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Patient education: Painful menstrual periods (dysmenorrhea) (Beyond the Basics)

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INTRODUCTION

Painful menstruation, also known as dysmenorrhea, is one of the most common women's problems. Most women begin having dysmenorrhea during adolescence, usually within four to five years of the first menstrual period. Painful periods become less common as women age.

This topic review discusses the causes, symptoms diagnosis, and treatment of dysmenorrhea in women who do not have an underlying cause for their pain (eg, endometriosis, fibroids, bowel or bladder disease, etc). Separate topic reviews discuss the management of these problems. (See "[Patient education: Endometriosis \(Beyond the Basics\)](#)" and "[Patient education: Uterine fibroids \(Beyond the Basics\)](#)" and "[Patient education: Chronic pelvic pain in women \(Beyond the Basics\)](#)".)

CAUSE OF DYSMENORRHEA

Prostaglandins are chemicals that are formed in the lining of the uterus during menstruation. These prostaglandins cause muscle contractions in the uterus, which cause pain and decrease blood flow and oxygen to the uterus. Similar to labor pains, these contractions can cause significant pain and

discomfort. Prostaglandins may also contribute to the nausea and diarrhea that some women experience.

DYSMENORRHEA SYMPTOMS

The pain of dysmenorrhea is crampy and usually located in lower abdomen above the pubic bone (the suprapubic region); some women also have severe pain in the back or thighs. The pain usually begins just before or as menstrual bleeding begins, and gradually diminishes over one to three days. Pain usually occurs intermittently, ranging from mild to disabling.

Other symptoms that may accompany cramping include nausea, diarrhea, dizziness, fatigue, headache, or a flu-like feeling.

DYSMENORRHEA DIAGNOSIS

The diagnosis of dysmenorrhea is based upon a woman's medical history and physical examination.

Physical examination — Women with dysmenorrhea should have a complete abdominal and pelvic examination. During the examination, the health care provider will observe and feel the size and shape of the vagina, cervix, uterus, and ovaries. An internal pelvic examination may not be necessary in adolescent girls.

Other tests — In some women, pelvic ultrasound (performed vaginally if possible) can be useful in determining if conditions such as uterine fibroids, adenomyosis, or endometriosis are present.

DYSMENORRHEA TREATMENT

There are a number of treatments available for women with dysmenorrhea.

Nonsteroidal anti-inflammatory drugs (NSAIDs) — NSAIDs are a class of medications that are very effective in reducing pain associated with dysmenorrhea. Some NSAIDs are available without a prescription while others require a prescription; prescription NSAIDs are probably no more effective than non-prescription NSAIDs as long as an adequate dose is taken.

NSAIDs are most effective if they are started as soon as bleeding or other menstrual symptoms begins, and then taken on a regular schedule for two to three days.

Birth control pills — Birth control pills and other forms of hormonal birth control (eg, patch, vaginal ring, injection, hormone-releasing intrauterine device, contraceptive implant) also represent effective

treatments for women with dysmenorrhea. These treatments work by thinning the lining of the uterus, where prostaglandins are formed, thereby decreasing the uterine contractions and menstrual bleeding that contribute to pain and cramping. As discussed below, women may choose to use NSAIDs and hormonal contraceptives simultaneously to control dysmenorrhea.

Obviously, hormonal methods of birth control do not make sense for women who are trying to become pregnant. However, for other women (whether or not they need birth control for preventing pregnancy), using hormonal contraception usually reduces dysmenorrhea within several months of starting it. (See ["Patient education: Hormonal methods of birth control \(Beyond the Basics\)"](#).)

Women who start a hormonal birth control treatment continuously often have intermittent light bleeding or spotting, especially during the first two to three months of treatment; this usually declines with time. When bleeding occurs, it is usually lighter and associated with less severe cramping compared with before the treatment.

Traditionally, hormonal birth control treatments (pills, patch, ring) are taken so that the woman has monthly bleeding. However, women who prefer **NOT** to have bleeding each month and those who wish to minimize dysmenorrhea can use these contraceptives continuously to avoid or minimize pain associated with the menstrual period. Taking the treatment continuously means the following:

- Women who take a birth control pill would take one "active" pill per day for 21 or 24 days (depending upon the brand of pill), and then open a new pack of pills and do the same. This can be done indefinitely, although many women stop taking their pill for several days every 9 to 12 weeks; many women will have some bleeding during this time.
- Women who use the patch (Xulane) would apply a new patch once per week for 9 to 12 weeks, and then use no patch for several days; most women will have some bleeding during this time.
- Women who use the vaginal ring (Nuvaring) would insert a new ring every three to four weeks for 9 to 12 weeks, and then use no ring for several days; most women will have some bleeding during this time.
- Women who use injections of [medroxyprogesterone acetate](#) (Depo-Provera) are given one injection every 12 weeks. Most women have some intermittent spotting or bleeding for the first few months; this usually decreases with time. However, after women have received four or more injections (one year or more of use), most have little to no bleeding.

Intrauterine device (IUD) — The intrauterine device (IUD) that contains the hormone [levonorgestrel](#) (Mirena, Skyla, Kyleena, Liletta) can reduce dysmenorrhea by as much as 50 percent. In a study performed in teenage girls 12 to 17 years of age, use of a smaller, lower-dose levonorgestrel IUD (Kyleena) was noted to reduce dysmenorrhea [1,2]. The levonorgestrel IUD is discussed in detail in a

separate topic review. (See "[Patient education: Long-acting methods of birth control \(Beyond the Basics\)](#)".)

Non-pharmacologic treatments — Treatments that do not require the use of a medication can also help to reduce the pain of dysmenorrhea. In some cases, these treatments are not as effective as medications, although they can be combined with a medication to increase the pain-relief benefit.

Heat — Applying heat to the lower abdomen with a heating pad, hot water bottle, or self-heating patch can significantly reduce pain, often as well as treatment with an NSAID. It is important to avoid burning the skin with a heating pad or hot water bottle that is too hot; a temperature of approximately 104°F (40°C) is recommended. The heat can be applied as often as it is needed. Using heat in addition to [ibuprofen](#) may speed the relief of pain [3].

Dietary, vitamin, and herbal treatments — A variety of dietary and vitamin therapies have been studied for the relief of dysmenorrhea [4]. However, the studies involved a small number of women and do not provide sufficient information regarding safety or efficacy. While a review of published studies suggested that ginger powder could have some effect [5], we do not advise dietary, vitamin, or herbal remedies for dysmenorrhea.

Exercise — Exercise seems to reduce menstrual symptoms, including pain, in some studies [6]. Exercise has a number of benefits, so it is reasonable to try exercising to reduce painful periods. (See "[Patient education: Exercise \(Beyond the Basics\)](#)".)

Complementary or alternative medicine — There is some evidence that complementary medicine practices such as yoga or acupuncture are effective in reducing painful periods [7]. However, further study is needed to confirm the safety and efficacy of these treatments. Further information about complementary and alternative medicine is available from the National Center for Complementary and Integrative Health (<https://nccih.nih.gov/>).

Transcutaneous electrical nerve stimulation — Transcutaneous electrical nerve stimulation (TENS) is a treatment that involves the use of electrode patches, which are applied to the skin near the area of pain. TENS has been used to treat pain caused by many conditions, and may help to reduce dysmenorrhea in some women.

The patient wears a small battery pack on a belt, which generates a mild electrical current that passes to the electrodes. The electrical current is believed to stimulate the release of chemicals that block or reduce painful nerve impulses.

An analysis of several studies showed that TENS does not relieve pain as well as medications; however, it may be a useful alternative for women who cannot or prefer not to take pain-relieving medications [8].

Surgical options — At least two surgical procedures have been developed to treat dysmenorrhea. Both of these surgeries involve cutting or destroying the uterine nerves, which prevents the transmission of pain signals. However, no surgery has been shown to provide long-term relief of pain. Furthermore, surgery may be associated with complications. These may be related to regrowth of nerves or pain signals being transferred by alternate routes [9]. As a result, surgical treatments for dysmenorrhea are not generally recommended.

IF THE INITIAL DYSMENORRHEA TREATMENT FAILS

The most effective treatments for dysmenorrhea include NSAIDs and/or hormonal birth control treatments. If one of these treatments does not sufficiently relieve pain within two to three months, another treatment may be offered. As an example, if a woman tries NSAIDs but does not improve or cannot tolerate the treatment, a hormonal birth control treatment may be recommended instead of or in addition to the NSAID (or vice versa).

If neither NSAIDs nor a hormonal birth control treatment adequately improve pain, the next step depends upon the woman's age, symptoms, and other medical conditions. The options include:

- Diagnostic laparoscopy may be recommended to determine if endometriosis, or another condition, could be causing the pain. Usually performed in an operating room under general anesthesia, laparoscopy is a minimally invasive surgery that uses small incisions and a thin telescope with a camera to determine if there are signs of endometriosis or other abnormalities on or near the uterus, ovaries, or other areas inside the pelvis.
- Assume the pain is caused by endometriosis and treat with a gonadotropin-releasing hormone (GnRH) agonist, such as [nafarelin](#) (Synarel) or [leuprolide](#) (Lupron), or the GnRH antagonist [elagolix](#) (Orilissa). If dysmenorrhea improves within two to three months of starting treatment, it was probably caused by endometriosis.

These options are discussed in full detail in a separate topic review. (See "[Patient education: Endometriosis \(Beyond the Basics\)](#)".)

WHERE TO GET MORE INFORMATION

Your health care provider is the best source of information for questions and concerns related to your medical problem.

This article will be updated as needed on our web site (www.uptodate.com/patients). Related topics for patients, as well as selected articles written for health care professionals, are also available. Some

of the most relevant are listed below.

Patient level information — UpToDate offers two types of patient education materials.

The Basics — The Basics patient education pieces answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials.

[Patient education: Endometriosis \(The Basics\)](#)

[Patient education: Uterine adenomyosis \(The Basics\)](#)

Beyond the Basics — Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are best for patients who want in-depth information and are comfortable with some medical jargon.

[Patient education: Endometriosis \(Beyond the Basics\)](#)

[Patient education: Uterine fibroids \(Beyond the Basics\)](#)

[Patient education: Chronic pelvic pain in women \(Beyond the Basics\)](#)

[Patient education: Hormonal methods of birth control \(Beyond the Basics\)](#)

[Patient education: Long-acting methods of birth control \(Beyond the Basics\)](#)

[Patient education: Exercise \(Beyond the Basics\)](#)

Professional level information — Professional level articles are designed to keep doctors and other health professionals up-to-date on the latest medical findings. These articles are thorough, long, and complex, and they contain multiple references to the research on which they are based. Professional level articles are best for people who are comfortable with a lot of medical terminology and who want to read the same materials their doctors are reading.

[Dysmenorrhea in adult women: Clinical features and diagnosis](#)

[Primary dysmenorrhea in adolescents](#)

[Dysmenorrhea in adult women: Treatment](#)

[Uterine adenomyosis](#)

The following organizations also provide reliable health information.

- National Library of Medicine

www.nlm.nih.gov/medlineplus/ency/article/003150.htm

- The American College of Obstetricians and Gynecologists

www.acog.org/Patients

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