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Spring 2001

# LAHEY CLINIC

*Health Magazine*

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## **Headache**

*Heading Off Pain*

# Headache



## Heading Off Pain



**At Lahey Lexington, neurologist Ann Camac, MD, elicits a patient's detailed medical history, one of the most important tools in diagnosing and treating headache.**

Trying to keep track of all the different kinds of headaches and their triggers can be...well...a real headache.

There are well-known ones, like migraine, tension type and ice cream headaches. And sneaky ones, like rebound headaches and breakthrough headaches. Cluster headaches that start around or behind the eyes, day after day for weeks at a time, until they just go away. Headaches triggered by bright light, chocolate, perfume

or sinus problems. There are headaches brought on by caffeine, and others brought on by caffeine withdrawal.

"Actually, the vast majority of headaches don't have a cause that one can find," says neurologist Stephen L. Wanger, MD, a headache specialist at Lahey Clinic Medical Center in Burlington.

"And most people with headaches self-treat with over-the-counter medications," says Lahey neurologist Ann Camac,

MD, who specializes in headache treatment at Lahey Lexington and Lahey Clinic Medical Center. "A large percentage of those who treat themselves are undertreated."

To be sure, it's a matter of perspective. Everyone has at least an occasional minor headache over time—brought on by, say, hunger or lack of sleep (or too much sleep) or the sudden roof-of-the-mouth coldness of ice cream, or perhaps missing the daily caffeine fix.

But for many people, headaches are not a minor, occasional issue but a persistent, even disabling affliction whose causes are unclear. Forty percent of the American population is estimated to experience tension type headaches periodically, and 18 percent of American women and 6 percent of American men experience migraine headaches.

"The good news is that we have come to a new understanding of headache and to the development of new classes of medications," Camac says. "These have revolutionized the treatment of many of these problems. The important thing to know is that there is help available."

### Primary and secondary roles

The evaluation of patients with headache problems is frequently driven as much by a thorough medical examination and history as by diagnostic technology. A "primary" headache is one in which the headache itself is the medical issue. A "secondary" headache is one associated with an underlying issue—meningitis, stroke or severe hypertension, for example.

"When a person experiences a headache problem, it's important to determine that it's not a marker for some underlying disease," Wanger says. "It rarely is, but it's most important that people know that's the case."

"In fact, a chronic headache victim should have such an evaluation at least once in his or her lifetime," he says. "This generally means MRI or CT imaging or possibly a lumbar puncture. It doesn't have to be done for every new doctor, but it should be done at least once."

An examination, says Camac, includes eliciting both a family history and a detailed medical history of the patient, focusing on a wide range of characteristics. These include the location of the pain, whether it occurs on one side or both sides,





**Although relatively few headaches are associated with underlying diseases, CT scanning and the MRI technology shown here are valuable tools in ruling out potential problems such as tumors, stroke or inflammation of blood vessels.**

whether it's throbbing or sharp, whether there are associated factors such as light sensitivity or abnormal vision, what triggers the pain, frequency of attacks, treatments tried, potential medical issues such as hormone replacement therapy or birth control pills, and lifestyle issues such as smoking or consumption of caffeinated beverages.

"There are different types of headaches with different mechanisms," Camac says. "If you can determine the nature of the headache, you can develop a medication plan."

#### **Treatment options**

"Typically," Camac says, "in terms of treatment we have three possible routes—analgesics, or pain killers, to relieve the pain; abortive medications to stop a migraine that has begun; and prophylactic, or preventive, medications to make migraines strike less often or even eliminate them." Analgesics, of course, have long been in use, including over-the-counter medications such as aspirin and acetaminophen as well as prescription pain killers.

"Triptans, medications that have proven effective in stopping migraines that have already started, are the first class of medicines designed specifically for headache," Wanger says. "They could be developed because of advances in our understanding of the mechanisms of headache."

Triptans (sumatriptan, naratriptan and rizatriptan, among others) appear to

act at the serotonin receptors. Proposed mechanisms of action include constricting intracranial blood vessels, inhibiting the trigeminal sensory nerve, and inhibiting pain transmission to the brain.

Triptans' degree of success tends to depend on when they're used in the course of a migraine—they are 80 percent effective in stopping a migraine when used early, 50 percent effective when use is delayed. Ergot alkaloids such as ergotamine have also proven useful for this purpose.

Drugs that have been found useful in preventing headaches or in diminishing their frequency or duration are, among others, antidepressants such as amitriptyline and doxepin; drugs associated with control of hypertension such as beta-blockers and calcium channel blockers; and anticonvulsants.

"The good news is there is much we can do for the headache sufferer," Camac says. "People shouldn't despair."

*For an appointment with headache specialists Ann Camac, MD, or Stephen L. Wanger, MD, call 781-744-3250.*

*For more information about the Department of Neurology and its staff, see our web page: [www.labey.org/neuroscience/](http://www.labey.org/neuroscience/)*

## Migraine Headaches

While the principal primary headache types are perceived as tension type, cluster and migraine headaches, it's now recognized that migraines are much more common than previously thought, and that the others may be subsets of migraine to some degree.

"In a way, the different types of headache seem to be parts of a broad continuum that share a lot of mechanisms but are expressed differently," Wanger suggests, "like music that is all made out of the same body of notes but expressed uniquely in different songs."

Migraine in fact is often experienced as a broader set of symptoms than just headache. While intense pain is certainly the overriding issue, for about one out of five migraine sufferers its outstanding characteristic may well be the "aura" that frequently precedes it and can affect vision, hearing and smell.

The most common element of an aura is a disruption of clarity of vision, accompanied by a visual perception of flashing lights or zigzag patterns that can last for minutes or hours. Intense, dull pain in the temple can spread to the side of the head—often just one side. Also present may be nausea and sensitivity to sound and odors.

"A moderate to severe migraine typically lasts for hours or days," says Camac. "The pain can be a throbbing pain that is worse when you exert yourself. Migraine is far more common in women but it can strike anyone at any age."

# A Glossary of Headache

Migraine attacks can be triggered by events as varied as the tension of emotional problems, hormonal changes associated with menstruation, fatigue, drinking alcohol or eating foods containing MSG. It's now largely believed that migraine attacks originate in the nervous system's reaction to changes in the body or external environment, causing blood vessels and nerves serving the brain to become inflamed.

Says Wanger, "One of the biggest developments in our field is an emerging understanding that the message for headaches comes from the brain, that a central nervous system generator is responsible for sending the message for many headaches, especially migraines."

## Cluster Headaches

Cluster headaches usually start around or behind the eye, although they may move to other parts of the head. They tend to come on in clusters—often at the same time each day for days or weeks, reaching a peak within about 15 minutes and lasting several hours. Whereas women are by far the principal victims of migraines, 90 percent of cluster headache sufferers are men. While cluster headaches used to be considered a distinct category of headaches, currently they're viewed as likely a subset of migraines.

## Tension type Headaches

Tension type headaches actually affect more people than any other kind of primary headache disorder, but they are the least understood and the hardest to distinguish. Many of their characteristics overlap those of migraines, and their diagnosis is often based principally on the absence of migraine symptoms. Face and neck muscle tightness plays a role, but whether that's a cause or an effect is not clear. Most migraine sufferers also experience some tension type headaches, as well.

## Chronic daily Headaches

Whether migraine or tension type, headaches may occur frequently enough—say, on more days than not in a month—to be described as chronic daily headaches. While the source of pain in chronic daily headache is not known, theories include, simply put, the conditioning of nerve fibers from repetitive headaches, increased sensitivity from the same repetitive experience, and a genetic predisposition, complicated by the invariable daily use of analgesics.

## Mixed and Breakthrough Headaches

"There are a lot of challenges in treating headaches," Camac says. "Headaches can occur intermittently or can become a chronic daily occurrence. Patients can have more than one headache type, with mixed features of migraine and tension type headaches. When a medication's effectiveness fails after a period of success, the patient can have 'breakthrough headaches' that require readjustment of medications to control the pain."

## Rebound Headaches

Perhaps the most discouraging type of headache is the one that's caused by the medications that are supposed to treat it—rebound headache. Rebound headaches can occur after a period of overuse with many types of medicine, from analgesics like aspirin to triptans to nasal decongestants.

Rather than a question of absolute dosage, the rebound effect reflects the frequency of taking these medications and creating dependency on a comfort level. Abrupt discontinuation of them can cause significant withdrawal headaches; as with caffeine, cessation is advised on a gradual basis. Once such pain treatment has been discontinued, paradoxically, the headache problem is likely to improve.