

Migraine and Vertigo

Migraine is a disorder usually associated with headache. Although it can affect the whole head, it usually occurs on one side only. It is characterized by throbbing and associated with symptoms that may include nausea, vomiting, and sensitivity to light and sound. Flashes or patterns before the eyes may precede the headache. Symptoms may also include vertigo and imbalance.

Migraine can be associated with benign recurrent vertigo of adults (not to be confused with BPPV), paroxysmal vertigo of childhood, motion sickness, and other vestibular disturbances.

Stress, anxiety, hypoglycemia, fluctuating estrogen, certain foods, smoking and other factors can trigger migraine. Physicians treat vertigo and imbalance from migraine by reducing these risk factors. Treatment may also involve medications.

Statistics

Migraine is an extremely common disorder. Studies suggest that more than 20 million people in the U.S. suffer from migraine. Women are four times as likely as men to experience migraine, which can recur at intervals ranging from one day to several years. Studies indicate that about 25 percent of migraine sufferers experience dizziness during the attacks.

Migraine classifications

Migraine disorders are usually divided into several types including common, classic, migraine equivalent, and complicated migraine. However, the International Headache Society (IHS) recently developed a new classification system.

In the IHS system, migraine without aura replaces common migraine. Four out of five people with migraine experience migraine without aura. This type of migraine consists of periodic headaches that are usually throbbing and one-sided, made worse by activity, and associated with nausea, and increased sensitivity to light and noise. Patients often refer to these headaches as "sick" headaches because of the nausea. The headache builds slowly in intensity and usually lasts from several hours up to a whole day. Patients usually prefer to lie down in a quiet dark room during the headache and often feel better after sleep. Usually other members of the patient's immediate family (parents, grandparents, brothers, sisters, etc.) also suffer from migraines. Vertigo can occur before, during, or separately from the episodes of migrainous headache.

Migraine with aura or classic migraine is associated with short-lived symptoms (noises, flashes of light, tingling, numbness, vertigo, and others) known as the aura. These symptoms usually precede the headache and usually last 5 to 20 minutes. Nearly one in five people with migraine experience migraine with aura. In a variation called migraine with prolonged aura, these symptoms may last a week. Migraine patients may experience migraine with aura on some occasions and migraine without aura on other occasions.

Less common types of migraine include basilar migraine. Symptoms include vertigo, tinnitus, decreased hearing, and ataxia (loss of coordination).

Another less common type is called migraine aura without headache or migraine equivalent, and there are several other uncommon types such as ocular migraine and hemiplegic migraine.

Vestibular syndromes caused by migraine

Benign recurrent vertigo of adults (not to be confused with BPPV) is the most common vestibular syndrome caused by migraine. This disorder consists of spells of vertigo, occasionally with tinnitus but without hearing loss. Doctors must rule out Meniere's disease, BPPV, transient ischemic attacks, vestibular epilepsy, and perilymph fistula before making a diagnosis of migraine induced vertigo.

Benign paroxysmal vertigo of childhood (not to be confused with BPPV) consists of spells of imbalance and vertigo without hearing loss or tinnitus (ringing in the ears). The majority of cases occur between the ages of 1 and 4 but may occur up to age 10. Meniere's disease, vestibular epilepsy, perilymph fistula, certain tumors, and psychological problems can also cause these symptoms.

Migrainous infarctions or complicated migraine is a migraine with aura associated with an infarct or stroke (blood flow problem resulting in cell death). One of the symptoms may be vertigo.

In addition to the syndromes caused by migraine, several vestibular disorders have been associated with migraine. Studies indicate that people with migraine are much more likely than other people to experience severe motion sickness and may be more likely to suffer from Meniere's disease or BPPV.

Causes

The causes of migraine are incompletely understood. The headache component probably results from inflammation of blood vessels in the scalp, and the aura probably results at least partly from temporary neural dysfunction.

The mechanism for vertigo associated with migraine is poorly understood. It may or may not involve a temporary reduction of blood flow to the inner ear.

Treatment

Vertigo and imbalance secondary to migraine usually respond to the same treatment used for migraine headaches.

Treatment of migraine includes elimination or reduction of dietary substances such as tyramine (a chemical found in aged cheeses, Chianti wine, pickled herring, and other foods) that are known to trigger migraine attacks. Treatment may also include exercise, biofeedback, hypnosis, meditation, or other actions to counteract biochemical changes caused by stress. Your doctor may also recommend medications that change blood vessel tone. He or she may also prescribe medications to block the actions of chemicals such as serotonin, a neurotransmitter that causes large blood vessels to contract, or the prostaglandins, a family of chemicals stimulated by estrogen, that cause blood vessels to expand and contract.

Depending on your general health and other factors determined by you and your personal physician, you might be advised to do the following:

Start an aerobic exercise program that is gradually increased until you are exercising (jogging, swimming, walking fast, playing racquetball, etc.) three to five times a week for at least 30 minutes at the end of the day. The goal is to get your heart rate above 100 for at least 20 minutes per session.

Avoid hypoglycemia by eating something at least every eight hours. Don't skip breakfast. Eat breakfast at the same time each morning, including weekends.

Maintain a regular sleep schedule. Go to bed and get up at the same times each day.

Don't smoke or chew anything containing nicotine.

Avoid estrogen (oral contraceptive, estrogen replacement) not produced by your own body.

Follow a diet meant to reduce the intake of tyramine and other substances known to make migraine worse. Foods such as red wine and monosodium glutamate (MSG) can cause migraine almost immediately. Others such as chocolate, nuts, and cheese can cause migraine the next day. A more complete list of dietary suggestions appears below.

Keep a diary in which you record (a) the time and date of all headaches and/or spells that interfere with your daily routine; (b) any foods you should have avoided but ate during the 24 hours before a headache and/or spell. Take the diary with you on your next visit to the doctor.

Take your medications as prescribed.

Treatment of migraine may include prescription drugs meant to prevent migraine or to stop migraine that has already started. Drugs used to prevent frequent migraine attacks include beta blockers, tricyclics, lithium carbonate, aspirin, ibuprofen, and others. Drugs commonly used to stop migraine are aspirin, ibuprofen, isometheptene mucate, ergotamine, and Imitrex.

Treatment of migraine in children

Because medications can have a stronger effect on children than on adults, your doctor will probably be reluctant to prescribe medications as a first resort for children. He or she will more likely suggest ways to reduce risk factors such as sleep disruption, certain foods, environmental factors, or unusual stress. Your doctor may also send your child to learn relaxation techniques to reduce headache frequency and pain.

[Much of the information for this document comes from "Diagnosis and Management of Neuro-otologic Disorders Due to Migraine" by Ronald J. Tusa, M.D., Ph.D., which appears as Chapter 12 of Vestibular Rehabilitation, ed. Susan J Herdman, Ph.D., P.T., (F.A. Davis Company, Philadelphia, 1994).]

Diet for migraine patients

Avoid these:

Ripened cheeses such as Cheddar, Emmentaler, Gruyere, Stilton, Brie, and Camembert.

Chocolate

Nuts, peanut butter

Any foods containing large amounts of monosodium glutamate (MSG). Chinese foods often have large amounts of MSG.

Smoked meats such as bacon, sausage, ham, salami, pepperoni, and hot dogs

Excessive aspartame artificial sweetener

Alcohol, especially red wine, port, sherry, scotch, gin, and bourbon

Reduce or avoid these:

Herring

Vinegar, except white vinegar

Anything fermented, pickled, or marinated

Sour cream, yogurt

Hot fresh bread, raised coffee cake, doughnuts

Pods of broad beans such as lima and navy; pea pods

Onions

Canned figs

Citrus fruit. Eat no more than one orange a day

Bananas. Eat no more than ½ banana a day

Pizza

Pork. Eat no more than two or three servings a week

Excessive tea, coffee, cola. Drink no more than four cups a day

Chicken livers

Migraine Support Groups

The organizations listed here provide information and ongoing support for people who suffer from migraine headaches.

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American Council for Headache Education (ACHE)
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National Migraine Association (MAGNUM)
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