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Effectiveness of Physical Therapy Interventions for Women with Dysmenorrhea: A Systematic Review

Authors: Amy Tremback-Ball, PhD, PT, Emily Hammond, SPT, Abigail Applegate, SPT, Emma Caldwell, SPT, Hayley Witmer, SPT

INTRODUCTION

➤ Primary Dysmenorrhea:

- Idiopathic painful menstruation
- 60–90% prevalence in females
- May cause school absences and missed work
- Impacts social life and psychological health
- Traditional treatments: NSAIDs, contraceptives, and thermotherapy

PHYSIOLOGY

➤ Prostaglandins:

- Aid in shedding of endometrium by reducing blood flow triggering muscle contractions; extremely elevated levels in primary dysmenorrhea causing painful contractions

➤ Endorphins:

- Endogenous peptides that relieve stress and pain by binding to opiate receptors in brain

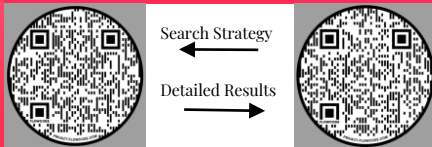
➤ Exercise:

- Increases blood flow, decreases prostaglandin levels and releases endorphins
- Innate pain relief, improved quality of life.
- Releases endorphins acting as non-specific analgesics

PURPOSE

The aim of this study is to explore the role of physical therapy in treating primary dysmenorrhea through traditional and alternative interventions.

METHODS/RESULTS



RESULTS – CONVENTIONAL

➤ Aerobic Exercise:

- Frequency varied between 4–12 weeks
- Duration: varied between 25–40 mins.
- Type: dancing, walking, cycling, and treadmill training
- Reduction in pain intensity and duration

➤ Core Stabilization:

- Engages back extensors, abdominals and pelvic floor muscles
- Increases circulation to surrounding musculature and tissue
- Reduction in pain intensity and duration

➤ Alternating Knee Chest Position:

- Strengthens pelvic floor
- Reduction in pain intensity



➤ Active Stretching:

- Creates flexibility in abdomen, pelvis, and groin
- Perform stretches regularly to reduce post-cycle symptoms
- Not superior to aerobic exercise
- Simple and effective method for decreasing dysmenorrhea symptoms

➤ Patient Education:

- Maintaining active lifestyle creates a positive aspect on dysmenorrhea
- Foods rich in magnesium, potassium, and vitamin C can decrease prostaglandin production

RESULTS – NON-CONVENTIONAL

➤ Spinal Manipulation:

- Stimulates pelvic nerves
- More effective with exercise regimen
- Effective in reducing intensity of pain

➤ Yoga:

- Stretching and core stabilization
- Poses analyzed: Corpse, Sun Salutation, Sleeping Thunderbolt, Head to Knee, and Seated forward bend
- Research needed for long-term benefits

➤ Aquatic Therapy:

- Promotes muscle relaxation and stretching
- Reduces intensity and duration of pain

➤ Kinesio Taping:

- More effective than isometric exercise
- Can provide immediate pain relief through cutaneous stimulation



Anterior

8cm x 5cm = horizontal
10cm x 5cm = vertical



Posterior

No specified dimensions
Pictured: 2, 10cm x 5cm

RESULTS- NON-CONVENTIONAL

➤ Acupressure:

- Auricular acupressure
 - Internal genitals, endocrine, shenmen, sympathesis, liver, kidney
 - No obvious effects on dysmenorrhea pain
- Acupoints
 - SP-6 and RANGU points
 - Effective in reducing pain



APPLICATION TO CLINICAL PRACTICE

- Include questions on the intake form to screen for symptoms
- Easy addition to plan of care
- Advocate to treat the “whole” person
- Promote open communication
- Can incorporate into any clinical setting

LIMITATIONS

- Limited availability of high quality RCTs
- Limited long-term follow-up
- Lack of evidence analyzing several menstrual cycles
- Small sample sizes

CONCLUSIONS

- Most effective: aerobic exercise, active stretching, and core stabilization
- Traditional methods recommended in conjunction with alternatives
- More research needed
- Physicians should recommend physical therapy to patients