

## **Treatment of Primary Dysmenorrhea with Acupuncture: An Alternative to Medications**

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### **Abstract**

Among the many gynecological disorders that can afflict young women and girls, primary dysmenorrhea ranks high. Period cramps that are both unpleasant and non-pathological are the hallmark of this condition. Everyday life, productivity at work, academic achievement, and quality of life can all be severely affected by the illness. Despite the widespread use of pharmacological treatments like oral contraceptives and nonsteroidal anti-inflammatory medicines (NSAIDs), there has been a rise in interest in non-pharmacological techniques like acupressure due to concerns about side effects and long-term pharmaceutical use. According to the research that were examined, acupressure can help women with primary dysmenorrhea greatly decrease the severity and length of their menstrual pain. Acupressure patients reported less discomfort, less need for analgesics, and better capacity to carry out daily tasks after treatment. Additionally, a number of studies found that it helped with related symptoms including nausea, exhaustion, headache, and mental distress. In most cases, acupressure was determined to be risk-free, cheap, simple to use, and accompanied by little negative side effects. There is mounting evidence that acupressure can effectively and safely manage primary dysmenorrhea without the use of pharmaceuticals. Women looking for alternatives to medication-based therapies can benefit from its capacity to decrease menstruation discomfort and enhance general well-being. In order to bolster the evidence base and back up clinical recommendations, greater sample sizes and standardized intervention techniques are necessary for additional high-quality randomized controlled studies.

**Keywords:** Acupressure, Primary Dysmenorrhea, Menstrual Pain, Non-Pharmacological Intervention

### **Introduction**

Girls and women of childbearing age around the world suffer from primary dysmenorrhea at a higher rate than any other gynecological disorder. In this condition, there is no pelvic pathology detected, but the patient has unpleasant cramps either before or during menstruation. The lower back and thighs could experience radiating pain from the lower abdomen. Feelings of emotional discomfort, dizziness, headache, nausea, vomiting, and diarrhea are common side effects. Everyday life, productivity at work, and academic achievement can all take a hit when these symptoms are present. Primary dysmenorrhea is more common in certain communities than others, although research shows that many women deal with period pain to varying degrees. Because of the pain, many women miss time at work or school and are unable to fully enjoy life's social and recreational opportunities. The personal, social, and economic ramifications of primary dysmenorrhea make it a major public health concern. Excessive

prostaglandin synthesis by the endometrium during menstruation is the main cause of primary dysmenorrhea. Period cramps are caused by uterine ischemia, which is brought on by increased prostaglandin levels, which also increase uterine contractions and decrease blood supply to the uterus. Primary dysmenorrhea risk factors include early menarche, family history, stress, smoking, and heavy monthly bleeding. Oral contraceptives, nonsteroidal anti-inflammatory medications (NSAIDs), and other pharmaceutical treatments are often used in the conventional care of primary dysmenorrhea. Side effects like nausea, dizziness, gastrointestinal distress, and hormonal problems are possible with these methods, despite their generally beneficial nature. Moreover, owing to personal preferences, contraindications, or worries about long-term pharmaceutical use, some women may favor non-drug therapy. The use of CAM (complementary and alternative medicine) techniques to alleviate period cramps has been more popular in recent years. Among these treatments, acupressure has stood out for being easy, risk-free, and non-invasive. Applying pressure to certain areas on the body, called acupoints, might help bring about balance and healing. This practice is rooted in Traditional Chinese Medicine (TCM). Acupressure is more widely practiced and accepted than acupuncture since it does not involve needles. According to some research, acupressure can alleviate period pain by calming the muscles, increasing blood flow, and triggering the release of endorphins, which are naturally painkillers. Additionally, acupressure has the potential to alleviate menstruation-related symptoms including nausea, exhaustion, and anxiety, leading to a more pleasant period overall.

### **Primary Dysmenorrhea: What Causes It and What Can Prevent It**

Period cramps that are so intense that no obvious pelvic problem is present are known as primary dysmenorrhea. When it comes to gynecological issues, it ranks high among teenage girls and young women. Several biological, psychological, and lifestyle factors impact the disease, which is mostly linked to the physiological changes that happen throughout a woman's menstrual cycle.

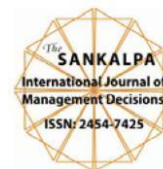
#### **Root Reasons for Primary Dysmenorrhea**

Excessive prostaglandin synthesis by the endometrium during menstruation is the main cause of primary dysmenorrhea. Uterine muscular contractions are induced by prostaglandins, which are hormone-like molecules. The uterine tissues experience decreased blood flow (uterine ischemia) and oxygen availability as a result of stronger and more frequent uterine contractions caused by elevated prostaglandin levels. The characteristic symptom of primary dysmenorrhea, which is pain felt in the lower abdomen, is caused by this process.

Period pain may be exacerbated by other biochemical mediators such vasopressin, leukotrienes, and inflammatory cytokines, which increase uterine contractility and pain sensitivity. Substances like these can make uterine contractions worse and bring on other symptoms including nausea, vomiting, headache, and exhaustion.

#### **Risk Factors of Primary Dysmenorrhea**

Several factors have been identified that increase the likelihood of developing primary dysmenorrhea:



### *1. Early Menarche*

Girls who experience menarche at an early age are more likely to develop primary dysmenorrhea. Early onset of menstruation is associated with longer exposure to ovulatory cycles and menstrual pain.

### *2. Young Age*

Primary dysmenorrhea is most prevalent among adolescents and young women, particularly during the first few years after menarche. Symptoms often decrease with age and after childbirth.

### *3. Family History*

A positive family history of dysmenorrhea is a significant risk factor. Women whose mothers or sisters experience menstrual pain are more likely to develop the condition, suggesting a genetic or familial influence.

### *4. Heavy Menstrual Flow*

Women with excessive menstrual bleeding may have increased prostaglandin production, which can contribute to more severe menstrual cramps and discomfort.

### *5. Long Menstrual Duration*

Menstrual periods lasting longer than normal are associated with a higher risk of dysmenorrhea due to prolonged exposure to uterine contractions and inflammatory mediators.

### *6. Smoking*

Smoking has been linked to an increased risk of dysmenorrhea. Nicotine may reduce blood flow to pelvic tissues and worsen uterine ischemia, thereby increasing menstrual pain.

### *7. Psychological Stress*

High levels of stress, anxiety, and emotional distress can influence pain perception and may exacerbate menstrual symptoms. Psychological factors are often associated with increased severity of dysmenorrhea.

### *8. Obesity or Low Body Weight*

Both excessive and insufficient body weight may affect hormonal balance and menstrual function, increasing the likelihood of experiencing menstrual pain.

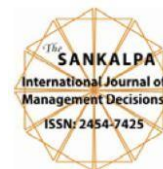
### *9. Lack of Physical Activity*

Sedentary lifestyles and inadequate physical exercise have been associated with a higher prevalence of dysmenorrhea. Regular physical activity may improve blood circulation, reduce stress, and alleviate menstrual discomfort.

### *10. Nulliparity*

Women who have never given birth often report a higher prevalence of primary dysmenorrhea compared to women who have experienced childbirth.

When prostaglandin production is elevated, it causes the uterus to contract excessively and painfully during menstruation, a condition known as primary dysmenorrhea. A number of factors can heighten the likelihood and impact of the condition, such as a young age, excessive menstrual flow, smoking, stress, and lifestyle choices, as well as a family history of the disease. In order to create successful therapeutic and preventative methods, including non-pharmacological therapies like acupuncture, it is crucial to understand these causes and risk factors.



### **Primary Dysmenorrhea: What Causes It and What Can Prevent It**

When there is no pelvic illness or pathology present, unpleasant menstrual cramps are the hallmark of primary dysmenorrhea. Adolescents and young women are more vulnerable to its painful effects, which lead to missed classes and job. Several risk factors might enhance the frequency and intensity of the disease, which is influenced by physiological processes related to menstruation.

Dysmenorrhea is mostly caused by the endometrial lining of the uterus producing an excessive amount of prostaglandins, especially prostaglandin F2 $\alpha$  and prostaglandin E2. The endometrial cells release these chemicals during menstruation, which cause the uterus to contract strongly. The uterine muscles experience a momentary lack of oxygen (ischemia) due to excessive uterine contractions, which in turn causes cramping and agony. Nausea, vomiting, diarrhea, headache, and exhaustion are some of the symptoms that are linked to elevated prostaglandin levels.

Another contributing factor is the increased release of **vasopressin**, a hormone that can enhance uterine contractions and reduce uterine blood flow. Elevated levels of inflammatory mediators and leukotrienes may further intensify menstrual pain and associated symptoms.

Several risk factors have been identified that increase the likelihood of developing primary dysmenorrhea:

#### **Early Menarche**

Girls who begin menstruating at a younger age are more likely to experience dysmenorrhea due to a longer duration of exposure to ovulatory menstrual cycles.

#### **Young Age**

Primary dysmenorrhea is most common among adolescents and young adults. The severity of symptoms often decreases with increasing age and after childbirth.

#### **Family History**

A positive family history of dysmenorrhea significantly increases the risk. Women with mothers or sisters who experience painful menstruation are more likely to develop similar symptoms.

#### **Heavy Menstrual Bleeding**

Excessive menstrual flow is associated with increased prostaglandin production, which may lead to stronger uterine contractions and more severe pain.

#### **Long Menstrual Duration**

Women with prolonged menstrual periods are at a greater risk of experiencing dysmenorrhea due to extended uterine activity and inflammatory processes.

#### **Smoking**

Smoking has been identified as a risk factor because nicotine may constrict blood vessels, reduce uterine blood flow, and aggravate menstrual pain.

#### **Psychological Stress**

Stress, anxiety, and emotional disturbances can influence pain perception and may increase the intensity of menstrual cramps. Psychological factors are often linked to greater symptom severity.

### Sedentary Lifestyle

Lack of regular physical activity may contribute to dysmenorrhea. Exercise is believed to improve blood circulation, release endorphins, and reduce menstrual discomfort.

### Obesity or Underweight Status

Abnormal body weight may affect hormonal regulation and menstrual function, increasing the likelihood of painful menstruation.

### Nulliparity

In women who have never given birth before, primary dysmenorrhea is more common than in women who have given birth more than once.

The main cause of primary dysmenorrhea is the painful uterine contractions induced by excessive prostaglandin production. It develops and becomes more severe due to a combination of biological, lifestyle, and psychological variables. Effective preventative measures and treatment techniques, including non-pharmacological therapies like acupressure, require an understanding of these causes and risk factors.

### Conclusion

For many women, especially those in their adolescent and young adult years, primary dysmenorrhea is a gynecological disorder that has a major impact on their mental, emotional, and social health. Period discomfort and its symptoms can significantly impact a person's ability to go about their everyday life, including their ability to study, work efficiently, and enjoy life in general. Many people are interested in exploring alternative treatment techniques due to worries about side effects, contraindications, and long-term pharmaceutical use, even though pharmacological treatments such hormonal therapy and nonsteroidal anti-inflammatory medications are commonly utilized. A non-pharmacological approach to the treatment of primary dysmenorrhea, acupressure has recently gained attention. Acupuncture, which involves the application of pressure to specific acupoints, has the potential to alleviate menstrual cramps through a number of pathways, including neural system stimulation, enhanced blood circulation, muscular relaxation, and the secretion of endogenous compounds that alleviate pain, such endorphins. Along with pain relief, acupressure has the potential to lessen a variety of related symptoms, such as nausea, exhaustion, anxiety, and emotional distress. From what we can tell from the research, acupressure is a viable option for treating primary dysmenorrhea that is also safe, cheap, and easy to acquire. For women looking for non-invasive pain management options, it is a good bet because to its low risk of side effects and lack of invasiveness. Also, with the right training, acupressure may be done on one's own, which is great for patients because it encourages independence and self-care. One effective supplementary therapy for primary dysmenorrhea is acupressure. Period health care programs that incorporate acupressure may help with symptom control, drug reduction, and overall quality of life. To back up evidence-based clinical advice, however, further large-scale, well-designed trials are required to confirm its efficacy.

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- These references are formatted in **APA 7th edition style** and are suitable for a review paper on **“Acupressure as a Non-Pharmacological Intervention for Primary Dysmenorrhea.”**