PATIENT INFORMATION

MIGRAINE HEADACHE

What is it?

Migraines are severe, episodic headaches that follow a particular pattern: most commonly these headaches are one-sided, throbbing, preceded by certain warning signs, and often accompanied by visual or other symptoms. Although stress may often trigger an attack, the migraine headache is a biological process, not a psychological manifestation.

Who may be affected?

Most of Americans have at least one bad headache at some time in their lives, but only about 18% of women and 6% of men between the ages of 12 and 80 get migraines. Migraine headaches frequently run in families, suggesting a hereditary component. Migraine headaches generally begin around puberty, occur with some regularity through adulthood, and wane after about age 50 years (or menopause).

What forms does it take?

1. **Migraines without aura** ("common migraine") are generally moderate to severe in intensity, throbbing, one-sided, and usually associated with nausea, vomiting, and extra sensitivity to light or sound. Such attacks occur up to four times a month and last most of one day (or longer). Most patients feel better in a dark, quiet room and generally improve with sleep.
2. **Migraines with aura** ("classic migraine") are similar except they begin with visual, speech, motor and/or sensory disturbances lasting up to an hour.
3. **Migraine variants** may include retinal migraine, ophthalmoplegic migraine, or familial hemiplegic migraine that each consist of temporary neurologic changes that affect the eye or arms or legs and may last for several days.

It is now thought that migraines, tension- type headaches and other forms of severe headache are related in their biological origins in the brain, but just manifest differently. Some patients report nonspecific symptoms of fatigue, concentration difficulty, neck stiffness, blurred vision, or sensitivity to light or sound for hours or a few days before an attack.

What causes it?

No single theory can explain all manifestations of migraine. Current research suggests that the pain arises from release of chemical transmitters within the brain that lead to inflammation. With repeated stimulation, the nerve fibers become increasingly responsive, leading to the throbbing quality of the pain, worsening of pain with coughing or bending, and increased pain with even minor stimulation (e.g., brushing hair) or painful stimuli. Although the term headache might suggest otherwise, the brain itself does not feel pain. Often migraine headaches can be elicited by triggering factors.

1. **Chemical triggers** consist of certain foods, smells, and smoke. Common food triggers for many migraine sufferers include processed and cultured dairy products (cheeses, yoghurt, sour cream, buttermilk), red wine, chocolate, caffeinated beverages (coffee, tea, colas), citrus fruits, canned or processed meats, MSG, meat tenderizers, yeast, beans and nuts.
2. **Hormonal factors** can reflect menstruation, ovulation, menopause or using oral contraceptives.

3. **Stressing triggers** may be physical (heat, cold, exhaustion, lack of sleep or oversleeping), climate-related (weather shifts), or emotional (extremes of happiness or sadness).

What can be done?

Most migraines are benign (not life-threatening), despite causing intense pain and debilitation. However, if you experience your "first or worst" severe headache, you should see a physician promptly to be sure that nothing more serious is occurring, such as meningitis, a tumor, or bleeding. Other warning signs that should prompt medical evaluation consist of severe headache lasting more than 24 hours, rapidly increasing frequency of headaches, or localizing neurologic disturbances such as loss of coordination or numbness.

Formal assessment may help determine what type of migraine may be occurring, based on a detailed history of your headaches (including what brings them on and what relieves them) and physical examination. Sometimes, specialized tests like a computerized tomography (CT) scan, magnetic resonance imaging (MRI), or spinal fluid sampling may be needed to rule out other conditions.
There is no cure for migraines, but there are a variety of control measures and medications. A careful charting of your headache pattern (which records environmental, food, lifestyle and other factors over a few months; see Headache Diary on last page) may provide clues to triggers and relief methods. This first step is important, as is continued monitoring by your physician, in determining which maneuvers and/or medications (both symptom-controlling and preventive) are appropriate for you.

Symptom-controlling medications are those that lessen the severity or duration of migraines already in progress, such as

- Triptans (e.g., sumatriptan [Imitrix™], zolmitriptan [Zomig™], naratriptan [Amerge™], rizatriptan [Maxalt™], almotriptan [Axert™], eletriptan [Relpax™], frovatriptan [Frova™]), usually administered as pills, less commonly as nose spray or injection
- Nonsteroidal anti-inflammatory drugs (e.g., ibuprofen [Advil™, Motrin™] or naproxyn [Aleve™, Naproxyn™])
- Simple or combined analgesics like aspirin and acetaminophen acetaminophen (Tylenol™), with or without caffeine (e.g. Excedrin Migraine ™)
- Vasoconstrictors that narrow the blood vessels (ergot preparations)

For severe or prolonged migraines, more specific prescription drugs are available. These include *dihydro-ergotamine (DHE), tranquilizers, or (rarely) narcotics*. DHE, which acts directly on involved neurotransmitters in the brain, is given by injection.

If you have been taking over-the-counter pain medications (aspirin, acetaminophen, ibuprofen) for some time and in high doses, your physician may want to change the strategy. These analgesics can not only prevent other, more specific headache medications from working, but can actually cause rebound or withdrawal headaches.

Preventive medications may also be prescribed for you to prevent migraines and cluster headaches from recurring and to break the cycle of migraine- medication-rebound headache.

Prescribed prophylactic agents include *ergot derivatives, calcium channel blockers, tricyclic and SSRI antidepressants, beta-blockers, calcium channel blockers, serotonin antagonists, anticonvulsants, and nonsteroidal anti-inflammatory drugs.* All medications may have side effects, so a summary of your other active conditions and responses to prior treatments will be useful in deciding management. Different

headache patterns and individuals respond to diverse medication dosages, combinations and sequences. Regimen adjustments may require several months for best results.

In addition, many people find they can help avert onset of migraine or reduce its pain by biofeedback training or relaxation techniques (meditation, visualization). These require some effort, but can benefit you by increasing positive attitude and reducing need or dosage of medications. If stress or depression is involved, psychological counseling may be helpful.

What can I start doing now?

Once you have had a medical examination to rule out life-threatening conditions, shift your energy to tracking and minimizing the triggers to your migraines:

- Monitor for food or environmental factors that appear to trigger your attacks and work hard to avoid the triggers.

- Strive for regularity and moderation in your lifestyle: Eat and sleep at appropriate times and in appropriate amounts; balance work and play.

- Exercise regularly and learn relaxation methods to help reduce stress buildup.

- Avoid stimulants (caffeine) or depressants (alcohol) before bedtime to ensure a good night's rest.

- When warning signals first come on, take prescribed symptom-reducing medication and try to rest in a quiet, dark room.

- Take prescribed medication when and as directed. Avoid **underuse** (because prophylactic medications seem to be working) and **overuse** (more is not better, and may even trigger more severe headaches or toxicity). Track results on your headache chart and discuss medication changes with your doctor.

- If you suddenly develop a headache more severe or varying from your pattern, seek immediate medical attention from your doctor or an emergency room (take your headache chart and medications with you).

Headache Diary

Starting and maintaining a Headache Diary may provide useful clues, patterns, and strategies for preventing attacks or minimizing symptoms during an attack.

Headache Diary	Episode #1	Episode #2
Date		
Warning Signs		
Time begun		
Time ended		
Type of pain		
Intensity of pain (1-10)		
Location of pain		
Treatment taken		
Effect of treatment		
Hours of sleep in 24 hours before pain		
What eaten in 24 hours before pain		
Events/stresses in 24 hours before pain		
Comments		