HeadWise

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

Migraine & Dizziness

1 out of 3 migraineurs has problems with dizziness
1 out of 4 people with migraine have vertigo

OCCIPITAL NEURALGIA
Diagnostic and Treatment Challenge

Why Aspirin?
And does it work in migraine?

Allergy And Headache In Children
Fact or Fiction?

HEADACHE GODFATHER
The Chronicle of a Headache Pioneer

$6.99

Volume 3, Issue 1 • 2013
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

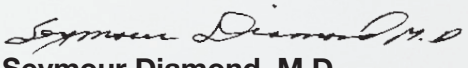
To join, go to www.headaches.org/store/membership or call 1-888-NHF-5552.

Volume 3, Issue 1 • 2013

contents

FROM THE EXECUTIVE CHAIRMAN:

Due to overwhelming consensus of our readership, and a recent extensive survey, we have decided that our magazine, *Head Wise*, will continue with a greater emphasis on science and headache education. Our revised magazine is an attempt to generate interest in headache and its nuances. We welcome your comments and suggestions about future issues.



Seymour Diamond, M.D.
Chicago, Illinois

Head Wise™

The National Headache Foundation • www.headaches.org

Mission

The National Headache Foundation exists to enhance the health care of individuals with headache. It is a source of help to their families, physicians and allied health care 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 health care 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.

Head Wise (Volume 3, Issue 1) is published quarterly by the National Headache Foundation, 820 North Orleans, Suite 411, Chicago, IL 60610. Standard Mail Non-Profit postage paid at Carol Stream, IL 60188 and at additional mailing offices.

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

This publication discusses a broad range of headache information in an effort to inform and educate readers, but is not intended to substitute for the advice of your health care provider. Statements expressed herein are not necessarily those of NHF.

Send Us Your Feedback
Letters, manuscripts, stories, materials or photographs are welcomed but will not be returned. Submission of letters implies the right to edit and publish all or in part. Submissions may be sent to: mfranklin@headaches.org. Please indicate your name, address and phone number.

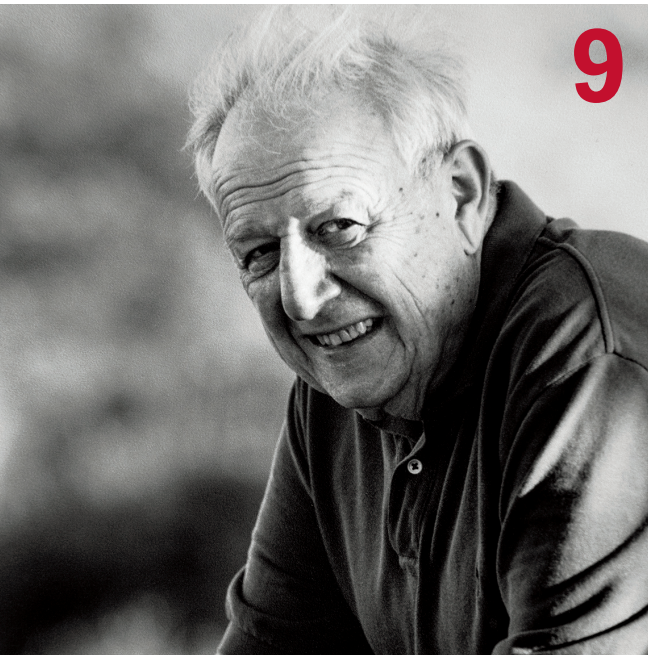
Mail: Seymour Diamond, MD
Executive Chairman and Founder
National Headache Foundation
820 North Orleans, Suite 411
Chicago, IL 60610
Email: mfranklin@headaches.org

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 ®

contents



IN EVERY ISSUE

Fête de Masque Unmasking the Mystery of Chronic Headache Disorders

Since September, 2012, our staff and a loyal band of volunteers, under the leadership of the co-chairs–June Barnard and Katie Biggs–have met monthly to organize our annual fund raiser. *Fête de Masque*–Unmasking the Mystery of Chronic Headache Disorders was held on Saturday, May 4, 2013, at the Ritz Carlton Chicago. The gala included dinner, dancing, live and silent auction, car raffle, and the "Wall of Wine", in addition to the raffle for a red 2013 Mazda3 sedan, with black interior.

At the event, two special awards were presented. K. Michael Welch, MB, ChB, FRCP, received the Lifetime Achievement Award of the National Headache Foundation, in recognition of his impressive and enduring body of work in the field of headache. Doctor Welch is President and CEO of Rosalind Franklin University of Medicine and Science in North Chicago, Illinois. He is a member of the NHF Honorary Board.

The Elaine Diamond Service Award will be presented to long-time NHF Board member, James Beasley, in recognition of his excellent and enduring service to the National Headache Foundation. Mr. Beasley is involved in real estate in Turbeville, South Carolina.

Proceeds of this event will help the NHF in our mission to raise awareness about the malady of chronic migraine and headaches.

Dan Levy, PhD, addresses the guests at the Libby Fund event.

The Libby Fund Event

On March 10, 2013, Anne and Elon Spar welcomed more than 70 guests to their home in Armonk, New York, for a fund-raiser for The Libby Fund, which supports research on hemiplegic migraine. Guests were greeted by Emily and Paul Kandel, who are members of the Honorary Board of the NHF.

At the gathering, NHF board member Mark Green, MD, discussed the importance of the research supported by the Libby Fund. Dan Levy, PhD, of Harvard Medical School and a recipient of a Libby Fund grant, discussed the ongoing research and how it will impact our understanding of hemiplegic migraine. The third speaker was Eric Kandel, MD, who spoke of his work in migraine early in his career while he was at the National Institutes of Health. Dr. Kandel won the Nobel Prize in 2000 in Physiology or Medicine for his research on the physiological basis of memory storage in neurons.

Other attendees included Arthur Elkind, MD, the president of the NHF; Leah Green, MD; and, Shannon Babineau, MD, and Kate Mullin, MD, both of Mount Sinai Medical Center in New York City. More than $19,000 was raised at the event.

National Migraine and Headache Awareness Month

The month of June is designated National Migraine and Headache Awareness Month. The theme for 2013 is Unmasking the Mystery of Chronic Headache Disorders. We will be doing a media blitz about this issue. Please watch our website for any planned events.

Special Lectureships

Wade Cooper, DO receiving his award from Roger Cady, MD

Nasim Maleki, PhD receiving her award from Roger Cady, MD

Annually, the National Headache Foundation awards two special lectureships. On February 18, 2013, these lectures were presented during the postgraduate course, The 26th Annual Practicing Physician's Approach to the Difficult Headache Patient, at the Westin Mission Hills, in Rancho Mirage, California. The course is sponsored by the Diamond Headache Clinic Research and Educational Foundation.

The National Headache Foundation Lectureship was awarded to Wade M. Cooper, DO, of the University of Michigan Headache and Neuropathic Pain Clinic. As the premier educational and informational resource for those living with headache disorders, their family members, physicians, allied health professionals, and health policy decision makers, the NHF created this award to preserve the highest level of neurobiological research and advancement in medicine today. Recipients of the award prove themselves to be up-and-coming physicians and scientists who have demonstrated interest in the management of common and complex headache problems.

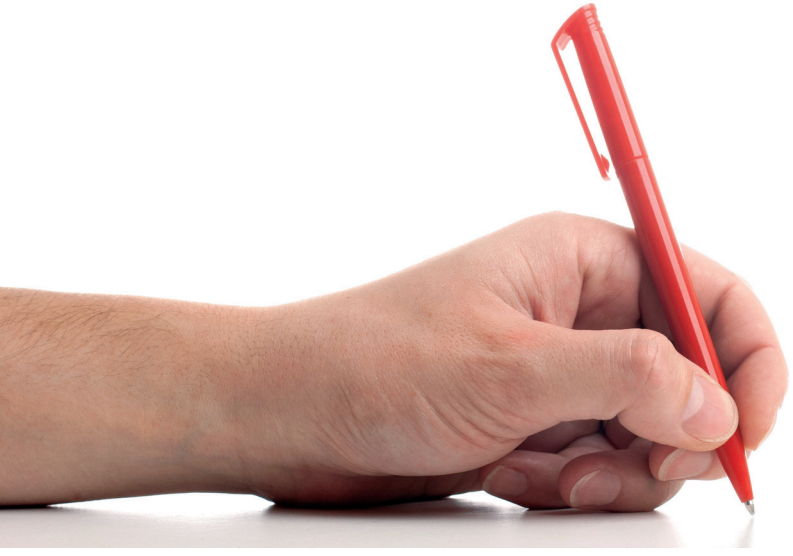
Doctor Cooper's lecture, "Allergy and Migraine: The Role of Mast Cells," was well-received by the attendees. We hope to include a summary of his lecture in a future issue of *Head Wise*.

The recipient of the 2013 Seymour Diamond, MD Lectureship was Nasim Maleki, PhD, who is an Instructor in the Department of Anesthesiology at Boston Children's Hospital and Harvard Medical School. This lectureship was established in 2005 to honor the Executive Chairman and Founder of the National Headache Foundation–Seymour Diamond, MD. The award recognizes the most significant paper in headache which was published during the past year.

Doctor Maleki's lecture, "Her Versus Him Migraine: Multiple Sex Differences in Brain Function and Structure," is based on the article of the same title which appeared in the journal, Brain, Volume 135, 2012. Her coauthors were Clas Linnman, Jennifer Brawn, Rami Burstein, Lino Becerra, and David Borsook. As with Doctor Cooper's lecture, we hope to publish a summary of Doctor Maleki's lecture in an upcoming issue of *Head Wise*.

reader mail

You ask. Our headache experts 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.

RATHKE'S CYST

My husband has a constant headache going on 6 years now. He has seen 8 different neurologists including the head of the neurology department at the Mayo Clinic. They are all stumped. He hasn't seen anyone now for several years and we were wondering if there are any new findings that might help him. He has a Rathke's Cyst on his brain. At Mayo he was told the cyst could not be drained because of the significant size of it and that perhaps that is causing him his headache (although it hasn't grown in size since 2001). He has an implanted defibrillator and cannot have any more MRI's. His headache did vary in intensity but for the last month or so, it has become increasingly more severe. Can anyone help him? I would appreciate any help you might be able to provide, or lead us in the right direction.
–Joanne E.

By now I am certain you are fully aware of the issues surrounding a Rathke's cyst, but let me summarize some information for our readership. These cysts occur early in brain development, located between the 2 parts of the pituitary gland. Often these cysts

do not cause any symptoms but are visualized when someone undergoes brain MRI for various reasons. When extremely large and compressing other parts of the brain, Rathke's cysts may be treated surgically, generally by removing part of the membrane that surrounds the fluid-filled cavity. Possible symptoms do include headache, but this generally occurs in the context of other findings as well–visual impairment, mood swings, weight changes, frequent urination, breast discharge, and fatigue. If your husband has only had headaches for 6 years (vs. most of his life), lacks these other issues, and is worsening despite a stable appearance in the cyst, then most likely there is another explanation for the headaches. A visit to a comprehensive headache program would then seem in order.

–Robert Kaniecki, MD
Director, The Headache Center
Chief, Headache Division
Assistant Professor of Neurology
University of Pittsburgh
Pittsburgh, PA

ADOLESCENT WITH NEW DAILY PERSISTENT HEADACHE

My 14-year-old daughter has been diagnosed with New Daily Persistent Headache after having a headache 24/7 for the past 7 months. We have been to her doctor, eye doctor, allergist, physical therapist, orthodontist, two neurologists, and had blood work and an MRI, which all came back normal. She is currently trying medicine #8. She is becoming very discouraged and depressed. She went from being a very active and fit cheerleader, outgoing and social, to spending the majority of her time in bed. She is behind in her schoolwork and we just recently decided to home school her for the rest of the school year. We don't know what else to do. We are just watching her agonize in pain with no relief in sight.

The meds she has tried:
Muscle relaxant
Treximet
Maxalt
Migranal
Prednisone
Morphine (given in E.R.)
Propranolol
Topamax
Cymbalta (currently taking for the past 5 weeks, has not helped at all)

–Alisha B.

This is the most difficult headache to treat. At this point, you need to be managed by a pediatric headache specialist. There are a few main principles of management to follow:

- get adequate sleep
- eat properly
- deal with depression, if present, with counseling,medication, and exercise as tolerated

Your medications need to be optimized. Each prevention drug should be given a fair trial of 3 months; starting with a low dose, increasing in increments until it works or she has side effects. This is very difficult to manage and requires an expert calling the shots.

–Jack Gladstein, MD
University of Maryland
Director of the Pediatric Headache Clinic
Baltimore, MD

CONTINUED ON PAGE 8

reader mail

You ask. Our headache experts answer.

IS THERE A CONNECTION?

I have been getting daily headaches for almost a year now. When a really bad one hits, it lasts for more than 4 days and gets more intense right after eating. I feel like it makes my neck so tender that it hurts and feels like I am suffocating when I have my neck against anything (lying on a pillow, wearing a scarf, etc). I have no idea what is the trigger for the headaches, but my brain is buzzing all the time! My joints feel tender in my neck after the headache starts. I did get in a car accident almost 2 years ago and had a stiff neck, but didn't have headaches until about 8 months after the wreck, so I don't see the correlation.
–Aimee W.

I agree. Your neck is probably not the cause for your headaches. It is very common for migraine attacks to refer pain to the neck muscles. The back of the head and upper neck are innervated by the first and second cervical nerves which end up in the part of the brain-stem known as the trigeminal nucleus caudalis, mixing with nerve inputs from the trigeminal system. The trigeminal system accounts for the pain we experience with migraines. It is believed that much of migraine pain arises from this region of the brainstem, which probably explains why migraine pain is commonly referred to the neck. Certainly, with a daily headache for almost a year and frequent worsening, you would best served by seeing a headache specialist.

–Edmund Messina, MD, FAHS
Medical Director,
Michigan Headache Clinic
East Lansing, MI

VISUAL FIELD LOSS AND HEADACHE

Is there any correlation between migraine and visual field loss and open angle glaucoma? I've found a few comments in an online search, but nothing definite.
–Marie C.

I am not aware of any correlation between migraine and visual field loss from open angle glaucoma. However, you must first ask yourself a very simple question: is the field loss in one eye or both eyes? Typical visual field losses from a migraine aura usually occur on the right or left side of space or in your central vision. Migraine symptoms seem to occur in both eyes in a similar location. Visual field loss in migraine is temporary and usually lasts less than one hour. Visual field losses from glaucoma are usually due to irreversible nerve cell damage, so they don't just come and go like a migraine aura does.

A simple test, next time you experience an aura, is to cover one eye and then the other. If the visual problem occurs in both eyes, in about the same location in space, it is probably not due to an eye problem. Visual signals coming from the retina split at the optic chiasm, around the brain, so each eye is contributing information to both sides of the brain. Migraine aura arises in an area in the back part of the brain, known as the occipital cortex. A migraine aura which arises from the occipital cortex will be present no matter which eye you cover.

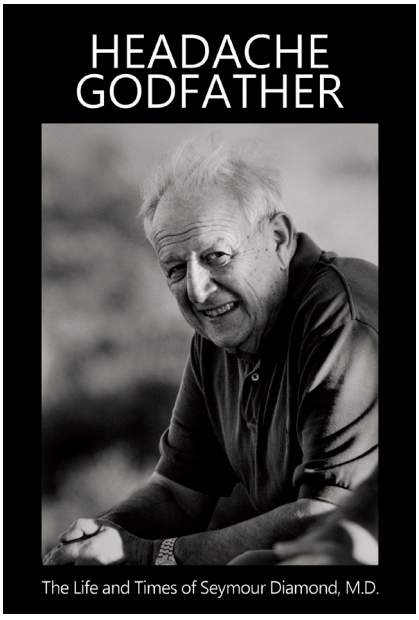
Certainly, if you have a diagnosis of glaucoma, whether or not you have migraine, you need to make your ophthalmologist aware of any changes in your vision. **HW**

–Edmund Messina MD,FAHS
Medical Director,
Michigan Headache Clinic
East Lansing, MI

by Mark Green, MD, Guest Reviewer

book review

Doctor Seymour Diamond, the Executive Chairman of the National Headache Foundation, generously shares his professional and personal life experience in the field of headache treatment and research in this lively conversation-based memoir. His life story unfolds naturally, interwoven with the milestones in headache diagnosis and treatment for the past half century.



When headache medicine began as a recognized scientific field, no single medical specialty took ownership. Neurologists appeared most interested in diagnosis but there was little information about treatment. With his background in primary care, Dr. Diamond was well-suited to become a pioneer in headache managment.

Throughout his life, Dr. Diamond demonstrates tremendous energy and strength of character to meet the challenges inherent in developing headache management as a medical specialty. What comes across clearly in this chronicle is his focus on the patient: establishing a relationship, quality of care, communication, and education. His career achieves the establishment of the National Headache Foundation as a key organization for headache sufferers, and the creation of the Diamond Headache Clinic as the first multidisciplinary patient oriented continuity-type practice with an available acute inpatient hospital unit.

The National Headache Foundation's role in funding research and education has been a great source of satisfaction to Dr. Diamond. These endeavors are diverse and include grants for clinical studies as well as sponsored travel to educational meetings for providers training in headache medicine.

His experience in medicine is rich and varied with a background in family practice, training in neurosurgery, and a preceptorship in neurology. Participation in headache research and clinical studies involving drugs to treat headache sufferers grows naturally from his interest in patient care. This interest leads to a groundbreaking open-label study on tricyclic antidepressants for headache patients during the 1960s as well as studies on the use of the beta blocker, propranolol, for migraine prevention. The use of the antidepressants and beta blockers remain standards for migraine prevention.

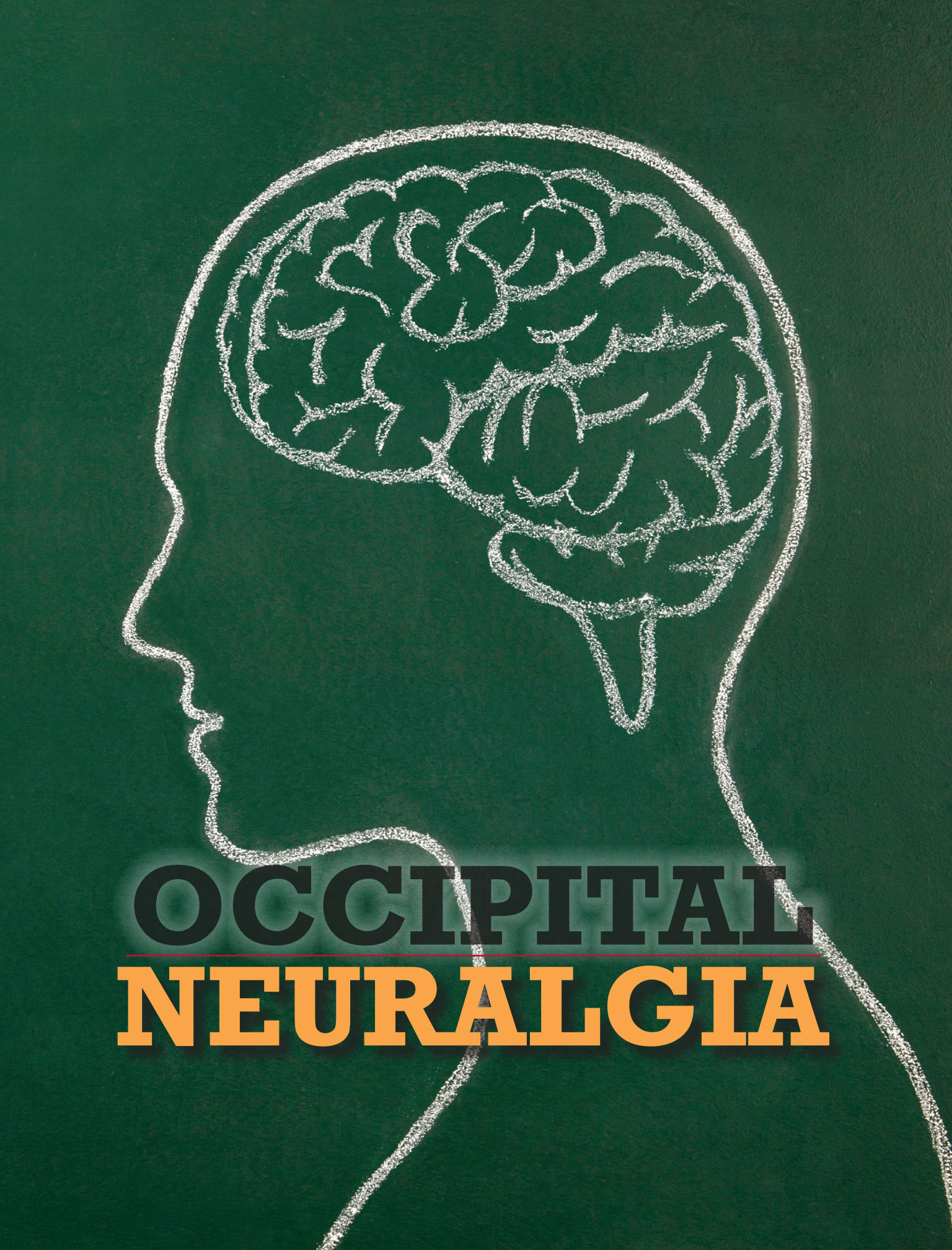
Through engaging anecdotes of interactions with patients, famous headache physicians, the media, and numerous world travels to educate the public about headache, the narrative reveals the experiences that impacted on this established expert in his field. Family portraits and the meaningful relationships built over many years with friends and colleagues are featured as well. His career includes many honors and awards including an appointment in 1981 as Executive Officer of the Migraine and Headache Research Group of the World Federation of Neurology. His publications include the first comprehensive book about headache for the consumer, *More Than Two Aspirin: Hope for Your Headache Problem*, and his manual for clinicians, *The Practicing Physician's Approach to Headache*. Of note in this publication, he provides information for continuing patient care beyond intervention on a one-time basis.

His accomplishments are balanced by descriptions of the difficult times in his personal and professional life. He has met these challenges with his characteristic tenacious attitude and problem-solving solutions. Currently, he has retired from medical practice and continues to work at the National Headache Foundation. Dr. Diamond's legacy includes the establishment of a headache fellowship in his name by Doctor Jose Biller in the Department of Neurology at Loyola University of Chicago/Stritch School of Medicine in 2010.

This book will be of great interest to anyone trying to understand headache medicine from an historical perspective. Readers with or without a medical background will find the writing style easily accessible. **HW**

This book is available for purchase on Amazon.com

MARK W GREEN, MD, is Professor of Neurology,
Anesthesiology, and Rehabilitation Medicine
Director of Headache and Pain Medicine,
Icahn School of Medicine
Mount Sinai New York, NY



OCCIPITAL NEURALGIA

OCCIPITAL NEURALGIA

Patients with occipital neuralgia usually complain of severe, lancinating, sharp, short-lasting, spastic, jabbing pain in the occipital area and the neck.

Occipital neuralgia is a condition identified by chronic pain in the upper neck and the back of the head. These areas correspond to the locations of the lesser and greater occipital nerves. Occipital neuralgia most commonly involves the greater occipital nerve, the lesser occipital nerve, and in rare cases, the third occipital nerve. All of these nerves are found in the cervical spine–the neck.

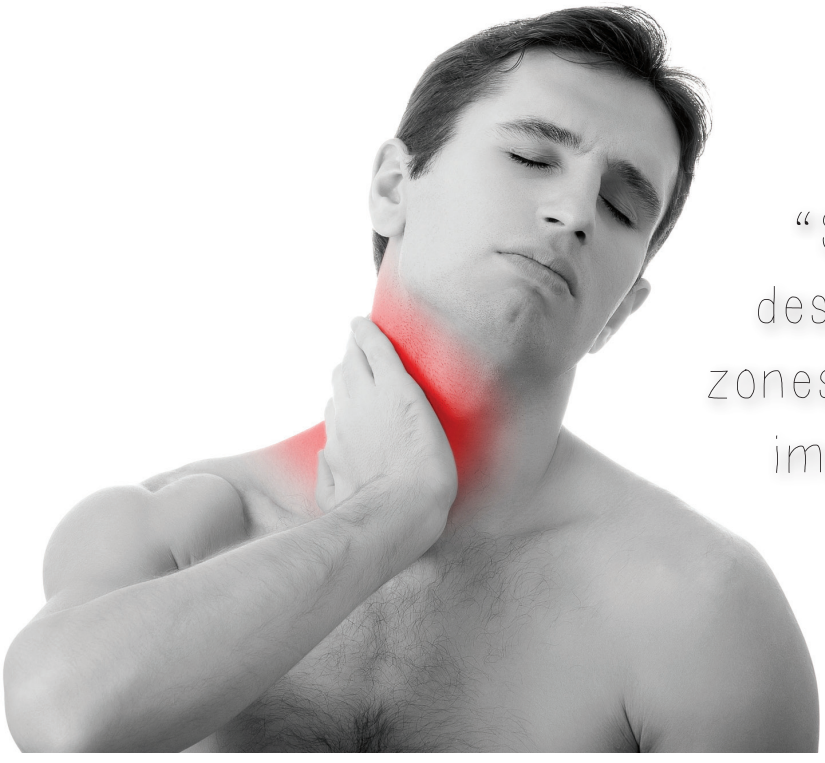
Patients with occipital neuralgia usually complain of severe, lancinating, sharp, short-lasting, spastic, jabbing pain in the occipital area and the neck. They frequently describe the pain as electric shock-like pain that usually lasts from several seconds to 1 to 2 minutes. It usually originates in the occipital area and spreads upward to the top of the head. Although it is usually one-sided, the pain may be felt on both sides. Most patients experience multiple severe attacks during the day. They may or may not experience a dull, low-grade background pain between the painful spasms. Usually, there is increased tenderness in the area of the greater occipital nerve that can be easily confirmed during physical examination. Palpation of this area may trigger an actual attack or produce paresthesia, which is a sensation of tickling, tingling, burning, pricking, or numbness of a person's skin with no apparent long-term physical effect. This is often described as "pins and needles."

The pain syndrome that is characterized by spastic, short-lasting, electric shock-like, painful attacks felt at the back of the head frequently suggests the occurrence of a previous injury or damage to the peripheral nervous tissue or a central nervous system dysfunction. In cases of occipital neuralgia, the occipital nervous tissue damage could be in the form of nerve compression by a tight muscle, degenerative changes in the neck, or sudden nerve injury that may occur during whiplash injury.

Occipital neuralgia is frequently caused by injury or trauma or by the chronic entrapment of the greater or lesser occipital nerve by tight cervical or occipital muscles. Although the "entrapment theory" seems to be very reasonable and can explain most of the patients' symptoms, there is a lack of strong clinical evidence to support this theory. This evidence includes multiple surgical studies that were done in the past. The history of recent neck injury can help establish the diagnosis of occipital neuralgia. However, in many cases, the pain occurs spontaneously.

DIAGNOSIS

In establishing the diagnosis of occipital neuralgia, it is very important to differentiate this condition from referred pain in the head and neck area, which could be due to a number of abnormalities affecting the neck muscles, vertebrae, or the shoulder. An initial MRI of the brain and the cervical spine is usually recommended for patients with recent



"Some patients may describe specific trigger zones at which stimulation immediately triggers a painful attack"

onset occipital neuralgia, especially if abnormal neurological findings have been observed during the examination. Finally, patients with occipital neuralgia should respond to a diagnostic occipital nerve block. Occasionally, in very challenging cases, performing specific nerve block procedures may help differentiate between the pain from occipital neuralgia and the pain due to cervical spine abnormalities.

The pain associated with occipital neuralgia may be either acute or chronic. Acute pain, which represents the body's protective mechanism, signals that the stimulation that has been received is potentially damaging to the tissue. In response, the body will try to eliminate it. For example, patients who experience severe occipital pain (as in the case of occipital neuralgia) may suddenly put their head in a certain position to alleviate the pain; or, they may stop the exact neck motion that produced the pain (such as straining the neck backwards). Most of these individuals may experience a sensation of tightness in the neck and shoulder areas or in the back of the head (occipital region). Instinctively, they may use muscle relaxants and/or anti-inflammatory agents to help reduce muscle tension, pressure, and localized swelling that may be causing or contributing to the compression of the greater or lesser occipital nerve. Once these protective mechanisms and actions have been utilized, the pain usually dissipates and may never re-occur unless a new injury is incurred.

Chronic pain occurs in those cases when the initial trauma has been resolved and the nervous tissue injury has healed, and yet the pain persists, and for the most part is unchanged. At this point, the chronic pain becomes the disease and not just a

symptom.

In general, the pain in occipital neuralgia can be described as continuous or intermittent, severe, sharp, burning or stabbing pain, and usually is localized to a particular nerve distribution. In many cases, these spiking, sharp, and painful attacks are triggered by apparently insignificant stimulation (such as a simple touch, a whiff of air, cold or hot temperatures) to the affected area or even by subtle neck or head motion. Some patients may describe specific trigger zones at which stimulation immediately triggers a painful attack–such as rubbing an area of the neck. In most cases, there is no observed neurological damage. Occasionally, patients with occipital neuralgia may show signs of allodynia, which is pain due to a stimulus that does not normally provoke pain (pressure from clothing or a gentle massage); or of dysesthesia, which is an unpleasant, abnormal sense of touch.

TYPES OF TREATMENT

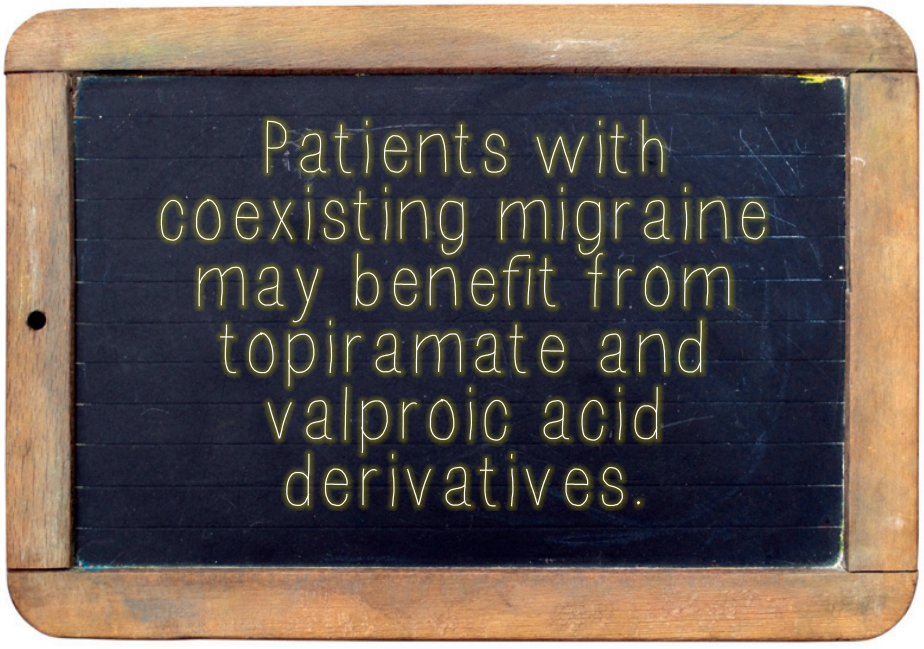
Patients with acute occipital neuralgia may benefit from local application of heat or cold. A short course of muscle relaxants and nonsteroidal anti-inflammatory medications (NSAIDs) may be of great value. Ultimately, an occipital nerve block, administered by a physician, may be helpful for both diagnostic and therapeutic efforts. In some cases in which the patient is experiencing frequent, severe lancinating, painful spasms–which may be quite disabling–this interventional approach should not be reserved as a last treatment option. Occipital nerve block procedure may be very effective and safe and could be easily and safely performed by a trained physician in a non-hospital setting. This procedure may provide prompt and lasting (for several weeks or even months) pain relief or in some cases even abort the disorder completely. Unfortunately, occipital nerve block frequently provides only temporary pain relief, indicating the need for long-term treatment modalities.

Before initiation of long-term therapy, the health care provider must first assess the patient's behavioral inactivity patterns, emotional background, cognitive factors, sleep pattern, compliance, and existing conditions. Evaluation of these factors should help tailor potential therapy for the individual patient.

Overall, one of the most successful and effective medications in patients with occipital neuralgia is carbamazepine (Tegretol®). Treatment usually starts at a dose of 100 mg per day which may be increased by 100 mg increments every 2 to 3 days, to a maximum of 1200 mg. per day, as tolerated. Sedation and dizziness are the most common side effects. Because one of the rare side effects is aplastic anemia, the patient will need frequent monitoring of the carbamazepine serum levels as well as other routine blood tests (complete blood count and comprehensive metabolic panel).

If initial therapy with carbamazepine did not produce significant pain relief, other treatment options should be considered. For example, patients with a history of depression and insomnia may benefit from the use of tricyclic antidepressants, such as amitriptyline or nortriptyline. Patients with a history of depression who do not report a significant sleep disturbance but do experience difficulty staying active during the day, may benefit from another tricyclic antidepressant–protriptyline–which typically does not produce sedation.

Patients with coexisting fibromyalgia or diabetes may also benefit from tricyclic antidepressant use. Alternatively, these patients may be considered for treatment with certain membrane stabilizers such as gabapentin and pregabalin. Patients with coexisting migraine may benefit from topiramate and valproic acid



derivatives. Application of lidocaine and capsaicin to the skin in the affected area, although not well-studied, may also be beneficial.

For those patients who fail to respond or are unable to tolerate the above-mentioned treatment modalities, more invasive treatment approaches may be considered, such as occipital nerve decompression surgery and occipital nerve stimulation. Although there is a growing body of evidence that these procedures may be both effective and safe, they should be reserved only for treatment of patients with intractable occipital neuralgia, which does not respond to standard forms of therapy.

Diagnostic Criteria Proposed by The International Headache Society

- Paroxysmal (spasmodic) stabbing pain, with or without persistent aching between spasms, in the distribution(s) of the greater, lesser and/or third occipital nerves
- Tenderness over the affected nerve
- Pain is eased temporarily by local anesthetic block of the nerve

Case Report

The patient, a 34-year-old male, complained of severe stabbing headaches. He described the pain as burning, electric shock-like pain that originated in the right occipital area and radiated to the top of the head. He states that pain is usually sudden in onset and lasting just a few seconds in duration. He rated the severity of the pain as 9 to 10 on a 1 to 10 scale, with 10 being most severe. The patient may experience between 10 and 20 attacks per day. He states that once the sharp pain is gone, he may still feel a dull, aching pain in the same distribution that may persist for several minutes. The patient also notices that certain neck positions or the application of applying pressure to the right occipital area can also trigger the acute sharp attack. The patient reported that he developed this pain

"However, on the morning after the accident, upon awakening he developed his first sharp twinge in the right occipital area. These severe stabbing head pains have occurred daily (up to 20 attacks per day) since the morning after the accident. . ."

2 weeks before the initial visit, following a minor motor vehicle accident in which his car was hit from behind while he was stopped at a red light. He did not notice any dizziness or light-headedness after the accident, and also denied any immediate pain or discomfort anywhere in his body. He noted that he did experience a whiplash motion in his neck, but he never addressed this complaint with his physician because it was very mild and initially, did not produce any neck and head pain. However, on the morning after the accident, upon awakening he developed his first sharp twinge in the right occipital area. These severe stabbing head pains have occurred daily (up to 20 attacks per day) since the morning after the accident. The patient tried taking acetaminophen and ibuprofen without any relief.

On physical examination, localized tenderness in the right suboccipital area (top of the neck) was noted. Palpation of the area was producing paresthesias (prickly and tingling sensations) along the path of the distribution of the right greater occipital nerve. When more intense pressure was applied to the area, the patient reported it was reproducing severe, short-lasting stabbing attacks. The range of motion in his neck was limited due to muscle tightness and to tenderness on the right side of the back of the head, above the neck. The rest of the neurological examination was normal. An x-ray of the cervical spine (neck) appeared to be normal.

On the same day of the initial evaluation, a diagnostic right greater occipital nerve block to the affected region was performed and which produced immediate and complete resolution of the pain. The patient reported that the relief lasted for several hours, after which the pain attacks returned, but were less frequent. Several days later, at a follow-up appointment, the patient was started on baclofen (Lioresal®) 10 mg. three times daily and carbamazepine (Tegretol®) 100 mg. orally twice daily. The dose of carbamazepine was gradually increased to 600 mg. per day, at which point the pain ceased. The patient continued the therapy for an additional 4 weeks. Blood tests, including a complete blood count and comprehensive metabolic profile, were checked prior to initiation of carbamazepine treatment and repeated again 4 weeks into the treatment. The blood tests appeared to be within normal limits on both occasions. After the patient remained pain-free for 4 weeks, the baclofen and carbamazepine were weaned and discontinued. During a 1-month follow-up appointment, the patient remained symptom-free.HW

Alexander Feoktistov, MD, PhD.
Diamond Headache Clinic
Chicago, IL

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® (onabotulinumtoxinA) 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.

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

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

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 at 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 overactive bladder symptoms such as a strong need to urinate with leaking or wetting accidents (urge urinary incontinence), a strong need to urinate right away (urgency), and urinating often (frequency) in adults when another type of medicine (anticholinergic) does not work well enough or cannot be taken.
- to treat leakage of urine (incontinence) in adults with overactive bladder due to neurologic disease when another type of medicine (anticholinergic) does not work well enough or cannot be taken.
- 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
- painful urination in people being treated for urinary incontinence
- inability to empty your bladder on your own and are being treated for urinary incontinence. If you have difficulty fully emptying your bladder after getting **BOTOX**, you may need to use disposable self-catheters to empty your bladder up to a few times each day until your bladder is able to start emptying again.
- 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

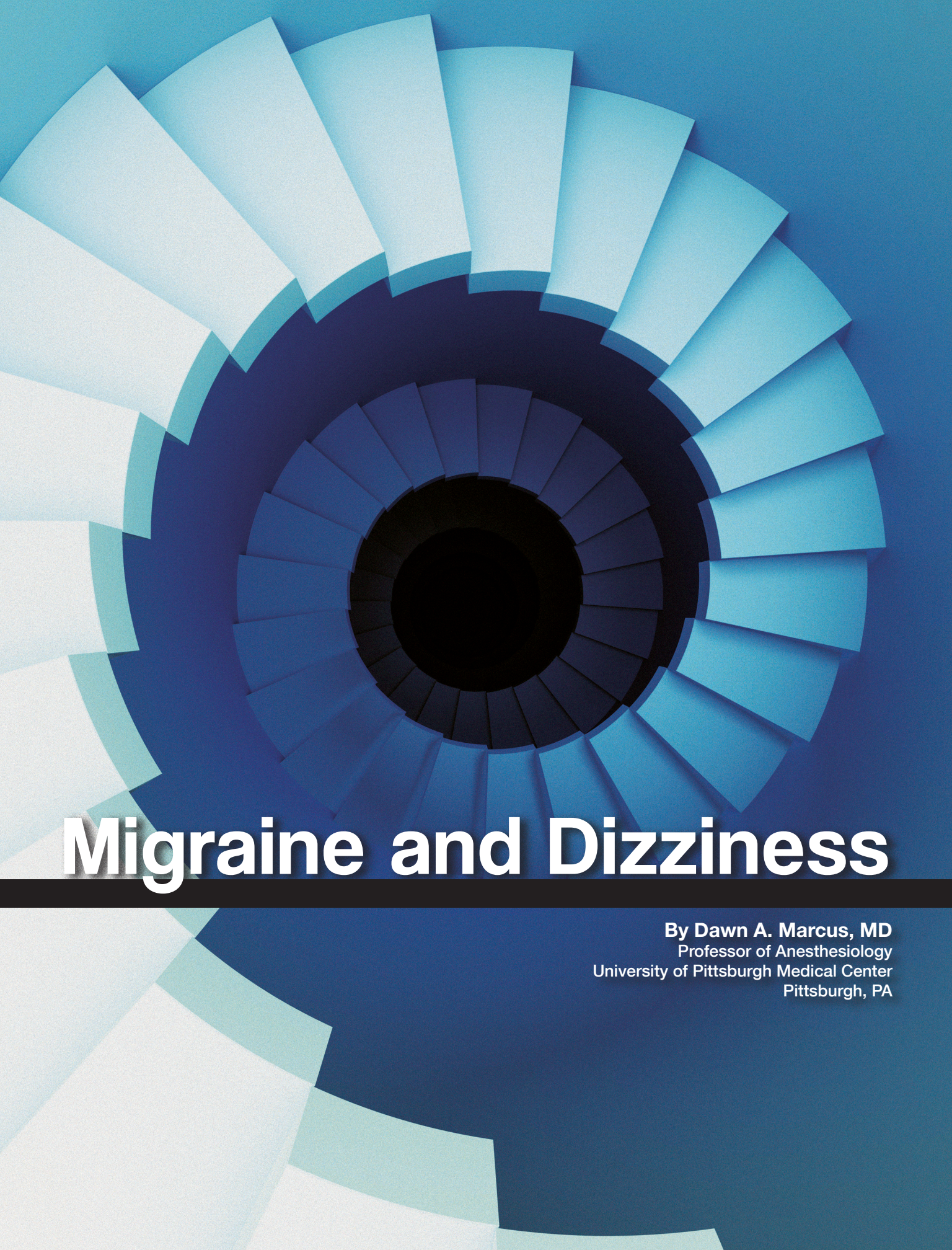
Inactive ingredients: human albumin and sodium chloride

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
Revised: 01/2013

ALLERGAN

Based on 72284US15
APC88QR13



Migraine and Dizziness

By Dawn A. Marcus, MD
Professor of Anesthesiology
University of Pittsburgh Medical Center
Pittsburgh, PA

People with migraine may also experience dizziness or other balance problems.

1:3 people with migraine has problems with dizziness
1:4 migraineurs have had vertigo

While dizziness can be a sometimes difficult to describe sensation as a feeling ill and off balance, vertigo is a sense of the world spinning around you or a feeling like you're walking on a rocking ship even though you're on steady ground. Like migraines, balance symptoms often come and go and sometimes attacks of dizziness or vertigo are linked with migraine episodes.

Research on migraine and dizziness has uncovered important links and interconnections between pathways that control pain and pathways that control our sense of balance in the brain and nervous system. The trigeminal center is an important relay station for head pain and migraine symptoms and balance nerves also connect to this system. In addition, the brain transmitter, serotonin, is an important messenger for both migraine symptoms and dizziness. At the University of Pittsburgh, we've done research to show that migraine drugs targeting serotonin receptors can also reduce the dizziness you experience when we put you through balance testing experiments.

On occasion, individuals with migraine experience dizziness or vertigo as part of their migraine episodes–with symptoms occurring as part of the migraine prodrome or aura, or occurring during the painful part of a migraine attack. At other times, migraines and dizzy problems occur separate from each other. Because people with migraine may also experience dizziness or vertigo, several studies have helped identify important relationships between migraine and common balance disorders, including motion sickness, vertigo, and Ménière's disease.

Motion sickness

Motion sickness is the development of sweating, dizziness, headache, sleepiness, and nausea when exposed to motion (like riding in cars, buses, boats, trains, and airplanes) or viewing a moving scene, like a 3-D movie. Motion sickness can be severe and disabling; especially for those whom travel is part of their job, such as business travelers, pilots, and ambulance workers. Motion sickness can also interfere with daily activities and limit vacation plans.

Individuals with migraine are more likely to be sensitive to the effects of motion and develop problematic motion sickness. For example, a study published in the journal *Headache* compared motion sickness in people with and without migraines.

Motion sickness occurred:

- When riding in a car in over 40 percent of migraineurs compared with 8 percent of people without migraines
- When playing with playground equipment for almost half of those with migraine and only 16 percent without migraine
- While watching wide-screen movies for 28 percent with migraine and 4 percent without migraines

Overall, when testing children or adults, about half of those with migraine also have problems with motion sickness.

The main treatment for motion sickness sensitivity is to limit exposure to situations that might provoke symptoms. For example:

- Avoid reading when riding in a car
- When you are a passenger in a car, ride in the front rather than the backseat
- Select forward rather than backward facing seats on trains
- Avoid 3-D movies

Scopolamine patches may be used when motion is unavoidable, such as taking a cruise. The patches should be used for no more than 3 days. Longer use can result in prolonged motion sickness symptoms that start about 1 to 3 days after removing the patch and can continue for days to weeks. Antihistamines, such as meclizine (Antivert), can also be used. Acupressure at the wrist (e.g., Sea-Bands) and taking 1 to 2 grams of ginger have also been shown to be helpful for reducing motion sickness symptoms.

People with migraine dizziness or other

Vestibular migraine

Some individuals experience disabling dizziness or other balance symptoms during their migraine attacks. When patients have experienced severe dizziness or vertigo with several migraine attacks, they may be experiencing a specific type of migraine, vestibular migraine, or migraine-related vertigo. Patients with vestibular migraine generally experience some migraine attacks with disabling dizziness or vertigo, and other migraine attacks with no vertigo symptoms. They may also complain of attacks in which vertigo is the main problem and pain and other migraine symptoms are minor or may not even be present. Vestibular migraine may be more common than we think. Vestibular migraine occurs in about 1 in every 10 migraineurs.

Balance problems with vestibular migraine usually involve the symptom of vertigo. Vertigo is a feeling like you are spinning or the world around you is spinning when, in actuality, there is no movement. Vertigo can make walking difficult or impossible and people often become very nauseated with vertigo. The vertigo in vestibular migraine occurs as intermittent attacks. Between attacks, patients generally have no problems with their balance. Vestibular migraine is diagnosed when:

- You have been diagnosed with migraine
- You get spells of disabling vertigo that come and go
- Migraine aura, migraine pain, or sensitivity to noises or lights occur during at least some of your vertigo spells
- You do not have another cause for vertigo, such as Ménière's disease (see below)

Women are five times more likely to have vestibular migraine than men. In most cases, individuals report migraine attacks without vertigo for several years before developing vestibular migraine.

Vestibular migraine is treated using the same therapies that are used for other migraine types. Both acute therapies (such as the triptans) and prevention therapies including verapamil (Calan), antidepressants (amitriptyline [Elavil]), or topiramate (Topamax) have been shown to effectively treat vestibular migraine. Biofeedback has also been shown to be effective. In some cases, anti-vertigo agents, such as promethazine (Phenergan) or meclizine (Antivert), are used during attacks.

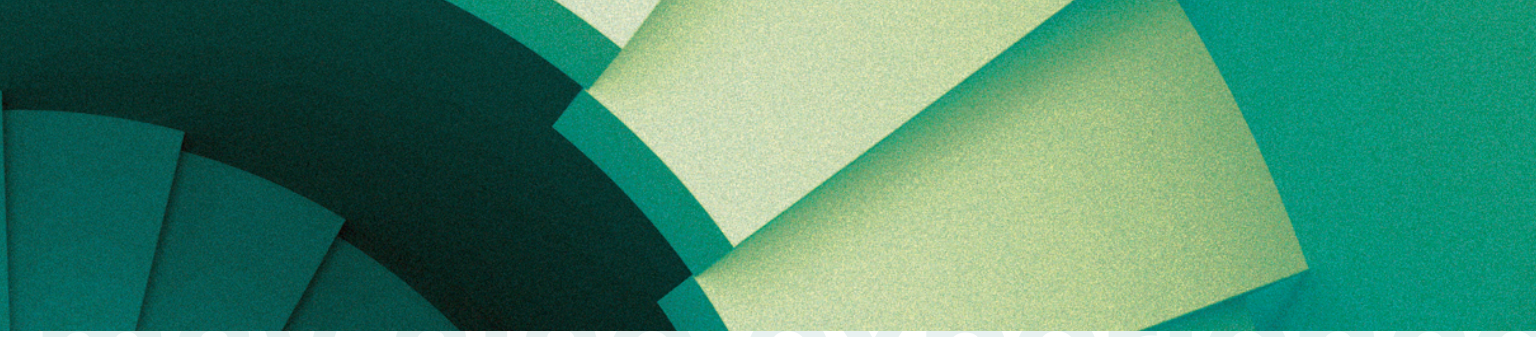
Ménière's disease

Ménière's disease is another condition with episodes of vertigo. Ménière's disease represents an inner ear problem. Ménière's disease attacks also include hearing loss and ringing or fullness in one of the ears. Some hearing loss can become permanent.

Unlike vestibular migraine, Ménière's disease is not a special type of migraine. Although Ménière's disease and migraine are two distinct syndromes, patients with Ménière's disease (about 50 to 60 percent) also experience migraine.

Episodes of vertigo in Ménière's disease may be treated with meclizine (Antivert), diazepam (Valium), or promethazine (Phenergan). Your doctor may also advise you to eat a low salt diet or may prescribe a water pill or diuretic to help reduce the frequency of Ménière's attacks. In severe cases, inner ear surgery may be needed.

Although Ménière's disease is an inner ear disease and migraine is linked with abnormal balance of brain chemicals and sensitivity of pain-producing nerves, it can often be difficult for physicians to distinguish between these two conditions. For example a recent study in the journal *Neurology* found that nearly half of people with Ménière's disease experienced at least one migraine symptom during their attacks of vertigo. Often, physicians use response to treatment to help establish the diagnosis. For example, if typical Ménière's disease treatment with a diuretic is ineffective, your doctor may try a migraine therapy like verapamil (Calan). If you respond to the migraine therapy, the doctor may determine that you



have vestibular migraine instead of Ménière's disease.

Episodes of vertigo in Ménière's disease may be treated with meclizine (Antivert), diazepam (Valium), or promethazine (Phenergan). Your doctor may also advise you to eat a low salt diet or may prescribe a diuretic (water pill) to help reduce the frequency of Ménière's attacks. In severe cases, inner ear surgery may be needed.

> "Treatments that target balance disorders combined with migraine therapies may be helpful in the management of disabling balance problems…"

What's the take-home message?

Dizziness and vertigo can occur from a broad range of health conditions, including migraine. They can also occur when you have an infection, chemical or hormonal imbalances, and anemia. Dizziness and vertigo can be caused by problems in your ear, your brain, or other organs. Because dizziness and vertigo can occur with so many disorders, it is important to contact your physician when you experience these symptoms or if your chronic balance symptoms become worse.

If you experience migraine, you are more likely to also have problems with dizziness and vertigo. At times, the dizziness or vertigo may be part of your migraine episode, as in the case with vestibular migraine. Occasionally, dizzy or vertigo symptoms may be a separate problem, as in motion sickness or Ménière's disease. Be sure to consult your physician about problems with dizziness or vertigo. Treatments that target balance disorders combined with migraine therapies may be helpful in the management of disabling balance problems that commonly occur with migraine.

Case Report

Mary is a healthy 20-year-old woman who has been having problems with dizzy spells for the last 6 months. Normally, she has no problems with dizziness or balance problems. About once a month, she experiences a bout of severe dizziness that lasts a few hours. The dizziness can become so severe that she feels like she is walking on a boat during a storm. If she tries to walk, she veers to the side and is afraid she will fall. In addition to the nausea, she becomes sensitive to sounds and lights during her dizzy attacks and prefers to stay in bed in a dark, quiet room. After the dizziness resolves, she is left with a mild, throbbing headache.

Mary is otherwise in good health and takes no medications besides birth control pills. Her only other problem is migraine headaches which began at the initial onset of her menstrual periods at age 15. Her migraine headaches start as a severe throbbing pain on one side of her head, and are associated with nausea and sensitivity to light, noises, and smells. The migraine attacks typically occur about twice a month. Treating her migraines early in the attack with sumatriptan is generally effective.

Like Mary, patients with migrainous vertigo often experience migraine without vertigo for many years before having episodes of migraine with vertigo. The duration of balance problems during migrainous vertigo attacks can last between seconds to a full day. Because the balance symptoms are generally quite severe and disabling, patients often do not notice the migraine features that also occur during migrainous vertigo episodes. Once Mary was diagnosed, she used sumatriptan to treat her vertigo episodes as she would her other migraine attacks–with good relief. HW

By A. David Rothner, MD

ALLERGY AND HEADACHE Fact & Fiction

A common question at the conclusion of a pediatric headache consultation is:

Are my child's allergies causing the headache? The answer to the question is multifaceted. It could involve a discussion of seasonal allergies, sinus issues, food allergies, gluten and celiac disease, and the effect that chemical additives in food can have on the body.

Allergies of all kinds, abdominal pain, sinus symptoms, and headaches are among the most common maladies that children and teens experience. The high frequency of these various disorders contributes to the misconception that they are related. It is, therefore, entirely reasonable that patients experience more than one of these conditions and mistakenly conclude that one (allergy) causes the other (headache). Let's examine the facts.

Definition

Prior to proceeding with this discussion, it is important to define Migraine and Tension-Type Headache (T.T.H.). Neither of these conditions have been proven to be caused by allergies.

Episodic migraine in children and adolescents, in over 80 percent of cases, is genetic in origin. If a mother experiences episodic migraine, each of her children stands a 50 percent chance of having migraine. The usual childhood migraine is not daily and occurs 2 to 8 times per month. The patients often become quiet, appear pale, have dark circles under the eyes, become listless or irritable, and develop a strong pounding headache. The child may want to lie down, stop activity, and become sensitive to light and noise. Most lose their appetite and refuse food. Many children experience relief after sleep. The entire episode may last 1 to 4 hours. Both analgesics and triptans may be needed.

The cause of T.T.H. is less clear. Stress, heredity, environment, and G.O.K. (God only knows) have all been implicated. In most instances, it is occasional, occurring once or so per week, but it may become more frequent. If it occurs less than 15 days per month, it is called Episodic T.T.H. If it occurs more than 15 days per month, for months on end, it may be called Chronic Daily Headache (C.D.H.). In many patients with C.D.H., occasional episodic migraine is also seen. In patients with T.T.H, pallor and dark circles are less prominent, and personality changes are less marked. The headaches are less pounding and severe, the patients are less sensitive to light and noise, and do not lose their appetite, develop nausea, or vomit. Simple analgesics are often effective.

"Treatment of the infection with nasal decongestants and/or antibiotics will often resolve the problem. Treatment with "allergy shots," over time will often prevent these periodic symptoms."

Allergies

Seasonal allergies, such as allergies to trees, pollen, and the like are common. Among the symptoms produced are nasal stuffiness, sneezing, watery eyes, runny nose, cough, and even wheezing. These symptoms are an over-reaction of the immune system. The nasal passages swell, and drainage from the nose and sinuses is impaired. This predisposes the individual to a feeling of fullness above the nose and in the forehead, and the pain is interpreted as "sinus headache." In addition, this impaired drainage can be complicated by bacterial overgrowth and a true rhino-sinus infection develops with tenderness over the sinuses, green purulent nasal drainage, and fever. The associated facial and frontal headache is real but it is not migraine or tension-type headache.

Treatment of the infection with nasal decongestants and/or antibiotics will often resolve the problem. Treatment with "allergy shots," over time will often prevent these periodic symptoms. Once again, these seasonal allergies are not the "cause" of your child's migraine or tension-type headache.

What about food allergies, gluten sensitivity, lactose/fructose intolerance, and my child's abdominal pain and other G.I. symptoms? The causes of these conditions are different from one another but the symptoms may overlap. These disorders do not in fact cause typical episodic migraine. When children and teens are ill from any condition, they may have increased headache. I am often asked if their abdominal pain is abdominal migraine. It should be stated that daily or very frequent abdominal pain is not abdominal migraine. Abdominal migraine often occurs in children who already experience typical episodic migraine. It also occurs more frequently in children whose parents experience typical episodic migraine. It occurs 2 to 4 times per month and is a peri-umbilical cramping pain, often quite severe. Nausea may coexist but vomiting is uncommon. Children may appear pale, and may lie in a dark quiet room. Most of the time there is no headache. The symptoms often last between 30 to 90 minutes.

Celiac disease is being diagnosed with increased frequency. As noted by NHF president, Dr. Arthur Elkind, "celiac disease is often over diagnosed by lay individuals. If the physician believes the child has celiac disease and headaches from the issue, it is very important to place the child on a gluten-free diet. The diet should not only arrest the headaches, but more importantly prevent or reverse an intestinal malabsorption syndrome." There are diagnostic procedures and tests that can be very accurate. Research regarding the frequency, severity, and the types of headache occurring in patients with celiac disease is currently underway. The stress to the patient, his or her family, the interference with normal childhood activities, decreased school attendance, and academic performance, as well as the

"There is no question that chemical additives contained in food are vasoactive and among other mechanisms can cause true episodic migraine."

recurrent abdominal pain caused by many primary G.I. diseases, may contribute to the occurrence of tension-type headache.

What about food and migraine? The differences between food allergies and dietary triggers should be discussed. There is no question that chemical additives contained in food are vasoactive and, among other mechanisms, can cause true episodic migraine. These reactions are not immune mediated. There are discussions, disagreement, and some research regarding which food and what quantities have a role in migraine and possibly in tension-type headache.

Management

In a youngster seeking consultation for significant refractory headache (migraine or C.D.H.), I routinely address:

A. Patient/parent education (written materials)
B. Confident reassurance that underlying problems have been excluded
C. Stress reduction
D. Adequate sleep
E. Hydration
F. Nutrition
G. Eliminate medication overuse
H. Adequate exercise

I routinely exclude foods that the patient or parents feel play a role, plus:

caffeine
chocolate
lunch meats
aged cheese
monosodium glutamate (MSG).

I ask for complete cooperation for 6 to 8 weeks and then consider reintroducing food in moderation. Lists of other provocative foods are easily found.

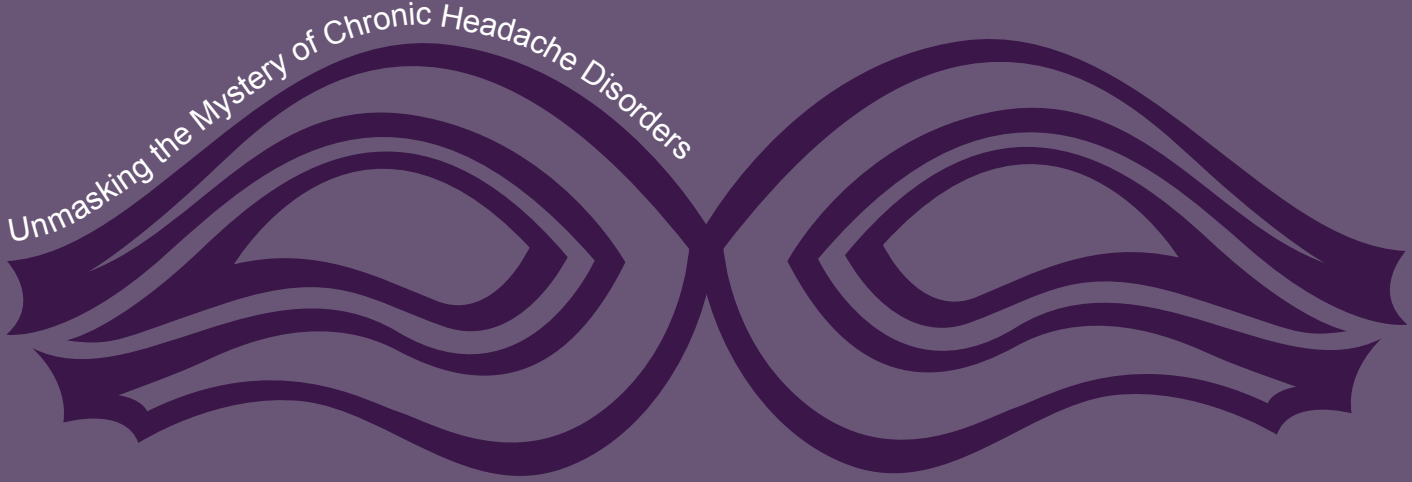
Summary

Research into allergies, diagnosed by a thorough history, skin and blood tests, or elimination diets has not definitively shown that they cause headache. In all cases, consult your physician or obtain a second opinion before embarking on an arduous expensive course of therapy. HW

A. David Rothner, MD,
Pediatric Neurology
Cleveland Clinic Foundation,
Cleveland, Ohio

JUNE IS

MIGRAINE & HEADACHE AWARENESS MONTH



For more information:

watch for updates on **www.headaches.org**

or

call **888-NHF-5552**

show purple | show support

ask the pharmacist

Richard Wenzel, Pharm.D.
Diamond Inpatient Headache Unit,
Presence-Saint Joseph Hospital
Chicago, IL

"Aspirin" has been marketed as a commercial product for more than a century. In actuality, acetylsalicylic acid is the active ingredient in aspirin and was discovered in the bark of a willow tree over 200 years ago. Today, aspirin remains a commonly utilized drug which is available without a prescription in most countries around the world, including the United States. This medication is inexpensive and, when taken at recommended doses, can be safely used by most individuals. As a result of these features, approximately 16,000 tons of aspirin (or roughly 80 million pills) are sold annually in this country.

Aspirin's uses include numerous non-pain conditions such as heart disease, fever, and blood clots occurring throughout the body. Still, pain typically ranks as the leading reason people use aspirin and, unsurprisingly, pain induced by a headache is often at the top of this list; virtually every person on the planet will experience a headache sometime during their life. Indeed, "take an aspirin" is undoubtedly the most common response to anyone saying "I have a headache". The World Health Organization lists aspirin as an essential medication for the treatment of migraine in adults, further promoting the global consumption of this medication.

Although aspirin is available in various dosage forms including tablets, capsules, suppositories, liquids, and injections, in the United States, products taken by mouth are clearly the most common manner in which this drug is utilized. The Food and Drug Administration (FDA) has approved aspirin for multiple medical purposes, including:

1) the treatment of adults with headache
2) the treatment of adults with migraine.

The FDA-approved doses for headache are 500 milligrams (mg.) to 1000 mg. every 4 to 6 hours as needed, with a maximum dose of 4000mg. per 24 hours. The FDA-approved doses for migraine are 1000mg for one-time administration every 24 hours as needed.

Migraine affects about 30 million individuals in this country, only half of whom have been diagnosed by a physician. Furthermore, physicians misdiagnose approximately one-fourth of patients with migraine. Thus a large number of migraine sufferers are unaware of the true nature of their condition and they may simply call their illness a "headache." Differentiating between a headache and a migraine can be a difficult, but a necessary task to perform in the real world. Yet, a 3000mg daily dosing difference

exists for these two conditions (4000mg versus 1000mg). This leads to a simple but important question; how much aspirin is the correct dose? Or perhaps phrased a similar way; how much aspirin is too much?

Several issues need to be considered prior to answering these questions. First, individuals who have certain risk factors should either avoid aspirin or only use aspirin under close supervision of a health care professional, usually at a reduced dose. Some common risk factors include bleeding disorders (e.g. stomach ulcers, inability to form blood clots properly, concurrent use of drugs that can cause bleeding such as Coumadin), pregnancy (especially the third trimester), kidney disease, liver disease, asthma, and excessive alcohol consumption (3 or more drinks daily).

Second, patients should strive to determine whether they are a migraine sufferer, as opposed to having some other headache disorder. Migraine's hallmark feature is disrupting a person's ability to perform normal activities of daily living such as being present and productive at their place of employment, fulfilling family responsibilities, (e.g. cooking meals, caring for children, cleaning house, etc.), or participating in social activities (dinner with friends, attend children's events, etc.). Other common migraine symptoms include nausea, vomiting, and sensitivities to light or sounds during an attack. If an individual is suffering with a headache so severe that the person is absent from work, is confined to a couch or bed, unable to perform daily tasks (preparing meals or doing other household chores), or is cancelling social plans with friends, there is a high probability that this person is experiencing migraine.

Patients with the issues mentioned in the previous paragraph should follow the FDA-recommended aspirin doses for migraine. If aspirin fails to provide relief for the majority of migraine attacks (e.g. treat three separate attacks with aspirin, but the drug fails to provide adequate relief for at least two attacks), then an evaluation by a physician should be considered.

However, if someone is able to complete their usual daily tasks despite being in the midst of an acute headache, the probability that this person has migraine is low. This individual should follow the FDA-recommended aspirin doses for "headache."

One final and important consideration is how many days per week should this medication be consumed? Although aspirin can be taken on a daily basis for the treatment of certain illnesses (e.g. stroke prevention), ingesting an aspirin

ask the pharmacist

Richard Wenzel, Pharm.D.
Diamond Inpatient Headache Unit
Presence-Saint Joseph Hospital
Chicago, Illinois

"Thus, seemingly a simply task, taking an aspirin may not be so simple in reality."

every day for the treatment of either migraine or other types of headaches is generally a poor idea. Daily or near-daily use of acute medications (including aspirin) places the individual at risk of developing rebound headache, which is a phenomena where too much medication consumption can actually increase the frequency and/or severity of the migraine attacks.

Individuals experiencing other headache disorders are also at risk of developing rebound headache if they repeatedly utilize their acute medication. As a general rule, patients should limit their acute medication use to an "as needed" basis on 3 or fewer days per week. Patients needing acute drugs 4 or more days per week, particularly when this occurs multiple weeks per month, should consider seeing a physician.

Thus, seemingly a simply task, taking an aspirin may not be so simple in reality. What should patients do? First, determine if an over-the-counter product (OTC) such as aspirin is appropriate; individuals who experience debilitation (e.g. need to lay down and avoid work, home, or social activities) with the majority of their headaches are poor candidates for OTC products, regardless of whether the patient believes they have migraine or "headache". These individuals should seek a physician's evaluation. Individuals who experience headache on 15 or more days per month, again regardless of whether the patient believes they have migraine or "headache", should also seek a physician's help.

Patients who believe they have migraine should follow aspirin's migraine-dosing recommendations, while those without migraine should follow the aspirin's "headache"–dosing recommendations. Over time, if aspirin fails to provide acceptable relief, then those patients should consider utilizing a different OTC product (e.g. ibuprofen) or consider an appointment with a physician. HW

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 undertaken 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) advocacy with health policy decision makers, 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.

NATIONAL HEADACHE FOUNDATION

Keeping a headache diary can help your doctor help you

NHF suggests answering the following questions to compile your headache history:

- When did you start having headaches?
- How often do they occur? At what time of day? During the week or on weekends? How long do they last?
- Where is the pain?
- Which word best describes it: throbbing, pounding, splitting, stabbing, and blinding?
- Are your headaches associated with your menstrual cycle?
- What triggers your headache: certain foods, certain physical activities, bright light, strong odors, change in temperature or altitude, noise, smoke, stress, and oversleeping?
- What symptoms do you experience prior to the headache?
- Does anyone else in your family suffer from headaches?
- Do you notice visual disturbances before or after your headaches?
- Do you suffer from more than one type of headache?

It is important to make an appointment with your doctor for the specific purpose of addressing your headache history rather than discussing headaches as part of a physician visit for other reasons. The National Headache Foundation also recommends keeping a diary to track the characteristics of your headaches. Patterns identified from your diary may help your doctor determine which type of headache you have and the most beneficial treatments.

For more information about headache causes and treatments, visit the NHF web site at: www.headaches.org or call 888-NHF-5552

820 N. Orleans, Suite 411, Chicago, IL 60610-3132
Toll Free (888) NHF-5552 Fax (312) 640-9049

NATIONAL HEADACHE FOUNDATION

Date	**Time**	**Intensity** rate 1-10 (most severe being 10)	**Preceding Symptoms**	**Triggers**	**Medication** (and dosage)	**Relief** (complete/ moderate/ none)

show purple | show support

JUNE IS

MIGRAINE & HEADACHE AWARENESS MONTH