DYSMENORRHEA, MENSTRUAL CRAMPING

Dysmenorrhea is defined as painful pelvic cramping associated with menses, which may be accompanied by low back and thigh pain, headache, nausea, and diarrhea. Symptoms often start one to three days before menses and last through the first few days of bleeding.[1] Over 50% of menstruating women experience painful cramping, often resulting in missed work and responsibilities.[2]

Primary dysmenorrhea, not explained by an alternative diagnosis, is thought to be secondary to elevated prostaglandins that cause uterine hypercontractility and subsequent ischemia.[2] Associated symptoms, including pain and nausea, can also be explained by high prostaglandin levels. Secondary causes of dysmenorrhea must be ruled out, including cervical stenosis, adenomyosis, fibroids, or endometriosis. Diagnosis may require a pelvic exam, transvaginal ultrasound, or even laparoscopy. Risk factors for primary dysmenorrhea include being overweight, smoking, age less than 30 years, longer menstrual cycles with heavier bleeding, history of sexual abuse, and chronic exposure to stress.[1]

The standard approach to treatment of dysmenorrhea includes NSAIDs, oral contraceptives, and the levonorgestrel IUD, all which help to suppress prostaglandin production. Research supports the use of many self-care and complementary approaches that should also be considered.

1. MOVING THE BODY

Evidence for exercise in the management of dysmenorrhea is promising but inconclusive.[3] However, regular physical activity should be encouraged, as exercise helps maintain a healthy body weight and manage stress, both of which are risk factors for dysmenorrhea.

2. SUBSTANCE USE

Develop a plan to decrease use of tobacco and alcohol, because both have been associated with worse symptoms of dysmenorrhea.[4]

3. FOOD AND DRINK

Encourage an anti-inflammatory diet, high in omega-3 fatty acids, to modulate prostaglandin production and decrease painful cramping. Small studies have shown benefit by using fish oil supplementation to decrease painful contractions.[2] Review methods for increased dietary consumption of omega-3 fatty acids, and consider supplementing with 1,000 milligrams of combined DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid) if dietary intake is insufficient. Refer to Top Supplements for Every Clinician to Know.
4. HEAT

Suggest applying a heating pad to the pelvic region. Some small studies suggest that heat application is equivalent to ibuprofen and acetaminophen in the treatment of menstrual cramps.[5]

5. SUPPLEMENTS

Supplements may help improve the symptoms of dysmenorrhea. A Cochrane Review evaluated the evidence for the following vitamins and minerals.[6] They show promise, but results are limited by the number and size of reported studies.

**Magnesium** decreases menstrual pain compared to placebo, according to three small trials.[6] Encourage magnesium-rich foods including fish, nuts, and leafy greens. Consider a trial of 300-600 milligrams supplement daily. Magnesium glycinate, gluconate, or chloride have decreased tendency to cause loose stools. Use with caution in individuals with renal disease. While magnesium is generally well tolerated, diarrhea is the first sign of toxicity, and the dose should be decreased if present.

**Vitamin B1** (*thiamine*) supplementation improved menstrual pain in a research study performed in India, only after use of 100 milligrams for at least 30 days.[6,7] Some question exists as to whether these results would apply to other populations. Consider supplementing 100 milligrams for one to three months and monitor for improvement. Vitamin B1 is generally well tolerated.

**Vitamin B6** (*pyridoxine*) may improve pain scores in dysmenorrhea according to one small trial.[6,8] Consider a trial of 100 milligrams daily. It is generally well tolerated. Toxicity presents as neuropathy.

**Vitamin E** has mixed evidence of its use in dysmenorrhea. A small study concluded no difference when vitamin E was added to NSAIDs for treatment of dysmenorrhea.[6,9] However, a few small, randomized studies have shown some benefit in decreasing the duration and severity of menstrual pain.[1,10] The typical dose is 150-500 units daily used from two to ten days before to three to four days after the onset of menses. Vitamin D is generally well tolerated.

6. BOTANICALS

*Note:* Please refer to the *Passport to Whole Health*, Chapter 15 on Dietary Supplements for more information about how to determine whether or not a specific supplement is appropriate for a given individual. Supplements are not regulated with the same degree of oversight as medications, and it is important that clinicians keep this in mind. Products vary greatly in terms of accuracy of labeling, presence of adulterants, and the legitimacy of claims made by the manufacturer.
Botanicals may also help improve the symptoms of dysmenorrhea.

**Fennel seed** (*foeniculum vulgare*) essential oil may inhibit prostaglandin-induced contractions, and a few small trials support its use as comparable to NSAIDs.[2] The typical dose is 30 drops of fennel extract at the onset of menses and every six hours for the first three days of bleeding. An alternative method of administration is tincture, 1-3 milliliter every four hours as needed. It has GRAS status, or Generally Recognized As Safe, with no reported adverse reactions.

**Black haw** (*viburnum prunifolium*) is a shrub often used, despite limited research, to treat dysmenorrhea because of its tonic, uterine sedative, and antispasmodic properties. The typical dose is 2 teaspoons of dried bark in 1 cup of water, boiled and simmered for 10 minutes, taken 3 times daily. Tincture should be taken 5-10 milliliters three times daily. It has GRAS status, or Generally Recognized As Safe, with no reported adverse reactions. Its use may decrease absorption of minerals including calcium, iron, and zinc. Black haw should be avoided in women with an aspirin allergy due to possible cross-reactivity and in those with a history of kidney stones.[11]

**Other botanicals** including willow bark extract (*salix cortex*) and cramp bark (*viburnum opulus*) may act in decreasing prostaglandins, but at this time there is little evidence to support their use in the treatment of dysmenorrhea.

7. **POWER OF THE MIND**

Explore the relationship between the chronic menstrual pain and its impact on a woman’s overall well-being. A Cochrane Review concluded that behavioral interventions may be beneficial in dysmenorrhea, but the evidence came from small studies with poor methodology.[12] Consider mind-body practices such as meditation, breathing exercises and relaxation, hypnosis, guided imagery, and biofeedback. These techniques help to decrease stress, improve coping skills, and facilitate relaxation. For more information, refer to [Power of the Mind](#).

8. **TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION**

Use of a transcutaneous electrical nerve stimulation (TENS) device may be helpful in decreasing pain from dysmenorrhea. A Cochrane Review concluded that high-frequency TENS therapy (50-100 Hz) was effective in reducing pain.[13]

9. **ACUPUNCTURE AND ACUPRESSURE**

Using acupuncture and acupressure may help with symptoms of dysmenorrhea. A Cochrane Review included six acupuncture trials and four acupressure trials. Results showed improved pain with acupuncture compared to placebo, Chinese herbs, and
standard care. Acupressure resulted in reduced pain compared to placebo.[14] The World Health Organization lists dysmenorrhea as an indication for acupuncture.[15]

10. OTHER HEALING MODALITIES

Despite limited research, other healing traditions should be considered if women are interested, including traditional Chinese medicine, Ayurveda, and homeopathy. Evidence for Chinese and Japanese herbs has been promising, although studies are difficult to interpret because these therapies are often individualized to each woman.[6]

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REFERENCES