

Topic Page: [Dysmenorrhea](#)

Definition: **Dysmenorrhea** from *Encyclopedia of Cancer*

Definition

Painful menstruation, usually consisting of lower abdominal cramps.

See also Endometriosis

Summary Article: **Dysmenorrhea**
from *Encyclopedia of Sports Medicine*

Dysmenorrhea is a syndrome that encompasses a cluster of unpleasant symptoms experienced during the onset of a woman's menstrual cycle. The defining symptom is lower abdominal and pelvic cramping. Many other symptoms can occur as well (see list below). Symptoms begin during the hours surrounding the start of menstrual flow and continue for 24 to 48 hours. Roughly 75% of adolescent women experience some degree of dysmenorrhea, making it the most common gynecologic complaint in this age-group.

The diagnosis can be further categorized into primary dysmenorrhea and secondary dysmenorrhea. In the primary form, no specific medical abnormality can explain the symptoms. Primary dysmenorrhea represents 90% of cases, is associated with a normal menstrual cycle, and is not associated with pelvic pathology. Symptoms usually begin 6 to 12 months after menarche, when menstrual cycles become regular and ovulatory. Secondary dysmenorrhea commonly appears 1 to 2 months after menarche or after age 25. Causes of secondary dysmenorrhea include endometriosis, anatomic reproductive tract abnormalities, surgical adhesions, pelvic inflammatory disease, uterine fibroids, or ovarian cysts.

Symptoms of Dysmenorrhea

Pelvic and abdominal cramps	Sleeplessness
Diarrhea	Backaches
Nausea	Depression
Tachycardia	Leg aches
Vomiting	Irritability
Facial blemishes	Sweating
Loss of appetite	Nervousness
Flushing	Weakness
Headaches	Dizziness

Dysmenorrhea and Exercise

Anecdotal claims assert that physical activity alleviates symptoms of dysmenorrhea. Lay magazines and websites often include these statements. A comprehensive review of the literature in 2008 showed no well-designed studies to prove these claims. Many studies cited had methodological flaws and

contradictory results. Yet the belief remains popular. As exercise does not adversely affect symptoms or menstrual irregularities and exercise has numerous other physical and emotional benefits, patients should be encouraged to maintain their routine as tolerated. The dysmenorrheic athlete should be evaluated and treated similarly as a sedentary individual.

Etiology of Primary Dysmenorrhea

The physiologic etiology is generally attributed to the effects of prostaglandins, specifically $PG_{F2\alpha}$ and PG_E . These compounds are released during the second half of a woman's menstrual cycle as a result of falling hormone levels. They are linked to uterine contractions, decreased uterine blood flow, and increased sensitization of pain fibers. As the prostaglandins distribute through the systemic blood stream, they also affect other organ systems. Medical inhibition of prostaglandin synthesis leads to reduction of symptoms.

Behavioral factors can also influence the disease course. Stress can lead to worsening of symptoms. Cultural taboos surrounding the menstrual cycle can influence associated behaviors. Benefits of secondary gain (e.g., time off work) can also be considered. The incidence of dysmenorrhea increases significantly among relatives. Whether this is related to a genetic predisposition or learned behavior is not known.

Clinical Evaluation

A thorough history and physical examination are essential during the initial evaluation. The medical history should include age at menarche, menstrual cycle length and regularity, sexual and obstetric history, risk factors for sexually transmitted infections, and whether the patient had previously undergone abdominal or pelvic surgery. Additionally, family history and evidence of increased psychological stress are important keys to the underlying etiology.

The physical exam should include a brief evaluation of major organ systems and should focus on the abdomen and pelvis. By definition, the examination of a patient with primary dysmenorrhea will be normal. During the pelvic exam, attention should be paid to signs of secondary etiologies. A scarred external cervical os may indicate cervical stenosis. Inflammation and purulent discharge suggest infection, and appropriate cultures should be taken. Occasionally, the clinician may see tissue consistent with endometriosis in the vagina or on the cervix, which implies more extensive pelvic involvement. A bimanual exam may reveal reproductive tract abnormalities or abnormal pelvic masses.

Diagnostic Tests

Most cases of dysmenorrhea can be diagnosed and managed with a thorough history and physical examination. However, if abnormalities reveal themselves, additional testing may be necessary. Also, if a patient with presumed primary dysmenorrhea does not respond to medical management, she may benefit from further testing. Pelvic imaging with ultrasound is the initial step. Based on the results, referral to a specialist in gynecology may be indicated.

Treatment

Primary dysmenorrhea is easily managed in an outpatient clinic. Social, physiologic, and predisposing factors need to be addressed. Treatment of secondary dysmenorrhea depends on the underlying etiology and is beyond the scope of this entry.

Behavior modification can be explored if the initial history and physical exam suggest social triggers. Methods to decrease stress, including meditation and yoga, may be beneficial, particularly around the

onset of menses. A conscious effort to decrease work and family-related demands during this time can also reduce the symptoms.

Nonsteroidal anti-inflammatory drugs (NSAIDs) are the usual first-line treatment. These medications inhibit prostaglandin synthesis, thereby decreasing pelvic and systemic symptoms. Clinical testing has not proven the superior efficacy of any one type or brand of NSAID. Ideal dosing begins 1 to 2 days prior to the onset of menses and continues for 3 to 4 days. Adequate pharmacological dosing is crucial; subtherapeutic dosing is often ineffective.

Patients whose symptoms respond only partially to NSAIDs can consider pharmacological contraceptive options for further relief. These medications act by decreasing endometrial growth over the course of the menstrual cycle. Less endometrial growth limits the production of prostaglandins. Options include oral, vaginal, or transcutaneous combination contraceptives or intramuscular, subdermal, or intrauterine progesterone contraceptives. Selection should be tailored to each patient, with close attention paid to the side effects of each type.

Nonpharmacological treatment can be very effective, and patients often successfully treat themselves with these modalities. Vitamin E inhibits prostaglandin synthesis by a different mechanism from that of NSAIDs and has shown positive effects. Dosage is 200 international units (IU) twice daily. Omega-3 fatty acids also aid in decreasing symptoms by decreasing the potency of uterine prostaglandins. Heating pads placed about the pelvis during symptom flares can also significantly decrease pain.

See Also:

Amenorrhea in Athletes, Female Athlete Triad, Menstrual Irregularities

Further Readings

- Daley, A Exercise and primary dysmenorrhea: a comprehensive and critical review of the literature *Sports Med* 38 (8) : 2008.
- Sanfilippo, J; Erb, T Evaluation and management of dysmenorrhea in adolescents *Clin Obstet Gynecol* 51 (2) : 2008.

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