

A Patient Guide to Menstrual Headache

NATIONAL HEADACHE FOUNDATION

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If you get a headache just before or during the first few days of your menstrual period, you may have menstrual migraine or menstrual-related migraine. This booklet will help you learn more about these conditions, their treatment, and what you can do to improve your quality of life. To learn more about migraine and other types of headache, visit the National Headache Foundation online at www.headaches.org.

TABLE 1

WHAT MAKES A HEADACHE A MIGRAINE ²
<p>Migraine without Aura</p> <ul style="list-style-type: none">■ At least 5 headache attacks, lasting 4-72 hours■ One-side, pulsating pain of moderate-to-severe intensity■ Aggravated by or causing avoidance of routine physical activity■ Accompanied by at least 1 of the following<ul style="list-style-type: none">— Nausea and/or vomiting— Photophobia (hypersensitivity to or avoidance of light)— Phonophobia (hypersensitivity to or avoidance of sound) <p>Migraine with Aura is accompanied by at least 1 of the following (which resolve completely):</p> <ul style="list-style-type: none">— Visual symptoms (eg, flickering lights, spots, or lines) or vision loss— Sensory symptoms (eg, pins and needles or numbness)— Speech disturbance (difficulty putting words together) <p>Common Symptoms You May Have With Migraine</p> <ul style="list-style-type: none">■ Before or during a migraine attack<ul style="list-style-type: none">— Feeling of well-being or surge of energy— Talkativeness or restlessness— Increased appetite— Drowsiness or depression— Irritability or tension■ During a migraine attack<ul style="list-style-type: none">— Nausea, vomiting, or diarrhea— Sweating or cold hands— Sensitivity to light or sounds— Scalp tenderness or pressure— Pale facial color— Pulsing pain

What Is Menstrual Migraine?

Migraine is a chronic disorder of the nervous system that results in recurrent headaches with other symptoms (see table 1).¹ Migraine is common: it affects nearly 30 million Americans, or 12% of people ages 12 years and older.^{3,4} Migraine may occur with or without aura.²

Pure menstrual migraine and **menstrual-related migraine** are migraine without aura (see table 1). Attacks occur up to 2 days prior to or during the first 3 days of menstruation in at least 2 of every 3 consecutive menstrual cycles. In pure menstrual migraine, attacks do not occur at any other time of the month. In menstrual-related migraine, attacks occur with menses (your period) and also at other times of the month (figure 1).²

Some research has shown the severity of headache pain and other migraine symptoms, as well as the level of disability related to an attack, may be increased at menses.⁵⁻⁷ In addition, the frequency of headache attacks appears to increase at menstruation.⁷⁻⁹ Migraine attacks at menses may be more persistent and difficult to treat, because pain may return even with treatment.

FIGURE 1



Figure 1: Definition of menstrual migraine and menstrual-related migraine²

Why Do I Get Headaches When I Have My Period?

Migraine appears to have a strong hormonal component. The condition is nearly 3 times more common among women than men (occurring in approximately 18% of women over their lifetimes and in 6% of men over their lifetimes).³ In addition, most women with migraine (nearly 80%) first experience an attack between the ages of 10 and 39,¹⁰ when estrogen levels are highest. Prior to puberty, girls and boys have migraine at an equal rate (4%).¹¹ While the number of males with migraine increases slightly as boys age, the number of females with migraine increases dramatically as girls age, accounting for the higher overall lifetime occurrence of migraine in women.¹²

See fast facts about migraine and women on next page.

Menstrual migraine and menstrual-related migraine are common among women who have migraine. Approximately 50% of female sufferers have menstrual-related migraine, while 4% to 12% have pure menstrual migraine (in which migraine attacks occur only with menses).¹⁰ In these conditions, headache attacks are caused, in part, by a drop in estrogen levels immediately before menses.^{13,14} It appears that estrogen may help protect women with menstrual migraine and menstrual-related migraine. The rapid drop in estrogen levels that occurs before menses leaves women more vulnerable to an attack.^{15,16}

MIGRAINE AND HORMONES THROUGH
A WOMAN'S LIFE

Changing estrogen levels throughout a woman's life also appear to affect migraine. For example, the frequency of migraine attacks has been shown to decrease through pregnancy to a low in the third trimester, when estrogen levels are highest. Frequency increases to normal in most women after they deliver as estrogen levels return to pre-pregnancy levels (although the frequency may remain low during breastfeeding). Migraine is also less common following menopause, when estrogen levels decline but remain steady.¹⁰

FAST FACTS ABOUT MIGRAINE IN WOMEN

3 times more common than in men



Commonly starts after puberty in girls



Is Menstrual Migraine Treatable?

YES! Menstrual migraine and menstrual-related migraine are treatable conditions. There are several treatment options available, so be sure to speak to your healthcare professional to design a treatment plan that is right for you.

TREATMENT OPTIONS FOR MIGRAINE

Lifestyle modification is the first element of managing migraine. Learn how to identify and avoid possible triggers, reduce stress, and adopt a healthy lifestyle (see lifestyle modification in migraine at right). In addition, the predictability of menses allows you to plan ahead for the increased risk of an attack around that time. Prepare yourself by increasing your self-care habits: eat regular meals, exercise, use relaxation techniques, avoid known triggers, keep a regular sleep schedule, and avoid stress. Try to resist the urge to “prepare” by “getting it all done” before your period starts. By increasing your stress at this time, you may actually be increasing your risk of attack.

Menstrual migraine and menstrual-related migraine may be treated with nonpharmacologic options, including relaxation training, hypnotherapy, biofeedback training, cognitive/behavioral management, acupuncture, nutritional supplements, and physical therapy and/or massage.

In addition, menstrual migraine may be treated with acute and preventive medications. As with other types of migraine, FDA-approved pharmacologic treatment options (see FDA medications on page 8) include acute medications (triptans, triptan combinations, ergotamines, and both over-the-counter and prescription pain killers) and preventive medications (certain beta-blockers and anticonvulsants). Your healthcare professional has many acute medications that can effectively treat a migraine attack and preventive medications that can help reduce the frequency of attacks.

Identify and Avoid Common Triggers

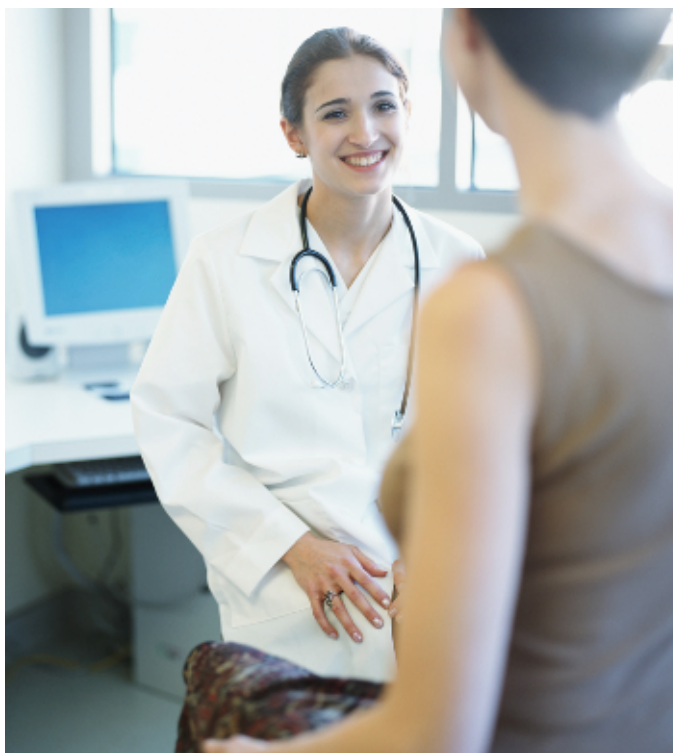
Diet: alcohol, some foods (including aged cheese, processed meat, chocolate, red wine), caffeine, some medications (including the overuse of over-the-counter analgesics and triptans)

Environment: variations in weather and barometric pressure, smoke, perfume, odors, high altitude, bright lights, loud sounds

Internal factors: anxiety, anger, fear, depression, stress, and let down from stress

Adopt a Healthy Lifestyle

- Eat regular, healthful meals and keep well hydrated
- Keep a regular sleep schedule
- Exercise regularly
- Rest during a migraine attack
- Reduce stress



FDA-APPROVED ACUTE AND PREVENTIVE MIGRAINE MEDICATIONS

Type of Medication	Trade Name (generic name)
<i>Acute medications</i>	
Triptans	<p>Amerge® (naratriptan HCl)</p> <p>Axert® (almotriptan)</p> <p>Frova® (frovatriptan)</p> <p>Imitrex® (sumatriptan succinate)</p> <p>Maxalt® (rizatriptan benzoate)</p> <p>Relpax® (eletriptan)</p> <p>Zomig® (zolmitriptan)</p>
Triptan combinations	Treximet™ (sumatriptan and naproxen sodium)
Ergotamine derivatives	<p>D.H.E. 45 (dihydroergotamine mesylate)</p> <p>Ergotamine/cafeine*</p>
Analgesics (pain killers) — over-the-counter	<p>Acetaminophen*</p> <p>Combination products (acetaminophen/aspirin/cafeine)</p> <p>Ibuprofen*</p> <p>Naproxen sodium*</p>
Analgesics (pain killers) — prescription (Used infrequently)	<p>Butalbital/cafeine with aspirin*</p> <p>Stadol NS® (butorphanol)</p>
Other prescription medications	Combination isometheptene mucate/dichloralphenazone/acetaminophen*
<i>Preventive medications</i>	
Beta-blockers	<p>Blocadren® (timolol maleate)</p> <p>Inderal® LA (propranolol)</p>
Anticonvulsants	<p>Depakote® (divalproex sodium)</p> <p>Topamax® (topiramate)</p>

FDA = Food and Drug Administration.
 * Marketed under one or more brand names.

ADDITIONAL TREATMENT OPTIONS FOR MENSTRUAL MIGRAINE

One treatment option for women with menstrual migraine and menstrual-related migraine is short-term prevention — treatment that is given monthly, generally beginning 2 days before menses and lasting through menses, when menstrual-related attacks are most likely to occur. Short-term prevention is designed to reduce the occurrence of attacks at this time, as well as the disability due to attacks and the use of acute medication. Treatment options include over-the-counter pain killers (for example, naproxen), triptans, magnesium, and estrogen.^{10,17}

Patients with menstrual migraine and menstrual-related migraine may also consider hormonal therapy. Taken daily, hormonal therapy helps regulate estrogen levels. Hormonal contraceptives that decrease the number of menstrual periods per year are one option. It is important to note, however, that hormonal therapy does not completely eliminate migraine. In some cases, women with menstrual migraine and menstrual-related migraine may experience an increase in number of attacks.¹⁷⁻¹⁹

Your healthcare professional and you can design a treatment plan based on your symptoms and the severity and frequency of your attacks. Follow the plan closely and follow up with your professional on your progress. Be sure to communicate what is working and what is not working for you. Include information about your migraine-related symptoms as well as any side effects of treatment you experience.

Could Your Headaches Be Menstrual Migraines?

By answering these questions, you and your healthcare professional can help you find out if you have menstrual migraine.

- Do your headaches occur on the day your period starts, or 1 or 2 days before or after?
☐ yes ☐ no
- Are your headaches usually on just one side of your head?
☐ yes ☐ no
- Do you feel pulsing or throbbing pain during your headaches?
☐ yes ☐ no
- Are your headaches bad enough that they get in the way of your daily activities?
☐ yes ☐ no
- Are your migraines more severe during your monthly period?
☐ yes ☐ no
- Do you sometimes feel nauseated or vomit during your headaches?
☐ yes ☐ no
- Is it hard for you to tolerate bright lights, loud sounds, or strong odors during your headaches?
☐ yes ☐ no
- Are your headaches made worse by mild physical activity, like walking or climbing stairs?
☐ yes ☐ no

If you answered “yes” to any of these questions, your headaches could be menstrual migraines. Take the completed questionnaire to your healthcare professional to discuss your answers.

What Should I Tell My Healthcare Professional?

If you feel you may have menstrual migraine or menstrual-related migraine, discuss this with your healthcare professional. Review your symptoms, the frequency and severity of attacks, when attacks occur and how long they last, how you treat your attacks, and what the outcome is. Be sure to include how migraine affects your life in your discussion: How disabled are you? Are you able to carry out daily activities or do you have to stay in bed? Do you avoid activities or change plans for fear that you may have a migraine attack?

KEEPING A HEADACHE DIARY

Keeping a headache diary is one of the best ways to learn more about your migraine, your triggers, and what works best for you. This is an important tool for all patients with migraine, and can be particularly helpful for patients who suspect they may have menstrual migraine or menstrual-related migraine. Keeping a diary for at least 3 months is recommended to determine patterns related to menses (see below).

MENSTRUAL MIGRAINE DIARY

Ask your healthcare professional for a headache diary or visit the NHF website (www.headaches.org) for a free downloadable copy.

Record the following on a daily basis:

- Headache attacks (including severity and duration)
- Treatment used (including both over-the-counter and prescription medications plus any other treatments)
- Your response to treatment
- Menses (including the last day of hormonal contraceptives, if appropriate)
- Exposure to your known triggers and other possible triggers

BE A PARTNER IN YOUR CARE

Follow these healthy habits to help manage your migraine:

- Eat regular, well-balanced meals and avoid foods that can trigger a headache (for example, ripe cheeses, processed meats, chocolate, red wine, caffeine, and others).
- Maintain a regular sleep schedule, even on week-ends and during vacations; get enough sleep, but do not oversleep.
- Reduce your stress, schedule personal time, and exercise regularly.
- Learn more about migraine and how to manage your symptoms by talking to your healthcare professional and reading patient education materials.
 - Regularly visit the NHF Web site to stay informed about the latest treatment options and headache news: www.headaches.org
- Keep a headache diary and share the results with your healthcare professional.
- Make an appointment specifically to discuss your headache with your healthcare professional.
 - Develop a treatment plan and follow up on your progress
- Be a participant in your treatment and an advocate for your headache care.

Glossary

Acute medications: Medications taken at the time of a headache attack to reduce pain and/or stop the attack.

Aura: Visual symptoms (flickering lights, spots, or lines) or vision loss, sensory symptoms (pins and needles or numbness), or speech disturbance (difficulty putting words together) that may precede the onset of head pain.

Hormonal therapy: Medication for menstrual migraine and menstrual-related migraine that is taken daily (or for short duration around menstruation; see short-term prevention) to stabilize estrogen levels and decrease the frequency of headache attacks.

Lifestyle modification: Changes to daily living that promote health and may help to reduce the frequency of migraine attacks. Examples include eating regular, healthy meals; exercising regularly; keeping a consistent sleep schedule; reducing stress; and identifying and avoiding factors and circumstances that may trigger migraine.

Menstrual migraine (pure menstrual migraine): Migraine without aura that occurs up to 2 days before or during menses, and at no other time of the month.

Menstrual-related migraine: Migraine that occurs up to 2 days before or during menses and also occurs at other times of the month.

Migraine: A chronic disorder of the nervous system characterized by recurrent headache attacks that consist of one-sided, pulsating pain of moderate-to-severe intensity and last 4-72 hours. Attacks are accompanied by other symptoms, including nausea and/or vomiting, avoidance of light and sound, and avoidance of routine activity. May occur as migraine with or without aura.

Nonpharmacologic treatment: Treatment for migraine that does not include medications. Examples include relaxation training, hypnotherapy, biofeedback training, cognitive/behavioral management, acupuncture, nutritional supplements, and physical therapy and/or massage.

Preventive medications: Medications taken daily whether or not headache is present to reduce the frequency of attacks.

Short-term prevention: Medications (including over-the-counter pain killers, such as naproxen; triptans; magnesium; and estrogen) for menstrual migraine given monthly, generally beginning 2 days before menses and continuing through menses, to reduce the occurrence of headache attacks at this time.

References

1. Lipton RB, Bigal ME. Migraine: epidemiology, impact, and risk factors for progression. *Headache*. 2005;45(suppl 1):S3-13.
2. Headache Classification Subcommittee of the International Headache Society. The international classification of headache disorders, 2nd edition. *Cephalalgia*. 2004;24(suppl 1):7-151.
3. Lipton RB, Bigal ME, Diamond M, et al, for the AMPP Advisory Group. Migraine prevalence, disease burden, and the need for preventive therapy. *Neurology*. 2007;68:343-349.
4. Population Division, US Census Bureau. NC-EST2005-01. May 10, 2006. Available online at: <http://www.census.gov/popest/national/asrh/NC-EST2005-sa.html>. Accessed January 25, 2008.
5. Granella F, Sances G, Allais G, et al. Characteristics of menstrual and nonmenstrual attacks in women with menstrually related migraine referred to headache centres. *Cephalalgia*. 2004;24:707-716.
6. MacGregor EA, Hackshaw. Prevalence of migraine on each day of the natural menstrual cycle. *Neurology*. 2004;63:351-353.
7. Martin VT, Wernke S, Mandell K, et al. Defining the relationship between ovarian hormones and migraine headache. *Headache*. 2005;45:1190-1201.
8. MacGregor EA, Frith A, Ellis J, Aspinall L, Hackshaw A. Incidence of migraine relative to menstrual cycle phases of rising and falling estrogen. *Neurology*. 2006;67:2154-2158.
9. Stewart WF, Lipton RB, Chee E, Sawyer J, Silberstein SD. Menstrual cycle and headache in a population sample of migraineurs. *Neurology*. 2000;55:1517-1523.
10. Brandes JL. The influence of estrogen on migraine. A systematic review. *JAMA*. 2006;295:1824-1830.
11. Bille B. A 40-year follow-up of school children with migraine. *Cephalalgia*. 1997;17:488-491.
12. Silberstein SD, Lipton RB, Goadsby RJ. Epidemiology and impact of headache disorders. In: *Headache in Clinical Practice*. Martin Duntz Ltd; 2002:230-231.
13. Amir B-Y, Yaacov B, Guy B, Gad P, Itzhak W, Gal I. Headaches in women undergoing in vitro fertilization and embryo-transfer treatment. *Headache*. 2005;45:215-219.
14. Lichten EM, Lichten JB, Whitty A, Pieper D. The confirmation of a biochemical marker for women's hormonal migraine: the depo-estradiol challenge test. *Headache*. 1996;36:367-371.
15. Kudrow L. Migraine in women: recognizing hormonal influences. *Female Patient Total Health Care Women*. 1993;18:33-38.
16. Martin VT, Lee J, Behbehani MM. Sensitization of the trigeminal sensory system during different stages of the rat estrous cycle: implications for menstrual migraine. *Headache*. 2007;47:552-563.
17. Tepper SJ. Tailoring management strategies for the patient with menstrual migraine: focus on prevention and treatment. *Headache*. 2006;46(suppl 2):S61-S68.
18. Lay CL, Payne R. Recognition and treatment of menstrual migraine. *Neurologist*. 2007;13:197-204.
19. Loder E, Rizzoli P, Golub J. Hormonal management of migraine associated with menses and the menopause: a clinical review. *Headache*. 2007;47:329-340.

The NATIONAL HEADACHE FOUNDATION (NHF) is a non-profit organization established in 1970 to enhance the healthcare of headache sufferers. It is a source of help to sufferers' families, physicians who treat headache sufferers, allied healthcare professionals and the public. As a member, you will receive the following benefits:

- **NHF Head Lines** - Keep up with the latest headache information. This 12-page award-winning bimonthly newsletter contains in-depth articles on timely topics, medical forums, patient case studies, Kids Korner and a reader Q&A section.
- **NHF News to Know** - This monthly e-newsletter, contains up-to-the minute information on new drug approvals and the latest in headache research. Each monthly issue will arrive in your e-mail inbox. The e-newsletter can also be received in a hard copy on request.
- Patient education information
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- Information via our Web site
- Web access to a nationwide database of healthcare professionals
- List of support groups in your state

