to select the right therapy for each headache." HW

A Stimulating Treatment



RENDERING COURTESY OF E-ALGOS

Headache disorders are prevalent, and while medical therapy provides relief to many headache sufferers, a significant number find their headaches unresponsive to treatment.

A new therapy shows promise for people with headache who are unresponsive to medical therapy: occipital nerve stimulation (ONS). The treatment, discussed in the January 2012 issue of the journal *Therapeutic Advances in Neurological Disorders*, was first used in 1999. It requires surgery to place electrodes in the back of the neck that connect (via a thin wire) to an implantable battery-driven pulse generator elsewhere in the body. The patient then controls the rate and intensity of pulses by using a handheld control.

Several studies have shown ONS to be beneficial. In one study of 25 people with treatment-resistant migraine, 88 percent reported at least a 50 percent reduction in headache days after the device was implanted. In a study of eight patients with cluster headache, 15 months after the ONS procedure, two patients reported their pain was gone; three reported a 90 percent reduction in the frequency of attacks; two had improved about 40 percent, and one person reported no benefit.

While the treatment shows promise, more information is needed regarding the most effective surgical techniques, the optimal electrical stimulation and which patients would benefit most.

BY THE NUMBERS

Of headache patients treated with Botox® in a recent study:

47% had at least a 50% reduction in headache days after 24 weeks

68% had a 50% reduction in headache days after 56 weeks

14% had injection site pain

2.7% reported adverse events (negative side effects)

Source: January 2012 issue of the journal *Headache*

HEADACHE IN THE E.R.

Headaches are common in the emergency room. In fact, headache is the fifth most common reason for a visit to an emergency department, representing two million visits per year. Of the acute headaches, migraine is the most frequent diagnosis made in an emergency department.

However, according to commentary from Randolph W. Evans, MD, and Benjamin W. Friedman, MD, MS, in the August 2011 issue of the journal *Headache*, ER physicians only receive two hours of structured primary headache lectures per year. When a headache patient appears in the ER, the ER physician will likely be focused on eliminating the possibility of life-threatening diseases and may, therefore, lump anything non-threatening into the category of migraine or nonspecific headache. Evans and Friedman admit that while medications used for migraine may still help other headache types, patients need an accurate diagnosis for longer-term therapy and treatment.

POP QUIZ

Up to 63 percent of adolescents with migraine and tension-type headache also experience:

a. numbness
b. nausea and vomiting
c. neck and shoulder pain
d. anxiety

See answer at bottom of page

TECH SUPPORT

Web-based self-management tools may be the ideal motivators for headache patients. A study published in the February 2012 issue of the journal *Headache* explored the effects of online behavioral tools on Internet users experiencing headaches. Researchers built web tools, such as interactive lessons to help people with headache learn cognitive behavior therapy, self-assessments to identify strengths and deficits in terms of behaviors, and user-generated advice.

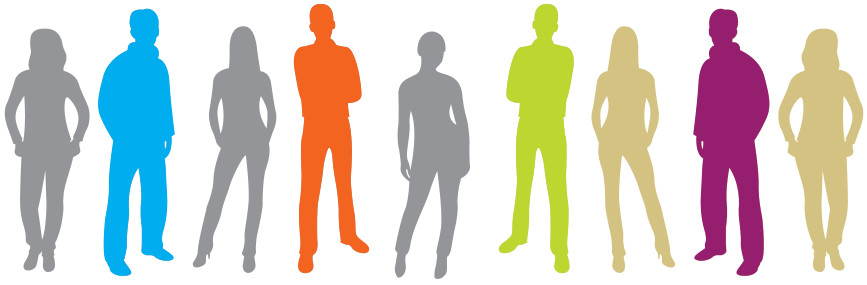
The results were extremely positive. Within three months, participants exposed to the website reported:

- Decrease in depression, stress and feelings of helplessness
- Increase in relaxation
- Increase in the use of exercise and social supports

The study concluded that self-management support helps people with headaches learn skills for headache management and find needed support.

Pop quiz answer: c

The Cluster Club



PEOPLE WITH CLUSTER HEADACHE are more likely to have brown and blue eyes than hazel eyes. It might seem strange to identify a headache patient by his or her eye color, but people with cluster headache do appear to fit a certain profile.

Approximately 500,000 cluster patients live in the United States. In late 2008, a U.S. Cluster Headache Survey was sent to approximately 9,000 of these patients and included 187 questions about everything from clinical to economic issues related to cluster headache. The results were published in the January 2012 issue of the journal *Headache*. Here's what they learned about U.S. cluster patients:

36% are between the ages of 21 and 30
80% have headaches on a daily basis
34% have brown eyes
42% spent five years waiting for a correct diagnosis
82% deny a family history of cluster headache
52% noted alcohol as a trigger
21% note an aura before a cluster attack
73% have a current or prior history of tobacco use

With such a high number of cluster patients reporting they are smokers, the results suggest that smoking is a risk factor for cluster headache.

Perhaps most concerning, of participants in the study, 55 percent have had suicidal thoughts, 17 percent have lost a full-time job as a result of cluster headaches and 11 percent noted they are homebound more than 30 days per year.

DID YOU KNOW?

Smoking is a known contributor to headache, both for those smoking and those impacted by second-hand smoke. Nicotine, one of the compounds found in tobacco, has vascular properties that may contribute to headache.

FAST FACT:

Women feel pain more intensely than men, according to a study published in the January issue of the *Journal of Pain*. Women report their pain levels to be **about 20 percent higher** than men for a number of conditions, from inflammatory pain to sinus infections.

Blinded by the Light

Strategies for avoiding the brightest migraine triggers

By Arianna Hermosillo

IT'S THAT MOMENT when you're driving and the oncoming driver hits the brights. Or when you're in the grocery store and the beaming fluorescent lights force you to wince in the cereal aisle. Many migraineurs know all too well how lighting can trigger an attack.

In fact, light sensitivity (also known as "photophobia") is probably the most common sensitivity that migraineurs face, affecting anywhere from 66 to 88 percent of migraineurs. "It's even more common than nausea and sensitivity to sound," says Vincent Martin, MD, vice president of the National Headache Foundation and professor of medicine at the University of Cincinnati.

Though it may not be possible to control all lighting in your environment, you can make your surroundings more bearable by better understanding how light can impact migraine.

THE MIGRAINEUR'S REACTION

Migraineurs are generally more sensitive to triggers (such as light) than the average person, says Robert Kaniecki, MD, director of The Headache Center at the University of Pittsburgh Medical Center.

"The migraine brain is fundamentally sensitive to multiple different sensory stimuli," Dr. Kaniecki says. Although light may top the list, you might also struggle with sensitivity to certain smells or sounds, and these can trigger a migraine.

Although researchers have not yet concluded exactly how light triggers migraine, Dr. Kaniecki attributes some of the connection to pain and light signals that converge upon the brain, which then processes the signals together.

For many migraineurs, light doesn't just trigger migraine pain—it may also make an existing migraine worse. "Your hypersensitive brain becomes even more sensitive during a headache or migraine," Dr.

Color Blind

Photophobia, or sensitivity to light, may cause some migraineurs to lose their perception of color. Patients experiencing migraine have a generalized impairment in the perception of the color red, according to research published in the June 2007 issue of the journal *Headache*. Perception of red was particularly worse for migraineurs who experienced sensitivity to light, so researchers noted that "it is conceivable that photophobia was responsible for the difficulties that migraine patients had in seeing red."

Kaniecki says, "and the baseline sensitivities will become amplified during the course of the attack."

HOW TO TAKE CONTROL

Following are four types of migraine-inducing light that you can avoid or deflect.

1. Sunlight

The sun is the most commonly reported light trigger, according to research published in the June 2009 issue of the journal *Headache*. Sunglasses can help to block out some of this light—if you know it's coming.

Dr. Kaniecki says his patients sometimes complain about the unexpected and sudden contrast from darkness to sunlight that occurs when stepping out of a movie theater. To avoid this unpleasant surprise, he suggests switching the lenses in your everyday eyeglasses to photochromic lenses that automatically darken when exposed to ultraviolet light.

2. Fluorescent lights

Although fluorescent lights are considered more energy efficient than the incandescent kind, Dr. Kaniecki says the whitish-blue color of fluorescent light is problematic for migraineurs.

The easiest solution for this lighting problem is to switch to incandescent bulbs or at least to switch to less-intense 60 to 70 watt bulbs. A simple dimmer switch, available at home improvement stores, can also help you control indoor lighting. Dr. Kaniecki says that those who work in an office environment should "try to use as much natural lighting as you can."

3. Filtered lights

Dr. Kaniecki has found that certain types of blinds filter light differently and that the horizontal light patterns negatively affect his patients.

The solutions here seem obvious: close the blinds, or swap blinds for shades or dark curtains. The important thing is to be aware that these window treatments that you might overlook could be the very objects triggering your pain.

4. Flickering lights

The visual cortex, or part of the brain that reads visual information, doesn't like flashing or flickering lights. Computers, particularly older computers, tend to have a subtle flicker effect that can irritate the eyes and trigger headaches, Dr. Kaniecki says.

To solve this issue (particularly if you sit at a computer all day at work), try a plastic guard. Or consider swapping that old computer screen for an anti-glare screen or an LED monitor. LED uses the same flat-panel technology that LCD uses—just without the use of fluorescent lights.

Whether you're the kind of migraineur who must wear sunglasses 24/7 or simply need to close the curtains on the brightest days, be proactive in identifying how light affects you. Adjusting your environment to your needs can help to eliminate the harshest triggers and remove the fear of the fluorescent bulb. HW

IMPORTANT SAFETY INFORMATION

BOTOX® may cause serious side effects that can be life threatening. Call your doctor or get medical help right away if you have any of these problems any time (hours to weeks) after injection of BOTOX®:

- **Problems swallowing, speaking, or breathing,** due to weakening of associated muscles, can be severe and result in loss of life. You are at the highest risk if these problems are pre-existing before injection. Swallowing problems may last for several months.
- **Spread of toxin effects.** The effect of botulinum toxin may affect areas away from the injection site and cause serious symptoms including: loss of strength and all-over muscle weakness, double vision, blurred vision and drooping eyelids, hoarseness or change or loss of voice (dysphonia), trouble saying words clearly (dysarthria), loss of bladder control, trouble breathing, trouble swallowing. **If this happens, do not drive a car, operate machinery, or do other dangerous activities.**

There has not been a confirmed serious case of spread of toxin effect away from the injection site when BOTOX® has been used at the recommended dose to treat chronic migraine.

Do not take BOTOX® if you: are allergic to any of the ingredients in BOTOX® (see Medication Guide for ingredients); had an allergic reaction to any other botulinum toxin product such as *Myobloc*® (rimabotulinumtoxinB), *Dysport*® (abobotulinumtoxinA), or *Xeomin*® (incobotulinumtoxinA); have a skin infection at the planned injection site.

ALLERGAN

ISN'T IT TIME TO REDUCE THOSE HEADACHE DAYS?

BOTOX® IS PROVEN TO SIGNIFICANTLY REDUCE HEADACHE DAYS EVERY MONTH.

- BOTOX® is the first and only FDA-approved, preventive treatment for people with Chronic Migraine.
- BOTOX® prevents up to 9 headache days a month (versus up to 7 for placebo).
- BOTOX® is injected every three months by your doctor.

BOTOX® may be right for you if you have migraine with 15 or more headache days a month with each headache lasting 4 hours or more. BOTOX® is not approved for adults with migraine who have 14 or fewer headache days a month.

Learn more at BOTOXChronicMigraine.com and find a doctor who treats Chronic Migraine patients. Because every day is important.

BOTOX® is a prescription medicine that is injected to prevent headaches in adults with chronic migraine who have 15 or more days each month with headache lasting 4 or more hours each day in people 18 years or older. It is not known whether BOTOX® is safe or effective to prevent headaches in patients with migraine who have 14 or fewer headache days each month (episodic migraine).

BOTOX® onabotulinumtoxinA

The dose of BOTOX® is not the same as, or comparable to, another botulinum toxin product.

Serious and/or immediate allergic reactions have been reported. These reactions include itching, rash, red itchy welts, wheezing, asthma symptoms, or dizziness or feeling faint. Tell your doctor or get medical help right away if you experience any such symptoms; further injection of BOTOX® should be discontinued.

Tell your doctor about all your muscle or nerve conditions such as amyotrophic lateral sclerosis (ALS or Lou Gehrig's disease), myasthenia gravis, or Lambert-Eaton syndrome, as you may be at increased risk of serious side effects including severe dysphagia (difficulty swallowing) and respiratory compromise (difficulty breathing) from typical doses of BOTOX®.

Human albumin and spread of viral diseases. BOTOX® contains albumin, a protein component of human blood. The potential risk of spreading viral diseases (eg, Creutzfeldt-Jakob disease [CJD]) via human serum albumin is extremely rare. No cases of viral diseases or CJD have ever been reported in association with human serum albumin.

Tell your doctor about all your medical conditions, including if you: have or have had bleeding problems; have plans to have surgery; had surgery on your face; weakness of forehead muscles, such as trouble raising your eyebrows; drooping eyelids; any other abnormal facial change; are pregnant or plan to become pregnant (it is not known if BOTOX® can harm your unborn baby); are breastfeeding or plan to breastfeed (it is not known if BOTOX® passes into breast milk).

Tell your doctor about all the medicines you take, including prescription and non-prescription medicines, vitamins, and herbal products. Using BOTOX® with certain other medicines may cause serious side effects. **Do not start any new medicines until you have told your doctor that you have received BOTOX® in the past.**

Especially tell your doctor if you: have received any other botulinum toxin product in the last 4 months; have received injections of botulinum toxin such as *Myobloc*®, *Dysport*®, or *Xeomin*® in the past (be sure your doctor knows exactly which product you received); have recently received an antibiotic by injection; take muscle relaxants; take an allergy or cold medicine; take a sleep medicine; take anti-platelets (aspirin-like products) or anti-coagulants (blood thinners).

Other side effects of BOTOX® include: dry mouth, discomfort or pain at the injection site, tiredness, headache, neck pain, and eye problems: double vision, blurred vision, decreased eyesight, drooping eyelids, swelling of your eyelids, and dry eyes.

For more information refer to the Medication Guide or talk with your doctor.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

Please refer to full Medication Guide including Boxed Warning on the following page.

Learn more and find a doctor near you, BOTOXChronicMigraine.com

MEDICATION GUIDE

BOTOX® and BOTOX® Cosmetic

(Boe-tox) (onabotulinumtoxinA)

for Injection

Read the Medication Guide that comes with **BOTOX** or **BOTOX Cosmetic** before you start using it and each time it is given to you. There may be new information. This information does not take the place of talking with your doctor about your medical condition or your treatment. You should share this information with your family members and caregivers.

What is the most important information I should know about BOTOX and BOTOX Cosmetic?

BOTOX and BOTOX Cosmetic may cause serious side effects that can be life threatening, including:

- **Problems breathing or swallowing**
- **Spread of toxin effects**

These problems can happen hours, days, to weeks after an injection of BOTOX or BOTOX Cosmetic. Call your doctor or get medical help right away if you have any of these problems after treatment with BOTOX or BOTOX Cosmetic:

1. Problems swallowing, speaking, or breathing. These problems can happen hours, days, to weeks after an injection of BOTOX or BOTOX Cosmetic usually because the muscles that you use to breathe and swallow can become weak after the injection. Death can happen as a complication if you have severe problems with swallowing or breathing after treatment with **BOTOX** or **BOTOX Cosmetic**.

- People with certain breathing problems may need to use muscles in their neck to help them breathe. These people may be at greater risk for serious breathing problems with **BOTOX** or **BOTOX Cosmetic**.
- Swallowing problems may last for several months. People who cannot swallow well may need a feeding tube to receive food and water. If swallowing problems are severe, food or liquids may go into your lungs. People who already have swallowing or breathing problems before receiving **BOTOX** or **BOTOX Cosmetic** have the highest risk of getting these problems.

2. Spread of toxin effects. In some cases, the effect of botulinum toxin may affect areas of the body away from the injection site and cause symptoms of a serious condition called botulism. The symptoms of botulism include:

- loss of strength and muscle weakness all over the body
- double vision
- blurred vision and drooping eyelids
- hoarseness or change or loss of voice (dysphonia)
- trouble saying words clearly (dysarthria)
- loss of bladder control
- trouble breathing
- trouble swallowing

These symptoms can happen hours, days, to weeks after you receive an injection of **BOTOX** or **BOTOX Cosmetic**.

These problems could make it unsafe for you to drive a car or do other dangerous activities. See "What should I avoid while receiving **BOTOX** or **BOTOX Cosmetic**?"

There has not been a confirmed serious case of spread of toxin effect away from the injection site when **BOTOX** has been used at the recommended dose to treat chronic migraine, severe underarm sweating, blepharospasm, or strabismus, or when **BOTOX Cosmetic** has been used at the recommended dose to treat frown lines.

What are BOTOX and BOTOX Cosmetic?

BOTOX is a prescription medicine that is injected into muscles and used:

- to treat leakage of urine (incontinence) in adults with overactive bladder due to neurologic disease.
- to prevent headaches in adults with chronic migraine who have 15 or more days each month with headache lasting 4 or more hours each day.
- to treat increased muscle stiffness in elbow, wrist, and finger muscles in adults with upper limb spasticity.
- to treat the abnormal head position and neck pain that happens with cervical dystonia (CD) in adults.
- to treat certain types of eye muscle problems (strabismus) or abnormal spasm of the eyelids (blepharospasm) in people 12 years and older.

BOTOX is also injected into the skin to treat the symptoms of severe underarm sweating (severe primary axillary hyperhidrosis) when medicines used on the skin (topical) do not work well enough.

BOTOX Cosmetic is a prescription medicine that is injected into muscles and used to improve the look of moderate to severe frown lines between the eyebrows (glabellar lines) in adults younger than 65 years of age for a short period of time (temporary).

It is not known whether **BOTOX** is safe or effective in people younger than:

- 18 years of age for treatment of urinary incontinence
- 18 years of age for treatment of chronic migraine
- 18 years of age for treatment of spasticity
- 16 years of age for treatment of cervical dystonia
- 18 years of age for treatment of hyperhidrosis
- 12 years of age for treatment of strabismus or blepharospasm

BOTOX Cosmetic is not recommended for use in children younger than 18 years of age.

It is not known whether **BOTOX** and **BOTOX Cosmetic** are safe or effective to prevent headaches in people with migraine who have 14 or fewer headache days each month (episodic migraine).

It is not known whether **BOTOX** and **BOTOX Cosmetic** are safe or effective for other types of muscle spasms or for severe sweating anywhere other than your armpits.

Who should not take BOTOX or BOTOX Cosmetic?

Do not take **BOTOX** or **BOTOX Cosmetic** if you:

- are allergic to any of the ingredients in **BOTOX** or **BOTOX Cosmetic**. See the end of this Medication Guide for a list of ingredients in **BOTOX** and **BOTOX Cosmetic**.
- had an allergic reaction to any other botulinum toxin product such as *Myobloc®*, *Dysport®*, or *Xeomin®*
- have a skin infection at the planned injection site
- are being treated for urinary incontinence and have a urinary tract infection (UTI)
- are being treated for urinary incontinence and find that you cannot empty your bladder on your own (only applies to people who are not routinely catheterizing)

What should I tell my doctor before taking BOTOX or BOTOX Cosmetic?

Tell your doctor about all your medical conditions, including if you:

- have a disease that affects your muscles and nerves (such as amyotrophic lateral

sclerosis [ALS or Lou Gehrig's disease], myasthenia gravis or Lambert-Eaton syndrome). See "What is the most important information I should know about **BOTOX®** and **BOTOX® Cosmetic**?"

- have allergies to any botulinum toxin product
- had any side effect from any botulinum toxin product in the past
- have or have had a breathing problem, such as asthma or emphysema
- have or have had swallowing problems
- have or have had bleeding problems
- have plans to have surgery
- had surgery on your face
- have weakness of your forehead muscles, such as trouble raising your eyebrows
- have drooping eyelids
- have any other change in the way your face normally looks
- have symptoms of a urinary tract infection (UTI) and are being treated for urinary incontinence. Symptoms of a urinary tract infection may include pain or burning with urination, frequent urination, or fever.
- have problems emptying your bladder on your own and are being treated for urinary incontinence
- are pregnant or plan to become pregnant. It is not known if **BOTOX** or **BOTOX Cosmetic** can harm your unborn baby.
- are breast-feeding or plan to breastfeed. It is not known if **BOTOX** or **BOTOX Cosmetic** passes into breast milk.

Tell your doctor about all the medicines you take, including prescription and nonprescription medicines, vitamins and herbal products. Using **BOTOX** or **BOTOX Cosmetic** with certain other medicines may cause serious side effects. **Do not start any new medicines until you have told your doctor that you have received BOTOX or BOTOX Cosmetic in the past.**

Especially tell your doctor if you:

- have received any other botulinum toxin product in the last four months
- have received injections of botulinum toxin, such as *Myobloc®* (rimabotulinumtoxinB), *Dysport®* (abobotulinumtoxinA), or *Xeomin®* (incobotulinumtoxinA) in the past. Be sure your doctor knows exactly which product you received.
- have recently received an antibiotic by injection
- take muscle relaxants
- take an allergy or cold medicine
- take a sleep medicine
- take anti-platelets (aspirin-like products) and/or anti-coagulants (blood thinners)

Ask your doctor if you are not sure if your medicine is one that is listed above.

Know the medicines you take. Keep a list of your medicines with you to show your doctor and pharmacist each time you get a new medicine.

How should I take BOTOX or BOTOX Cosmetic?

- **BOTOX** or **BOTOX Cosmetic** is an injection that your doctor will give you.
- **BOTOX** is injected into your affected muscles, skin, or bladder.
- **BOTOX Cosmetic** is injected into your affected muscles.
- Your doctor may change your dose of **BOTOX** or **BOTOX Cosmetic**, until you and your doctor find the best dose for you.
- **Your doctor will tell you how often you will receive your dose of BOTOX or BOTOX Cosmetic injections.**

What should I avoid while taking BOTOX or BOTOX Cosmetic?

BOTOX and **BOTOX Cosmetic** may cause loss of strength or general muscle weakness, or vision problems within hours to weeks of taking **BOTOX** or **BOTOX Cosmetic. If this happens, do not drive a car, operate machinery, or do other dangerous activities.** See "What is the most important information I should know about **BOTOX** and **BOTOX Cosmetic**?"

What are the possible side effects of BOTOX and BOTOX Cosmetic?

BOTOX and BOTOX Cosmetic can cause serious side effects. See "What is the most important information I should know about **BOTOX** and **BOTOX Cosmetic**?"

Other side effects of BOTOX and BOTOX Cosmetic include:

- dry mouth
- discomfort or pain at the injection site
- tiredness
- headache
- neck pain
- eye problems: double vision, blurred vision, decreased eyesight, drooping eyelids, swelling of your eyelids, and dry eyes.
- urinary tract infection in people being treated for urinary incontinence
- inability to empty your bladder on your own and are being treated for urinary incontinence.
- allergic reactions. Symptoms of an allergic reaction to **BOTOX** or **BOTOX Cosmetic** may include: itching, rash, red itchy welts, wheezing, asthma symptoms, or dizziness or feeling faint. Tell your doctor or get medical help right away if you are wheezing or have asthma symptoms, or if you become dizzy or faint.

Tell your doctor if you have any side effect that bothers you or that does not go away.

These are not all the possible side effects of **BOTOX** and **BOTOX Cosmetic**. For more information, ask your doctor or pharmacist.

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

General information about BOTOX and BOTOX Cosmetic:

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide.

This Medication Guide summarizes the most important information about **BOTOX** and **BOTOX Cosmetic**. If you would like more information, talk with your doctor. You can ask your doctor or pharmacist for information about **BOTOX** and **BOTOX Cosmetic** that is written for healthcare professionals. For more information about **BOTOX** and **BOTOX Cosmetic** call Allergan at 1-800-433-8871 or go to www.BOTOX.com.

What are the ingredients in BOTOX and BOTOX Cosmetic?

Active ingredient: botulinum toxin type A

Inactive ingredients: human albumin and sodium chloride

Issued: 08/2011

This Medication Guide has been approved by the U.S. Food and Drug Administration.

Manufactured by: Allergan Pharmaceuticals Ireland a subsidiary of: Allergan, Inc.
2525 Dupont Dr.
Irvine, CA 92612

ALLERGAN

Based on 72284US13C
APC16QH12

By Kelly Rehan

The Toll Stress Takes on Military Children

A parent's deployment can induce worry, fear—and headache—among children.

A CHILD WHO WATCHES a parent (or both parents) leave for military deployment shoulders a heavy burden.

When family dynamics shift in such a significant way, the child may experience chronic headaches or migraine—and this, pediatric neurologists say, is a reflection of the psychological trauma they experience when a loved one is away in a potentially dangerous situation.

Headaches are common in the pediatric population, and not just for children of military servicemen and women. In general, migraine incidence in children increases with age, from a few percent among young kids to 10 to 23 percent among high schoolers, according to Commander Michael J. Strunc, MD, child neurologist and sleep physician at the U.S. Naval Medical Center Portsmouth. Incidence is nearly equal among boys and girls prior to puberty, with a significant increase in girls as you move into adolescence, he says.

"As far as incidence of migraine, the numbers are the same for kids in the military as those not in the military," Dr. Strunc says. "What is different is what may trigger the migraine. There are some triggers that are unique, or more often present, in a military situation."

THE POWER OF STRESS

One trigger is the upheaval of moving, a routine event in the lives of many military families.

"Military kids have the excitement of moving every three to four years, on average," Dr. Strunc says. "They may move in first grade after making friends, then move in fourth grade and then in high school. And high schoolers, in particular, get a lot of stress from geographic moves because they've started forming stronger friendship bonds."

In addition to moving, there's the stress, fear, anxiety and worry that children experience when they say goodbye to a parent who is being deployed. And all too often, kids keep their emotions hidden, which only exacerbates their head pain and the co-morbidities that often accompany headaches, including somatic

complaints such as abdominal pain, and mood disorders such as depression and anxiety.

"When there's stress for any reason, there's a higher chance to trigger a migraine," Dr. Strunc says. "When I see a child who has a migraine, and his dad left last week for Iraq and will be gone for a year, and he's not sure what his dad is going to do, and he's worried his dad might not come home, but he doesn't talk about it? That's a trigger, and one that most kids do not encounter."

Of course, children aren't the only members of the household who suffer stress during a deployment. One of the best things parents can do to help their child during this time is find ways to effectively deal with their *own* stress, says Major Dalila Lewis, MD, FAAP, United States Air Force, child neurologist at the U.S. Naval Medical Center Portsmouth and Joint Base Langley-Eustis.

"Children often pick up on their parents' feelings of stress," Dr. Lewis says. "Parental stressors can often heighten the stress of the child."

In fact, according to research published in the August 2009 issue of the *Journal of Developmental & Behavioral Pediatrics*, "the most significant predictor of child psychosocial functioning during wartime deployment was parenting stress." Decreasing the level of stress perceived by children is one way parents can actively help prevent children's headaches.

THE POWER OF COMMUNICATION

When a family member is deployed, it might seem easier to ignore the pain it may cause. But a lack of communication could impact the entire family's emotional and physical health.

"Communication is really the best thing that parents can do, especially for adolescents, who are more likely to discuss things with their friends," Dr. Lewis says.

From a child's perspective, talking to a parent or sibling about stress is very different than talking to a friend or professional counselor. Children may feel safer talking about sensitive topics with someone outside of the family unit, especially when those topics relate to family problems. If you don't feel like your child is engaging in a dialogue with you, seek out a professional to help, Dr. Lewis says. When the child begins to talk about his or her headaches and associated factors, it assists parents and physicians in identifying potential headache triggers.

"I talk to kids about what is going on in their family, and that's a window into the stress level of the child," Dr. Strunc says. "When there's stress or anxiety in children, it can be hidden. It's not very often that a teenager says, 'Mom, I'd like to tell you about the stress and anxiety going on in my life.'"

Parents aren't the only external factor that can contribute to stress-induced headache. Media influences may exacerbate children's fears surrounding their parents' deployment, Dr. Lewis says.

"It's suspected that media enhance fears of deployment, which is somewhat hard for physicians and parents to combat," Dr. Lewis says. "Some parents don't recognize what their children are watching and how much that exposure is contributing to their child's stress."

This is where an open forum for dialogue can really pay off. "It is very common for headache to increase during the time of deployment," Dr. Lewis says. "If parents can anticipate that—and not just parents but the community and teachers—and allow a forum for talking, that helps." HW

Resources for Relief

Dr. Lewis recommends these websites for children experiencing headache who have a parent or parents in the military:

MilitaryOneSource.mil: From counseling services to social events, this site offers a wealth of information and lists activites and resources for children, adolescents and parents (e.g., upcoming social and community events). "They can meet up with other families who are going through the same things," Dr. Lewis says.

www.MigraineAndMe.ie: This resource, developed by the Migraine Association of Ireland, is intended for children, teens, parents and teachers to learn about migraine. "It has fun animation and graphics that appeal to all age levels," Dr. Lewis says.

If you are a soldier looking for help, visit the NHF War Veterans Resource Initiative at www.headaches.org/warveterans.

By Howard Jacobs, MD

Stranger Than Fiction

These five childhood migraines are rare and bizarre. One even mimics the events of a storybook.

YOU'VE HAD MIGRAINES BEFORE, and you suspect your 12-year-old son has them, too. One evening, he comes running into the room holding his head and crying. He tries to speak, but nothing understandable comes out. Your first thought: ***My son is having a stroke!*** You call 911. Paramedics arrive and drive your child to the emergency room. But a CT scan reveals nothing abnormal. It's the kind of event that can make you panic and leave you reeling.

Headache among children is not uncommon. In fact, anywhere from 37 to 51 percent of elementary age children experience headache. Migraines are the recurring headache most frequently reported among the pediatric population, affecting 1 in 10 children. But some migraines are far from common and need to be addressed immediately.

©SSPL VIA GETTY IMAGES

A RARE BREED

The following obscure migraines represent some of the frightening headache disorders that could arise among children and adolescents.

1. CONFUSIONAL MIGRAINE

Strange symptom: inability to communicate

The scenario described in the introduction could occur in a child with confusional migraine. First noted in 1970 in the journal *Pediatrics*, confusional migraine involves a headache associated with disorientation and an inability to communicate, often the result of a minor head injury. The condition, typically seen in preteens and early teenagers (more often boys than girls), results in confusion and even combative behavior.

Interestingly, confusional migraine may come with no headache at all. And while it may last up to several hours, it usually resolves spontaneously, never to appear again.

2. "ALICE IN WONDERLAND" SYNDROME

Strange symptom: visual distortion of bodily image

Although migraine is relatively common among

children, migraine with aura, which includes a warning sign such as a visual hallucination prior to a migraine attack, is less common among children. Even rarer, though particularly disturbing, is a type of migraine with aura known as "Alice in Wonderland" syndrome.

"Alice in Wonderland" is a visual spatial disturbance involving a child or teen's body image. They may see their bodies in a distorted shape or size—similar to what has been described in Lewis Carroll's *Alice in Wonderland*. It is thought that Carroll himself may have suffered from these types of migraines. In one case, described in a 1979 issue of the journal *Pediatrics*, an 11-year-old girl describes her arms feeling like twigs or her hands feeling small. Stranger than fiction, indeed, and the type of thing that can really frighten a child.

3. HEMIPLEGIC MIGRAINE

Strange symptom: temporary paralysis

Like "Alice in Wonderland" syndrome, hemiplegic migraine, is also a type of migraine with aura and can be divided into two types: the kind that is passed down through generations of a family and the sporadic type that develop with no family history. Though it generally runs a limited course, hemiplegic migraine involves one of the most frightening forms of aura: The child may suddenly develop a one-sided weakness or even paralysis in as little as the face or as much as an entire side of the body.

Following the aura, up to an hour later, a headache typically develops and can occur on either side of the body. Perhaps most frightening, the weakness may persist even after the headache is treated.

4. BASILAR MIGRAINE

Strange symptom: appearing intoxicated

A third form of migraine with aura is basilar migraine. In this case, instead of an aura that involves a distorted body image, the aura involves episodes of severe dizziness, double vision and difficulty with balance and walking lasting up to about an hour. Children as young as seven can have this condition. They may describe their pain as "behind the eyes," appear intoxicated or even pass out.

Two More to Watch for

These two precursors to headache occur in the pediatric population and also require emergency medical attention:

Benign paroxysmal torticollis: It's not uncommon to see a baby move his head to the side—but if he can't move it back into position, the baby may be experiencing the twist and stiffness of torticollis. These recurrent episodes of head tilt to one side among infants may be accompanied by vomiting. So a trip to the physician is important to rule out gastrointestinal reflux. Usually these babies are born into families where there is a previous history of migraine, and research suggests there may be a specific gene associated with the disorder. But the condition is still so rare that only 103 cases have been noted in literature.

Benign paroxysmal vertigo: This disorder, which occurs in younger children ages two to five, involves sudden episodes of loss of balance, usually accompanied by vomiting and pallor. After sleep, their balance returns to normal. Research published in the March 2011 issue of the journal *Cephalalgia* found that attacks ended around the median age of six years, though there was wide variation. And a majority of the children reported having recurrent headaches even after the vertigo resolved.

The National Headache Foundation has a list of headache specialists who may be of help. See www.headaches.org or call 888-NHF-5552.

growing pains

5. CYCLIC VOMITING/ABDOMINAL MIGRAINE

Strange symptom: bouts of vomiting

These two conditions are often considered together, as both tend to occur more often among families where there is a history of migraine and both involve the gastrointestinal tract. Cyclic vomiting, which typically occurs in younger children with an average age of six, involves recurrent episodes of repeated vomiting, at least five times per hour. Between bouts of vomiting, children may report feeling fine but they may be dehydrated. Migraine is not typically part of cyclic vomiting; however, most of these children develop migraines when they get older.

Children with abdominal migraine tend to be a bit older than those with cyclic vomiting. They experience intermittent attacks of vague stomachaches that are not associated with either diarrhea or constipation. Research from the March 2011 issue of the journal *Headache* suggests that four to 15 percent of children referred to a specialist for abdominal pain have abdominal migraine.

NOT TO BE TOYED WITH

Any childhood headache that is recurrent, worsening or interfering with the child's activities should be checked out. But if your child experiences any of the stranger symptoms described above, a trip to the emergency room is mandatory to rule out more serious conditions. The emergency room physician will want to gather all relevant information to ensure that symptoms like dizziness and weakness are not a sign of something worse like stroke, brain tumor, ulcerative colitis, drug ingestions, severe hydration, meningitis, etc. Your child may need blood work, a CT scan or an MRI to rule out the more serious conditions.

Once a proper diagnosis is made, it's important to consult with a headache specialist to develop a treatment plan that the family and child can work through together. Treatment for these rare migraine disorders is the same as treatment offered to children with other types of migraines. This might include ice packs, magnesium, NSAIDs, abortive medications and anticonvulsants in IV form.

It should be noted that, while it's less likely, adults can also experience these conditions. In these cases, it is even more important for an adult to see a physician for a diagnosis, as it is more likely in the adult population that these symptoms are a sign of something more serious, like a stroke. HW

HOWARD JACOBS, MD, is co-director of the Pediatric Headache Clinic, University of Maryland School of Medicine, Baltimore, Md.

How Common Is It?

They're rare, sure. But just how likely is your child to experience one of these strange disorders compared to more common conditions? Here are the numbers.

Headache	**37-51%** of all children
Migraine	**3.5-10%** of all children
Basilar migraine	**3-19%** of children with migraine
Cyclic vomiting	**0.0004-0.02%** of all children
Abdominal migraine	**20%** of children with migraine

Hemiplegic migraine and "Alice in Wonderland" syndrome are so rare among children that incidence has not been widely documented.

By Erin Golden

The Romance Buster

When sex triggers head pain, treatment may be needed to get your love life back on track.

Not tonight, dear, I have a headache.

Maybe you've heard that one before. But if you or your partner experiences sexual headache, it's the kind of excuse to take seriously.

"It will stop you in your tracks," says Frederick G. Freitag, DO, a member of the NHF board and medical director for the Comprehensive Headache Center at Baylor Health Care System and director of headache medicine research at Baylor Research Institute in Dallas.

Sexual headache is probably not life threatening. But the pain can stick around for hours after sexual activity. Learn more about this headache to determine whether you might need to see a headache specialist for treatment.

RECOGNIZE YOUR HEADACHE

Coital cephalalgia, or sexual benign headache, is triggered by sexual activity. It may appear in two forms: as a tension-type headache (the result of the alternating tension and relaxation) or an exertional headache (the result of the blood-pumping activity and excitement).

People who experience coital cephalalgia may have similar symptoms to migraineurs including nausea and sensitivity to light, says Jerome Goldstein, MD, director of the San Francisco Headache Clinic. The pain itself may feel sharp and could last between 12 and 24 hours. But unlike most migraines, a sexual headache is usually a new development that makes its first appearance after sexual activity.

IDENTIFY THE TRIGGER

Researchers aren't exactly sure why sexual activity triggers coital cephalalgia. What they do know is that a specific segment of the population is more prone to these headaches. They affect more men than women, more people at middle age than young people, more migraineurs than people with other types of headaches and more people who have other health issues including high blood pressure and obesity.

"The biggest issue is the state of general physical health," Dr. Freitag says. "If you are 30 years old, horribly out of shape and haven't done anything physically active in a decade, you could get an exertion-related headache."

FIND RELIEF

Taking the headache out of sex starts with a visit to a headache specialist. Whether it's your first sexual headache or it just won't go away, Dr. Goldstein says it's important to get a full diagnostic workup (likely including an MRI and possibly an MRA scan of the blood vessels). Because this type of headache may involve incredibly sharp pain or pain with a longer duration, Dr. Goldstein says it is important to rule out bigger problems such as brain aneurysm, brain tumor, meningitis or encephalitis, or a systemic inflammatory condition such as giant cell arteritis or polymyalgia rheumatica.

Once sexual headache is diagnosed, a headache specialist may prescribe an anti-inflammatory medication, such as indomethacin, as treatment. "This type of medication is taken a half hour to an hour before sex," Dr. Freitag says. "This could be a problem for those for whom sex is entirely spontaneous. But for most people it's not entirely spontaneous, so there is the opportunity to do something before you begin." Other patients may find relief with the help of a beta blocker such as propanolol.

In many cases, half the battle is reducing the anxiety that can come with the headaches. Dr. Goldstein says it's a bad cycle for many of his patients: They get a headache during sex, so the next time they become anxious about getting a headache, which leads to another headache. Dr. Goldstein says information is the most powerful treatment for this type of anxiety: "The most productive thing a health specialist can offer is appropriate counseling to put the patient at ease that this condition is not harmful." HW

Down but Not Out

Depression and migraine bring two-fold pain and a feeling of helplessness. But early treatment can reverse the slippery slope of sadness.

BY JACKIE WALKER GIBSON

It's hard to imagine a time when Seymour Diamond, MD, was not focused on headache. But in 1960, the executive chairman and founder of the National Headache Foundation (NHF) and director emeritus of the Diamond Headache Clinic in Chicago, spent his time in general medicine.

"I had a large family practice and I did research, but I knew nothing about headache," he laughs.

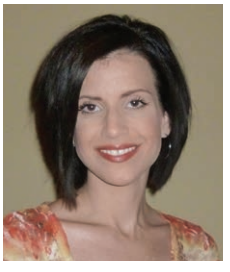
That year, Dr. Diamond was approached by Merck, Sharpe, and Dohme (now Merck & Co.), a pharmaceutical company that was investigating the use of amitriptyline (a tricyclic antidepressant) to treat somatic complaints, or those relating to the psyche. The drug was marketed for treatment of depression in 1961, and Dr. Diamond undertook a study to examine the positive impact amitriptyline had on his own patients' somatic complaints. During a presentation of his results, he was approached by Lester Blumenthal, MD, then secretary of the American Association for the Study of Headache (now the American Headache Society), who wondered if Dr. Diamond had considered the use of those same tricyclics to treat headaches. That inspired Dr. Diamond to examine the drug's benefits for both headache and depression.

Today, the ties between major depression and migraine are well documented. The conditions share some symptoms: trouble sleeping, decreased energy, decreased concentration, pain. But it wasn't until the early 1960s, when Dr. Diamond's research was published in the journal *Headache*, that the world learned that the very medication that brought positive responses for depressive patients was also effective at treating migraine.

Major depression and migraine are two pain-filled, stigmatized conditions. But people who experience the comorbidity

Julie's Story

Julie McDonald, 35, has had migraines since childhood. But after she finished high school, she finally saw a headache specialist who diagnosed her with migraine and chronic daily headache. By her mid-twenties, the pain intensified.



"I was in constant pain and felt really helpless and hopeless," recalls McDonald, who lives in Green Briar, Ark. "It felt like everything I wanted in life was slipping away from me. I was in law school at the time and couldn't complete school; I couldn't really enjoy my marriage or my friends."

That hopelessness was later diagnosed as clinical depression.

"It's a paralyzing and suffocating feeling, and it feels like it will never end," McDonald says. "It disrupts everything in my life: how I sleep, how I eat, who I want to be around and what I feel like doing, how I feel about myself. It's a crushing weight."

Despite the need for support, McDonald says she felt the stigma associated with depression and hid it for fear that others would see her as sick. But "you can't just will yourself to get better," she says.

McDonald manages her headache and depression with support from her husband and parents as well as a cadre of medications. She also had a manual vagus nerve stimulator implanted in her chest. McDonald wasn't sure if the device was relieving her pain until the battery began to weaken last year and her depression came back with a vengeance. Dr. Diamond noted that this stimulator (a battery-powered device attached to a wire that runs up to the vagal nerve in the neck and stimulates it to relieve pain) is a last resort for treatment.

For others experiencing this comorbidity, McDonald recommends meeting with a psychologist as soon as possible to discuss ways to cope and to find a way to contribute to society on your good days. McDonald volunteers for non-profits and says her volunteer work has helped her overcome feelings of powerlessness. She also recommends building a support system and letting your family know what you're going through.

"For my family, it has brought a different depth of understanding," she says. "It forces me to let my guard down and that's good for relationships."

can rest assured that treatment is available and hope can be restored.

A TWO-WAY STREET

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) classifies major depressive disorder as a mood disorder characterized by "feelings of sadness or emptiness; reduced interest in activities that used to be enjoyed; sleep disturbances (either not being able to sleep well or sleeping to much); loss of energy or a significant reduction in energy level; difficulty concentrating, holding a conversation, paying attention, or making decisions that used to be made fairly easily; [and/or] suicidal thoughts or intentions."

For people who experience head pain and depression, the headaches are likely to be migraines and they often arise in the early morning along with other significant depressive symptoms, notes Robert Shulman, MD, associate chair of clinical services in the department of psychiatry at Rush University Medical Center in Chicago. This is called a "diurnal variation," whereby one experiences the worst of their symptoms first thing upon awakening and may note a lightening of symptoms toward the evening hours.

The research is clear that the relationship between migraine and depression is bidirectional, meaning depression can trigger migraine and migraine can trigger depression. According to a study published in the March 2012 issue of the journal *Headache*:

- People with major depressive episodes are 40 percent more likely to develop migraine than people who don't experience depression, and
- People with migraine are 80 percent more likely to develop major depressive episodes than people who don't experience migraines.

Some 20 million people in the United States experience depression, according to the National Institutes of Health. Despite this high incidence, depression seems stigmatized in society, so much so that people who feel depressed may not report it to their physician.

Depression Among Other Headache Types

People with chronic migraine are more likely to have depression than people with episodic migraine, according to the American Migraine Prevalence and Prevention Study (sponsored by the National Headache Foundation). Further, migraineurs are more likely to have major depression than people with other types of headaches. For this reason, the comorbidity of migraine and depression has been studied in more depth than the comorbidities of depression and other headache disorders. However, depression does exist among other headache populations.

Among patients with common subtypes of chronic daily headache, 70 percent of patients with transformed migraine experience depression and 59 percent of patients with chronic tension-type headache experience depression, according to research published in the Nov.-Dec. 2011 issue of the journal *Headache*. A study from the January 2011 issue of the journal *Headache* showed that 51 percent of patients with New Daily Persistent Headache, a rare chronic daily headache characterized by new onset of daily headache, had a history of depression.

Interestingly, though research into the comorbidity of depression and cluster headache is rare, one study published in the April 2012 issue of the journal *Headache* showed only 8 percent of people with cluster headache experienced anxiety and depression.

Want to hear more about depression and headache? Access a full podcast interview with Dr. Shulman at www.headaches.org/education/Tools_for_Sufferers/Audio_Visual_Tools.

"People don't usually talk about feeling depressed to their primary care physician unless they have a long-standing relationship," Dr. Shulman says. "But they will go in and complain of pain and sleep problems, and it is the tuned-in physician who knows how to ask a couple of extra questions to figure it out."

Dr. Diamond says the patient's medical history "reveals the comorbidity." Whether through discussion of social relationships or life stresses, or through admission that the patient is experiencing a vise-like, steady pressure in the head at night or in the morning, a physician should be able to make a diagnosis of depression and migraine once certain symptoms are revealed. Dr. Shulman adds that the physician should take it a step further by exploring just how serious the condition is. Additional questions can reveal whether the patient is suicidal or whether the pain has led to drug or alcohol abuse.

"Some physicians are afraid to ask about suicidal thoughts because they have this notion that if they bring it up, they may put those thoughts into the patient's mind. But if somebody's not suicidal, they're not going to consider it just because you asked a question," Dr. Shulman says. "I think that because suicidal thoughts are stigmatized as 'weakness in the soul,' if the physician brings it up in a non-judgmental way, the patient can actually feel relief because their depression may have been previously stigmatized by society."

If a patient reveals an intention to act on suicidal thoughts or notes a current or past substance abuse, he or she may be referred to a psychiatrist for evaluation and could be admitted for inpatient care, Dr. Shulman says. Otherwise depression and headache are treated with a variety of traditional, psychiatric and psychological therapies.

HELP IS HERE

Because of the bidirectional nature of this comorbidity, treatment can be directed at the depression, the migraine or both. The thinking is that once you treat the migraine, this will relieve some of the hopelessness that comes with depression; or once you treat depression, depression-related migraines should be relieved. In a 2008 NHF survey, only 32 percent of respondents reported taking one medication to treat both depression and headache. Instead, 75 percent used medication to treat their depression, and 95 percent used medication to treat their headaches.

Treatment for depression depends on the type of depression: anxious, flat or empty, or a mix. "When you throw in headache or chronic pain disorder, the pain data is clear that the best antidepressants to use in pain are those that can treat both the anxious and the empty feelings of depression," Dr. Shulman says.

While often used to treat depression, clinical trials have shown serotonin norepinephrine reuptake inhibitors (SNRIs) such as Effexor® and Cymbalta®, and selective serotonin reuptake inhibitors (SSRIs) such as Prozac®, to be less effective for migraine treatment, says Jan Lewis Brandes, MD, director of the Nashville Neuroscience Group at St. Thomas Health Services, assistant clinical professor of neurology at Vanderbilt University in Nashville and a member of the NHF Board of Directors.

Rather, the antidepressants that are considered the best for migraine and depression are the

Sorrow, Stress in Service

Military servicemen and women are no strangers to headache and depression. According to research published in the June 2008 issue of the journal *Headache*, 47 percent of troops surveyed during the last three months of a one-year combat tour in Iraq screened positive for migraine, probable migraine or non-migraine headache. Furthermore, 18.5 percent of all returning servicemen and women meet the criteria for depression or post-traumatic stress disorder, according to a 2008 study from the RAND Corporation.

tricyclics—the very medications that Dr. Diamond researched in the 1960s. Specifically, pain responds "quicker and at lower doses" with amitriptyline than what would typically be needed to treat a major depressive episode, Dr. Shulman says. But tricyclics are generic medications, and because there isn't a brand name attached to them, Dr. Diamond says most physicians aren't aware of tricyclics.

Depression and migraine may also be treated with monoamine oxidase inhibitors (MAOIs) such as Nardil®. However, MAOIs are rarely prescribed because they come with risk for serious side effects. Dr. Diamond says MAOIs are usually prescribed only for the most well-informed patients.

Dr. Brandes adds that patients who have migraine and depression "will likely need a preventive medication for migraine and a preventive medication for depression. Using one drug for both is an ideal concept but often does not work, or is simply not likely to result in efficacious outcomes."

Aside from medication, headache specialists may prescribe transcranial magnetic stimulation (TMS), biofeedback or other behavioral treatment. TMS uses technology similar to magnetic resonance imaging (MRI) to focus the magnetic field on a specific part of the brain, changing the blood flow to alleviate depression. Biofeedback involves tracking the body's functions and using visualization and stress-relief techniques to manage them. A psychologist may teach biofeedback, which can help patients "learn to recognize some of their automatic responses and how to wrestle their thoughts away from them so they can focus on things that are more health related," Dr. Shulman says.

Exercise and diet, while not curative, can keep depression from worsening and can help prevent new episodes of depression, Dr. Shulman says.

Regardless of how you treat it or prevent it, Dr. Diamond stresses that it is important to catch the comorbidity and treat it early. "As with any condition, the earlier you treat someone, the less chronic it becomes." HW

BY ALLECIA VERMILLION

7 Ways to Avoid THE SUMMER HEADACHE

As temperature rises and outdoor adventures begin, follow these tips to avoid summer headache.

Nicole Greason says her fiancé can tell when she's about to get a migraine.

First comes the pinched look on her face. Then her eyes don't look quite right. That's when he sends her to lie down, pulls out the ice pack and brings her fluids to drink, says Greason, 46, who works in marketing and public relations at Arizona State University. It's a lesson learned from past trips to the emergency room when her migraines were especially bad.

"It is the worst pain that you can experience," Greason says. "It goes beyond broken bones and torn ligaments." While she's never been able to pinpoint the exact triggers for her headaches, she does know this: "They feel worse, they are more intense and the duration is longer during the summertime."

Either directly or indirectly, the main culprit seems to be heat, which can make life difficult considering Greason lives in Chandler, Ariz., where summertime temperatures regularly rise above 100 degrees and the heat can stretch well into October.

For most of the year, her attacks come about two months apart and are often manageable with over-the-counter medications. But come summer, Greason says she expects to have an intense headache episode about every three weeks. She takes special care during hot weather to eat right, get rest and drink plenty of water, often mixing in a quarter-part fruit juice for flavor. On vacations or weekend outings, she diligently checks for access to shade and fluids, and stocks the car with umbrellas and ice packs.

Technically there's no such diagnosis as "summer headache," notes Vincent T. Martin, MD, vice president of the National Headache Foundation (NHF) and professor of medicine at the University of Cincinnati College of Medicine in Cincinnati. And though some recent data suggest the summer months are the most common time for headaches, Dr. Martin says "there are lots of potential different reasons for that" and heat may not be the lone cause.

Like any other season, summer brings with it a unique set of triggers: sunlight, dehydration, increased physical activity, allergies and humidity, among others. But smart choices and coping methods can help people with headache stay pain free so they can enjoy the summer months.

1 SHIELD YOURSELF

Bright sunlight is a common headache trigger, Dr. Martin says, particularly for migraineurs who experience visual aura. "And it's not just light, it's usually glare." Dr. Martin himself experiences migraine with aura and remembers a time from his childhood when he was riding in a car. The sunshine hit the mirror of the car in front of him and reflected into his eye. "It triggered a migraine instantly," he recalls. Even the glare produced by sunlight hitting the sand can be problematic. Protect yourself from both bright light and glare with sunglasses and brimmed hats (see page 14 for more ways to block out light).

2 HYDRATE— THEN HYDRATE SOME MORE

Dehydration is a very common culprit for headaches no matter the season, says Frederick G. Freitag, DO, a member of the NHF board and medical director for the Comprehensive Headache Center at Baylor Health Care System and director of headache medicine research for Baylor Research Institute in Dallas. In hot weather, our bodies lose fluids at a faster rate. Despite years of public health education and even beauty magazine articles on the topic, many people don't consume enough clear fluids. "Few people even come close," Dr. Freitag says.

While optimal fluid consumption varies by person (see page 35), one of the easiest, if slightly unsavory, ways to gauge your hydration is to examine the color of your urine. "It should be nearly colorless," Dr. Freitag says. "If it isn't, then there likely is a degree of dehydration occurring." Constipation can also be an indicator of dehydration, he says. "If you are consuming sufficient fluids, then stools should not resemble pebbles."

3 EXERCISE CAUTION

Making tee time with friends or joining your company's soccer league? Proceed with caution. Physical activity like jogging could trigger migraines, and strenuous activity like lifting weights could trigger strain-induced exertional headaches.

It is possible to pre-treat exertional headaches with nonsteroidal anti-inflammatory prescriptions (e.g., naproxen) or beta blockers that slow down the heart rate. These are usually taken about 30 minutes before physical activity. See your headache specialist for the proper medication for you, and remember that all-important hydration becomes even more critical when you exercise.

4 EAT SMART, DRINK SMART

In addition to keeping a regular meal schedule, remember that some of the classic foods of summer can be part of the problem. If you're attending barbecues, picnics or outdoor parties, avoid common food triggers such as foods with nitrates (including many hot dogs and prepared meats) and MSG, says Roger Cady, MD, associate executive chairman of the NHF and founder and director of the Headache Care Center, Inc. in Springfield, Mo.

While a cold drink can stave off the summer heat, Dr. Cady advises patients to pay attention to what type of alcohol they're drinking. White wine or drinks with clear liquors are less likely to trigger headaches than red wine or rum. "And of course, drink in moderation," Dr. Cady notes.

5 BE AWARE OF ALL YOUR TRIGGERS

In addition to food and drink, dehydration, exercise, bright light and loud noises are significant triggers. But headaches and migraines can also be triggered by wind, extreme temperatures, allergens, humidity,

storm fronts and even subtle weather changes. There is no way to truly avoid all migraine triggers, Dr. Cady says. The only way to truly avoid all of these influences is to spend the year's most pleasant months shut inside a dark room, he says. This is both unpleasant and unrealistic.

Instead, Dr. Cady encourages patients to "think globally" about all the various risk factors for migraine to which their nervous systems are exposed. "Very often it's a combination of risk factors that are occurring in close proximity that set the nervous system up for an attack of migraine," Dr. Cady says. "For example, if you aren't sleeping well or you've had a lot of stress at work, it's probably not a wise idea to go to a wine and cheese party. You have to balance these things out and make yourself a lot less vulnerable." He notes that risk factors can be avoided in many instances, balanced with protective factors such as regular sleep and meals or modified by using sunglasses. The point is to address the lifestyle factors that can be controlled, to help the body better withstand the external factors that cannot be controlled.

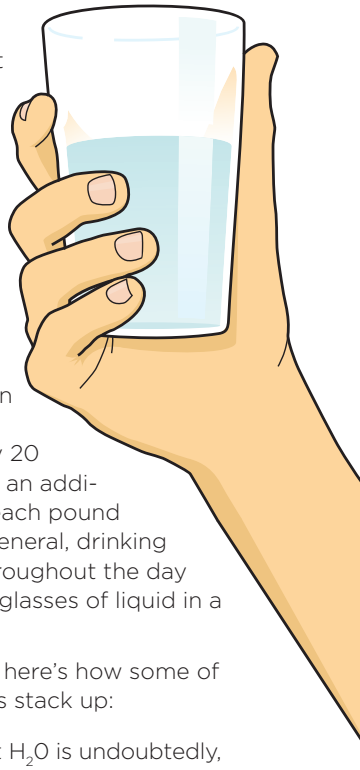
6 PLAN AHEAD

Warm weather usually means outings and travel plans that can tamper with those critical meal, sleep and medication routines. But before you embark on your day of adventure, plot out your schedule and make sure you have everything you need to make it through the day pain free. "I can't tell you how many stories I've heard that begin with, 'I went out on the boat and left my meds at home or in the car,'" Dr. Cady says.

7 RELAX—IT'S SUMMER

Worrying about headaches can produce anxiety and new headaches. So relax, kick up your feet and enjoy time with loved ones. The summer could also be a great time to try new activities to reduce your headaches, such as biofeedback, yoga or a regular, fun exercise such as tennis or swimming. "I think fun is a good thing for your nervous system," Dr. Cady says, "and hopefully that's what we have in the summer." HW

Hydrated and Happy



In the heat of the summer months, it can be easy to ignore your water intake. But Dr. Cady warns that allowing yourself to become dehydrated "is one of the worst things people with headaches of any sort, particularly migraines, can do."

To keep your body happy, remember to drink additional fluids before, during and after physical activity. Federal guidelines suggest an extra 8 to 16 ounces before exercise; 4 to 8 ounces every 20 minutes during exercise; and an additional 16 ounces of fluid for each pound lost during the workout. In general, drinking small amounts frequently throughout the day is easier than guzzling giant glasses of liquid in a single sitting.

When it comes to hydration, here's how some of the most common beverages stack up:

Water: It is well known that H_2O is undoubtedly, absolutely and unequivocally the best way to stay hydrated. It's free, it's plentiful, it's easy to tote around and it will keep your body replenished. Add a little flavor by garnishing with lemon, lime or cucumber slices.

Sports drinks: Following water, electrolyte-based drinks can be a great option for hydrating, especially for people planning vigorous exercise, Dr. Cady says.

Caffeine: Though Dr. Cady admits that caffeine withdrawal is the usual cause of caffeine-related headaches, he says his primary objection to coffee and caffeinated sodas is their ability to impair sleep. People who experience headache disorders need a good night's sleep to help the nervous system recover from the day's activities.

Soda: Soft drinks tend to be full of sugar, sweeteners and calories, which makes them a poor choice for hydration.

Milk: Nonfat milk could have some of the same replenishing properties as a sports drink, according to a study published in the October 2008 issue of the *Journal of the International Society of Sports Nutrition*. Of course, there's only so much you want to drink on a hot day.

Juice: While the sugar and calorie content makes juice a less-than-ideal drink for hydration, juice could be a good choice when adding a small amount to water.


What Andrew Levy learned about his own migraines led him to write a book about the condition.

A Novel Discovery

BY KATIE MORELL

Andrew Levy, 49, remembers a time when he was around six years old and saw "motes dancing in front of [his] eyes." The New Jersey native didn't think anything of the sensation at the time, but as he grew older he recognized those motes as auras preceding migraines. Sunlight seemed to trigger auras (such as partial blindness) in his early 20s and 30s, and he began to experience headaches. But it wasn't until 2006, when Levy experienced four months of steady headaches, that he sought medical attention.

In 2009, Levy, the Cooper chair of English at Butler University in Indianapolis, Ind., released a book documenting his experience with migraines titled *A Brain Wider Than the Sky: A Migraine Diary.* The book received rave reviews thanks to its delicate prose and well-researched view of the history of migraine. Levy recently spoke with *Head Wise* to discuss his experience with migraine, how he copes and why modern culture still stigmatizes the pain.

Head Wise (HW): Why did you decide to write your book and share your story with others?

LEVY: So many migraineurs muddle their way through, and I think it is totally unnecessary to do so. I felt that I was in a position to honestly admit that I had migraines and to talk about them and describe them in some detail that might help people. It was liberating to write about pain, to take control of it in that way, to beat it in that way.

HW: Do you have a known family history of migraine?

LEVY: Not on my father's side, but my mother did experience migraine events and headaches so bad she needed to throw up. We think my grandmother experienced them, too. Back then she would close the door and disappear for hours at a time. Our guess is that she was experiencing migraines.

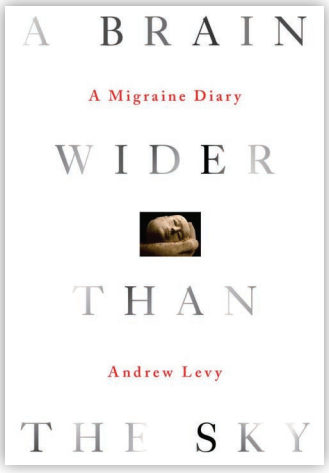
HW: How did you cope with migraines at first and how has that coping changed over the years?

LEVY: Back in my 20s and 30s, I really didn't do much. They were pretty infrequent, so I would take medication and they would go away. In 2006 when I realized I was having migraines, I changed my lifestyle, my diet, tried different medications and went to the doctor.

I got a CT scan to see if it wasn't something more serious and then

Photo by Stephen Simonetto

Excerpt from *A Brain Wider Than the Sky*



"Migraines are powerful because they force one to contemplate the great mystery of the boundary between free will and fate, between the thing we choose to do and the thing we're made to do.

"Clichés of a migrained marriage: vacations are canceled; Saturdays are spent in bed while the spouse is taking care of the children, etc. If you have migraine, its fifty-fifty your kid will, too. If you and your spouse both have migraines, it's three out of four. Should you have kids at all then? How many? And how much guilt should you feel about the ones you've already had?

"Some diseases have a clear cause; others have a clear cure. The treatment of migraine, however, in any individual case amounts to a treatment about treatment itself—about how one wants to use drugs, about how one wants to change one's life, and how one wants to sift through all this data that modernity produces. It is not just a clinical evaluation of the nature of headache, but a response to an overabundance of research and classifications. Patients are confused about what is and is not a migraine. Not sure whether they are migraining, patients 'wait and see.'

"To understand migraine in modern terms means reading through the advice you receive, though, through what the doctors and other migraineurs tell you, to the truth within, which comes at you from crazy angels as if crazy angels were the norm: that the 'generator' of the pain should lie so far from the pain itself; that 'hyper excitable' nerves must compel retreat to silence and to darkness. But what kind of brain does these kinds of things, and how do we reach it, really reach it, and talk to it?"

—Levy, Andrew. *A Brain Wider Than the Sky*. Simon & Schuster, 2009.

started taking Topamax®, an anti-epileptic drug. I would take it every day, but it gave me awful side effects. So I stopped taking it, cut my intake of caffeine and alcohol, and started taking sumatriptan.

HW: How do migraines affect your daily life?

LEVY: They are a complete and total irritant; but the pain does make moments of productivity more precious. When it is 6 a.m. and I see weird stuff forming in front of my eyes, it is completely frustrating. The best case scenario is I take a pill right away and I'm OK by 8 a.m. and feeling good by noon.

If the migraine comes on for four or five days, I start to feel intense depression. After three or four days, I get acclimated to the feeling and that acclimation is pretty depressing.

HW: In your book, you put somewhat of a positive spin on migraine, writing that the pain "compels you to eat better and sleep regularly...and can be seen as God's early warning system." How did you come to this conclusion?

LEVY: I see migraine as a smoke alarm that goes off when your toast is burning a little bit. It is loud and blaring, but it is telling you something. It would be great if your brain sent you more subtle signals to eat better and drink less and have less stress in your life. It would be great if it just gave you a gentle poke, but instead it gives you this massive punch in the side of the face. The pain has forced me to improve my life, to eat fewer sweets and drink less, and those are good things.

HW: In your book you attribute the onset of your migraines to the weather in the Midwest. Have you ever thought about moving to help your condition?

LEVY: No. Whenever I go on vacation, I pay close attention to see if the weather is helping or hindering, but it turns out that barometric pressure in Ireland can be a trigger for me, as can a sunset in San Diego.

HW: In your book, you run through the history of migraine. What made you want to explore that history?

LEVY: I found a lot of comfort in learning that famous people from the past lived with migraine. Before researching for the book, I didn't know Thomas Jefferson had them. I didn't know Sigmund Freud had a lot of them and was going to become a

Looking for more information about the history of headache and migraine?
Read *Headache Through the Ages* by Seymour Diamond, MD, and Mary A. Franklin (Professional Communications, Inc., 2005), available on Amazon.com.

migraine specialist before he was the first true psychotherapist. In many ways, finding these profiles of people who were coping and being productive was really powerful to me.

It was also powerful to discover that there were 3,000-year-old reports of migraine. It made me feel like I was part of something deeper.

HW: You also write about evolution and the idea that modern environments are not suited for persons with migraines. What do you believe to be the tie between migraine and evolution?

LEVY: Migraine is a disease often triggered by flashing light and there is much more of that in the contemporary world than 500 to 600 years ago.

In the book, I suggest that for me, migraines precede storms. So if you think of someone 2,000 years ago, getting a message in their head that they needed to seek shelter at a time when it really mattered made total evolutionary sense. Today we don't need to hide from weather anymore, but it still seems to me that the warning system will remain until we find a really good cure for migraine.

HW: One in 10 people experiences migraines. If so many people experience them, why do you think the disease is often stigmatized as "just a headache"?

LEVY: I think migraine is still stigmatized in part because it's been metaphorized; people will say "you are giving me a migraine." That aggravates real migraineurs.

Also, outside of rushing yourself into an MRI machine and having your head tested, evidence of a migraine is really on one's own testimony. And because the condition takes place inside your head, people associate it with psychosomatic moments. People think it is just stress and you can handle it.

In many ways, people stopped thinking of headaches as an actual disease needing real treatment a long time ago. If you go through 19th century literature, the number of female characters who have a headache that men dismiss or don't take seriously is just massive. There is still that stigma that women with migraine fake head pain to get out of housework, to get out of sexual obligations. It is very Victorian, but that thinking is still there.

HW: Do you think the stigma is going away at all?

LEVY: I think the last 10 to 20 years has been going in that direction, but I still think there is a ton of work to do. Headaches are still the number one cause of lost sick days in the United States. But it is encouraging to see a lot more celebrities describing themselves as having headaches. You also see more athletes being scratched from athletic events for migraine, men and women, a fact that I find fascinating. Given the machismo that is a serious part of our sporting culture, that is pretty telling.

HW: What message would you like to give to those that suffer from migraines?

LEVY: If you have any kind of headache or neurological disruption cutting into your life, go to your doctor right away. If you can't find the advice you need, go to a headache specialist even if the office is 300 miles away. Don't be ashamed to tell doctors what you have and how you experience it.

Try not to feel any shame about it in terms of family and work. Have the conversation on the outside, not just internally with yourself. HW

Want to hear more from Andrew Levy? Access the full podcast at www.headwisemag.org/ExpertAnswers.

wise words

NAME: Janet Geddis

RESIDENCE: Athens, Ga.

CONDITIONS: Migraine, osteoarthritis, chronic fatigue and immune dysfunction syndrome (CFIDS)

FIRST DIAGNOSED: 2001, eight years after migraines began

Photography by Chris Hamilton

What is the most frustrating thing about your life?
I never know which moments are going to be stolen by this disease. There's so much I enjoy, so much I look forward to—but I know without a doubt that some of those times are going to be held captive by migraine, and I won't get them back.

What's your greatest achievement?
Opening my own business in October completely from scratch—my dream bookstore, Avid Bookshop. It's the most amazing achievement of my life (thus far!).

How do you manage your condition?
My number one rule is keeping a consistent sleep schedule. When I break that rule, I feel out of sorts for days. I try to eat regularly, not work too much and have plenty of time to relax and read.

What's your favorite book?
You cannot pose this question to someone who is so obsessed with books that she opened her own bookstore! But I really loved *Wonder* by R.J. Palacio. Any book where a protagonist has a physical condition that alters his view of the world and the way the world sees him helps me cope with my own disability.

Where do you get the greatest support?
My greatest source of support is my family, by far. My partner also has migraine disease, and he is unfailingly supportive. Migraine runs in my family, so my already compassionate sister and parents are especially understanding.

What is your idea of happiness?
Peacefully accepting that there will be days I cannot do the things I want to do, while being immensely grateful for the days that I do feel healthy enough to spend time with my loved ones, read a book, talk with customers in my bookshop and travel. I'm beginning to think that following your passion is the key to feeling peaceful, especially if you deal with migraine.

Janet Geddis is the busy, dedicated owner of Avid Bookshop, a community-focused, independent bookstore in Athens, Ga.

—Kelly Hagler

Submit your own story at www.headwisemag.org/WiseWords.

Your Contributions to the National Headache Foundation Help Fund Projects

What's being done to help your headache problem? There is an unprecedented amount of research being done regarding migraine and other headache pain. The National Headache Foundation is involved in this effort with the help of funding from you. Contributions are a key part of the financial support of important headache research. Your gift provides funds for (a) NHF-financed research projects, (b) education for health care providers, and (c) patient-education initiatives. You can help! The National Headache Foundation, the #1 source for headache help, provides these services and many others through the generosity of people like you.

Please select one of the following giving categories:

❒ $250 ❒ $125 ❒ $100 ❒ $75 ❒ Other _____

Name: _____

Address: _____

City: _____

State/Zip: _____

Daytime Phone: _____

Method of Payment:

Check or Money Order payable to National Headache Foundation

❒ Visa ❒ MasterCard ❒ Amex ❒ Discover

Card #: _____ Expiration Date: _____

Leave a Legacy to the National Headache Foundation

With a planned gift to the National Headache Foundation, you can combine your desire to give to charity with your overall financial, tax and estate planning goals. Your planned gift gives you a special connection with NHF: **you will help those suffering from recurring headaches and migraines now and for years to come**.

The following general forms are suggested:

> Specific Bequest in your will or trust – "I give to the National Headache Foundation, whose national office is presently located at 820 N. Orleans, Suite 411, Chicago, IL 60610-3132, [the sum of _____($_____) or describe property] to be used for _____ [describe purpose] or for general purposes."
>
> Residual Bequest in your will or trust: "I give to the National Headache Foundation, whose national office is presently located at 820 N. Orleans, Suite 411, Chicago, IL 60610-3132, [all or _____percent (____%) of the rest, residue and remainder of [my or the trust] estate to be used for _____[describe purpose] or for general purposes."

This information is not intended as legal advice, but is merely suggestions as to content. The specific language should be written or adapted by your legal counsel.

LipiGesic® M

is the breakthrough first-line drug therapy for migraine.

LipiGesic M, a patent-pending, non-prescription, all-natural migraine pain reliever, has been shown to be:

- **Highly effective** – During the 2011 clinical trial,* 64% of users had mild or no pain two hours post dose
- **Fast** – Sublingual (under the tongue) delivery speeds full-strength ingredients (feverfew and ginger) into the blood stream
- **Safe** – natural ingredients with no known drug interactions
- **Cost-effective** – about $5 per treatment

LipiGesic® M

www.**LipiGesicM**.com

Now available at **Walgreens®** and **CVS/pharmacy®**

* Cady RK, Goldstein J, Nett R, et al. A Double-Blind Placebo-Controlled Pilot study of (LipiGesic®M) Sublingual Feverfew and Ginger in the Treatment of Migraine. Headache: The Journal of Head and Face Pain. 2011; 51:1078-1086

LipiGesic® M is a registered trademark of PuraMed BioScience, Inc.®

MANUFACTURER'S COUPON – NO EXPIRATION DATE

SAVE $2.00 on your purchase of LipiGesic® M

CONSUMER: Limit one coupon per purchase of product indicated. Any other use constitutes fraud. CONSUMER pays any sales tax. Void if copied, sold, exchanged, transferred or expired. RETAILER: PuraMed BioScience, Inc., will reimburse face value plus $.08 handling if submitted in accordance with our Coupon Redemption Policy. Submission of this coupon signifies your compliance with our Coupon Redemption Policy. For policy and/or coupon redemption send to: PURA/Universal, P.O. Box 222510, Hollywood, FL 33022-2510. Cash value 1/100¢. Void where prohibited.

5 34331 11182 6

0334331-021203