



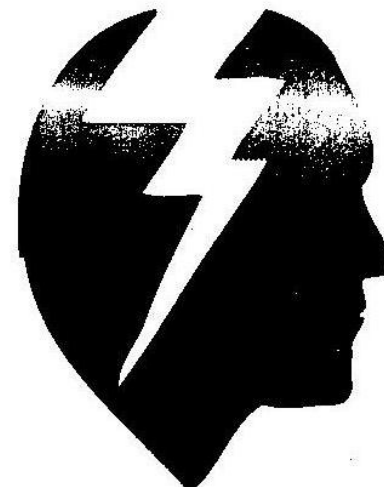


Top Ten Tips

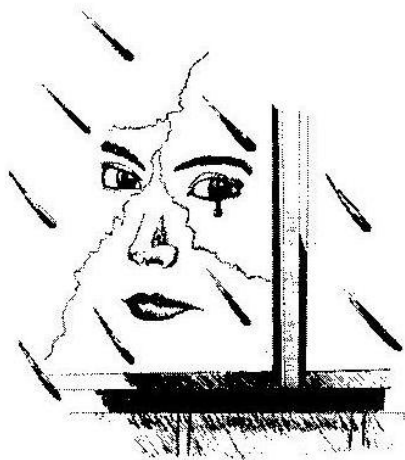
for Headache Prevention

1. Eat breakfast. Predictable mealtimes.
 2. Wake up at the same time each morning.
 3. Exercise at least 3 times a week.
 4. Biofeedback daily: balance internal physiology and listen to your body.
 5. No smoking, no caffeine after ~~4 pm~~, no artificial sweetener.
 6. Learn headache pattern.
 7. Pamper self during stressful times.
 8. Resolve disputes: forgive, release, resolve.
 9. Accept imperfection as human.
 10. Play is as important as work.
- 
- 

The Migraineur's Guide to Migraine



© 1998, Primary Care Network, Inc.



Your physician believes your headaches are migraines. This brochure will help you understand migraine. How to become an active participant in your care program is also important to gain control over your headaches. Migraine is a condition that reflects the way your nervous system functions or, at times, malfunctions. Learning about your migrainous nervous system gives you insight about your migraines.

Ultimately, you will find ways to

lessen the number of headaches. Even though migraine is not curable, it is manageable. Most who suffer from migraine can look forward to a future of better migraine control.

“Migraine attacks are completely unpredictable. I never know when one will hit.”

Your physician has a special interest in headache care and is a member of the Headache Network for Primary Care. Besides having received extra medical training in headache care, physicians in this network share ideas on successful treatment strategies. These physicians believe that migraine is a genetic condition. In other words, it is inherited; most people with migraine have at least one blood relative with this disorder. Migraine results when the normal balance of chemicals in the brain is disrupted. It is not a “stress disease.”

If you experience migraine then you are a migraineur. Being a migraineur means that you were born with a nervous system that is

more sensitive and more easily excited than those without migraine. This sensitivity is part of who you are, between attacks as well as during attacks of migraine. Understanding migraine is really gaining a new appreciation of yourself.

Besides suffering from severe headaches, migraineurs often share other characteristics, such as being light sleepers and skipping breakfast. They are affected by environmental changes, such as, weather, odors, and bright lights. Generally, migraineurs are conscientious, organized, achievement-oriented and creative. Vigilant of their surroundings, they may sense the feelings and needs of others.

“Am I just trying to get out of doing things?”

Prehistorically, there were advantages to a nervous system that is easily alerted, especially in terms of avoiding danger and finding food. Evolution selected the migrainous nervous system as adaptable to the rigorous demands of the environment. Today, migraine affects about 15% of the general population. Migraine is one of the most common reasons people seek medical attention.

What is Migraine?

Today's fast-paced lifestyle demands much from our nervous system. For many it seems we are in a constant state of alert. The nervous system is adjusting to the lights, sounds, and activities of our environment. It adapts to weather, wind and humidity. It constantly accommodates changes in hormones, emotions, and thoughts as well as the many chemicals in our food and beverages. Considering this, is it any wonder that at times, the nervous system overloads? And when it does, there is a change in brain chemicals, rendering the brain unable to slow down. Eventually, the brain loses the ability to inhibit sensory

information such as light, sound and odors. The thinking process slows down. Muscles become tight and tender, blocking the message from the brain to relax. Ultimately, blood vessels lose their regulation, swell and become inflamed, producing the headache associated with migraine. Interestingly, the Center for Disease Control has reported that over the past ten years, the prevalence of migraine has increased by almost 60%.

The Migraine Attack

The changes from a balanced nervous system to one destined for an attack of migraine often unfolds in a predictable manner. This process occurs in five different phases: prodrome, aura, headache, resolution, and postdrome. Keeping a diary helps you recognize the progress of these phases in your particular headache pattern. By intervening early, the migraine attack may be diverted completely. Sometimes by simply removing yourself from a stressful situation or by nurturing the nervous system with a nap, the impending attack of migraine may be avoided.

The first phase of a migraine attack is called a **prodrome**. This is an

"I'm constantly afraid that a migraine will spoil my plans."

awareness that a migraine is looming out there in the near future. Identifying the subtle changes of a prodrome is a first step in exercising control over the impending migraine. A prodrome precedes about 50-80% of migraine attacks. Common prodromal changes may include mood variations, such as irritability, depression, or elation. Other prodromes may involve alterations in mental processing. Light may appear too bright or halos may surround streetlights. Yawning and fluid retention are also common. Food craving, especially for chocolate, is frequently reported and may be confused as a migraine trigger.

The second phase of migraine is called an **aura** and occurs in about

15% of migraine attacks. Auras are disruptions of nervous system function that last several minutes up to one hour (it is rare for auras to last longer than this). They usually happen before the headache of migraine begins but the symptoms may occur during the headache too. Auras are best thought of as short circuits in the electrical connections of the brain caused by the changing chemical balance associated with an attack of migraine.

The most common auras are changes in vision. Frequently there is a

"I really resent my migraines."

light show consisting of flashes of light or a blind spot in the field of vision, encircled by jagged, shimmering light. Other aura symptoms may include numbness of the fingers, hands, and lips. At times, auras can be spectacular involving changes in perception of time and space. The most comforting aspect of an aura is that it is brief. If auras persist beyond the headache, then it is important to discuss this with your physician.



Scientists used to think that auras happened when too little blood flowed to an area of the brain. Without enough blood, there was a lack of oxygen, causing the brain cells to misfire. While minor changes in blood flow occur during a migraine attack, today we recognize auras as an electrical phenomenon that occur in response to chemical disruption. Generally auras are not treated with medicine unless they are particularly disruptive.

The third phase of migraine is called the **headache phase**. Usually the most dramatic symptom, the headache may begin in different ways even in the same migraineur. For many, the headache may be on one side of the head, pounding in nature, moderate to severe in

intensity, and aggravated by routine activities. In others, however, the entire head may hurt and not throb. Usually there is nausea but vomiting may also occur. The nervous system becomes sensitive to light and sound. Thinking may be difficult. Muscles in the head and neck often become painfully tender. If untreated, the headache may last from 4 to 72 hours; in some circumstances, even longer. Generally, the migraineur wants to be left alone in a dark quiet place. The headache phase usually produces the greatest disability for the

“The pounding pain and sick stomach interfere with my life.”

migraineur. The attack often disrupts family events, interferes with productivity at home and work, and may cause absenteeism from school or work. On average, a migraineur misses 3.2 days of work per year and may function at less than 50% of full capacity while at work up to 6 days a month. The cost of migraine to society is estimated to be up to 17.2 billion dollars per year. The good news is, based on the findings of recent studies, that treatment in the workplace lessens lost productivity by almost 50%.

The next phase of migraine is the **resolution phase**. How migraines eventually resolve is still a mystery. Most of the time migraines resolve with sleep and an important brain communication chemical, serotonin, is restored in the brain and surrounding tissue. Occasionally, and especially in children, vomiting will stop a migraine. This may be due to a release of serotonin that is stored in the intestinal track. Rarely, migraines terminate during an intense emotional response; seemingly during an emergency, the brain draws from its reserves to let the person manage the situation.

The final phase of an acute migraine attack is the **postdrome**, consisting of lingering symptoms that resemble a hangover or flu-like symptoms. Though not universally present, postdromes generally follow migraines that are long in duration. Common symptoms of a postdrome include fatigue, poor concentration, irritability, queasy

stomach, and tender muscles. Postdromes can usually be treated with rest or over-the-counter medications such as aspirin or naprosyn.

Nature's antidote to the migraine process is to shut down the nervous system. This may explain why light hurts or sound needs to be avoided. In general, during an attack of migraine people desire a dark quiet room where they can be left alone until the storm passes. The resolution of migraine involves rebalancing the brain chemistry. Serotonin seems to be at the center of this readjustment.

Serotonin levels in the brain drop during an attack of migraine. And conversely, resolution of migraine occurs when levels of this important brain chemical return to normal. Because serotonin is involved in many communication systems within the brain, if doctors attempt to treat migraine directly with serotonin, unwanted symptoms occur. Recently chemists have devised an artificial form of serotonin that can temporarily replace real serotonin in certain areas of the nervous system. This compound is called sumatriptan or Imitrex and has revolutionized the understanding and treatment of acute attacks of migraine.

Other similar compounds are being developed to treat migraine. These medications not only relieve headache pain in a large number of migraine sufferers but also return most to normal levels of function within a short time. This has set a new standard of therapy for acute migraine. Successful treatment of an acute migraine attack is the cornerstone of effective migraine management but it is only the beginning of managing the nervous system of a migraineur.

Managing the Migraineur

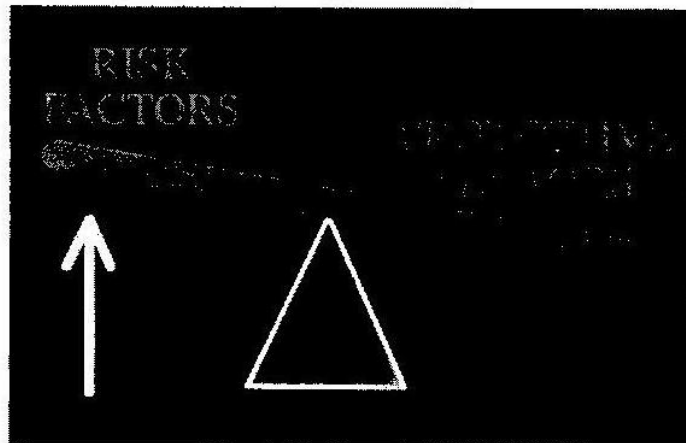
Migraineurs may have a variety of different types of migraine attacks. Some of the more common types are migraine occurring with aura, migraine without aura, early-morning migraine, migraine related to menstruation, or a slow-developing migraine that may take hours or even days to declare itself. Specific treatment strategies need to be developed for the various types of migraine presentations. For exam-

ple, an early morning migraine with significant nausea may require medication given as a nasal spray or a shot; whereas, a pill may work well for a slowly developing migraine.

Risk Factors (Table 1)

Influences in a person's life that tend to overload the nervous system are risks. Once identified in your life, you can counteract the negative effects of risks with the positive results of protective activities.

Dietary:	msg, red wine
Hormonal:	menstruation
Physical:	injury or over-exertion
Chronobiology:	lack of sleep or too much sleep
Chemical:	drugs or air pollution
Sensory:	glaring lights
Emotional:	loss, death, argument, fear
Trauma:	emotional or physical



Protective Factors (Table 2)

Self-nurturing activities protect the nervous system from imbalance. By engaging in one or more of the following activities daily, homeostasis is enhanced. Events that promote headache-free days also produce a healthy lifestyle.

- Regular physical exercise that is enjoyable.
- Nutritious meals
- Prioritize obligations to create a sense of control over life.
- Your health is of the utmost importance; the demands of others are secondary.
- Work out the pressure of stress through exercise, writing, or other expressive activity.
- Adequate sleep
- A period of relaxation twice a day to regulate the nervous system and prevent overload.

"I feel guilty over what I've missed because of migraines."

Self-Management: Living in Harmony with the Environment

A migraineur's nervous system can be trained to respond to excessive stimulation by retreating into a peaceful, internal refuge. The goal of biofeedback is to teach the body's internal physiology to respond with confidence rather than panic when a new challenge arises.

The first step in gaining control over the body's internal physiology is to gauge the body's current level of over-reaction. Finger temperature is a reliable indicator of how much stress the body is carrying. The average finger temperature is 85 degrees F. A finger temperature below 85 degrees F signifies that the body is holding a great deal of tension. Migraineurs typically have a finger temperature in the 70's, which reflects an over-extended nervous system.

- Warm the finger temperature to 96 degrees F.
- Breathe slowly, deeply, from the abdomen.
- Focus the mind on one scene or image.
- Listen to an audio tape to relax both body and mind.
- Practice this twice a day, for 10 minutes.



For many, biofeedback can be self-taught with the use of an audio cassette. If you are interested in this safe effective way to prevent many future migraine attacks, ask your doctor to assist you in getting started.

“Everything revolves around my migraines.”

Migraine Transformation

For many migraineurs, attacks of migraine occur infrequently and are responsive to medication. However, for a significant number of others, their headache patterns have changed over time. Well-defined attacks of migraine are interspersed with other less severe but more frequent headaches. Eventually, a person may begin to feel headache prone; when headaches are not present, they seem to be lurking just around the corner.

Finally, the different patterns of headaches merge into what has been described as a mixed headache pattern, where frequent low-grade headaches intermingle with bouts of severe migraines. This pattern, in turn, can evolve into another disabling headache pattern called a chronic daily headache, also identified as migraine transformation. Exactly why migraine transforms in some migraineurs is still a mystery.

“Nobody really understands.”

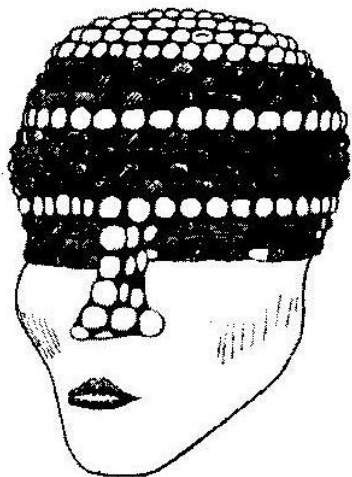
Even though transformation may be part of the natural evolution of migraines, certain catalysts also seem to play a role. **Facilitation or kindling** describes the impact of repeated attacks of migraine without adequate treatment. These uncontrolled attacks may actually prime the pump and lower the threshold for future migraines. In other words, uncontrolled migraine may pave the way for more migraine attacks in the future. Physicians in the Headache Network for Primary Care are committed to controlling acute migraine attacks.

Another important catalyst is trauma to the head or neck. Even minor trauma can cause microscopic disruption of information pathways to the nervous system and change intermittent migraines into chronic headaches. If a head or neck trauma seems to have worsened or initiated your migraines, discuss this association with your physician. There are treatments beyond medications, like physical therapy, that may be of benefit to you.

The third catalyst of migraine transformation is medications. Ironically, most of the medications that relieve an acute migraine attack may change an episodic migraine pattern into a daily headache when taken frequently over a period of time. If a person stops the medication suddenly, a severe headache called a “rebound headache” may erupt. Discuss all the medications that you are taking, especially over-the-counter medications, herbal products, and vitamins with your doctor.

Your doctor will instruct you concerning how to avoid rebound headaches. If you are currently in a medication headache pattern, your doctor will assist you with a plan to manage this often-debilitating headache pattern. Once an analgesic headache pattern is properly treated, daily headaches often return to intermittent migraines that are treatable by acute medication.

HEADACHES MAINTAINED BY MEDICATION



Many medications used to treat migraine may lead to daily headaches. In these instances, the person initially gets relief from the medication but over time finds that more medication is required to keep severe headaches away while suffering a perpetual low grade headache. Without the medication, a severe **rebound headache** results.

Rebound headaches occur because the medication damages the communication systems of certain nerve cells. The nerve cells communicate by sending chemical messengers from one cell to another. The communication chemical connects to the next nerve cell by fitting into a receptor, like a plug into a socket. When these sockets are exposed to certain chemicals found in medications for periods of time, damage to the receptors may occur. Because the receptors are damaged, normal communication is disrupted, making the person more vulnerable to risk factors that cause headaches.

The only way to end this vicious cycle is to stop the medication caus-

ing the damage and allow the nerve cells to repair or replace the damaged receptors. Your physician will assist you through this period of time with other medications. However, determination and time are required to free oneself from the rebound headache cycle. Also essential to success is developing a support system with family, friends, and a psychologist. The psychologist provides guidance for avoiding the fears and behaviors that lead to rebound headaches and teaches ways to soothe the nervous system, such as biofeedback. The psychologist and physician work in concert to manage this difficult headache pattern.

THE FAMILY OF SEROTONIN DISORDERS

Another characteristic of migraineurs is that they are often susceptible to conditions other than migraine. Many of these conditions are associated with an imbalance of a brain chemical called serotonin. Serotonin is a communication chemical for the brain and involved in many disorders including migraine, depression, anxiety, sleep difficulties, and irritable bowel syndrome. When serotonin levels are suddenly decreased, migraine may result. However, if the process is more chronic in nature, depression and sleep problems may develop.

The disorders associated with being a migraineur are called co-morbidities. Discussing this concept with your physician is a very important part of headache care. Learning how to manage a migrainous nervous system is the key to successful migraine management as well as preventing these co-morbid conditions.

MANAGING MIGRAINE AS A MIGRAINEUR

Patient-centered stratified care initially focuses on effective control of the acute migraine attack. This promotes confidence and allows you to be part of the decision-making process that ultimately refines your management program.

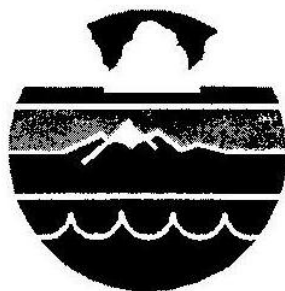
This approach addresses the variability of migraine attacks and the variety of circumstances and personal needs demanded of treatment.

Your physician plays an essential role in this management approach as an educator and provider of the tools necessary for success. Your physician can also help you evaluate the therapy and assist in the early detection of migraine transformation and migraine-associated medical conditions. The focus is the whole person; over time, migraine treatment strategies become refined and control is established.

"I worry that everyone will give up on me."

To assist in this effort the last page of this brochure is a diary, that focuses on your success in treating the acute attack of migraine. Once control of debilitating headaches is established, efforts can be directed at preventing migraine transformation and migraine associated diseases. The goal of your physician to help you understand and use this migrainous nervous system to its greatest advantages.

Another key feature of gaining control of migraine is finding reliable sources of information. One such resource is the web site of the Headache Care Network (<http://www.headachecare.com>).

[illegible]

Assessment: Changes to Improve Headache Management

Medication	
Sleep	
Stress	
Biofeedback	
Worries	
Events	
Other Comments	

Diary Instructions:

You and your physician need to work together to fine-tune the treatment of your migraines. The diary is a way to record important elements of relief of headache.

For each attack, please fill out the information on the diary. Bring the diary to your next appointment. Present your problem areas to your physician who will suggest solutions. Many times, a variety of approaches is required to effectively treat or prevent migraines.