Evaluation and Treatment of Chronic Pelvic Pain

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Disclosures:

- None

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Objectives:

- Broad:
  - Chronic Pelvic Pain (CPP) is a common complaint in the outpatient setting
  - A personalized approach to care may improve patient satisfaction
- Specific:
  - Review possible etiologies
  - Review initial patient assessment in the setting of CPP
  - Describe commonly used initial multimodal treatment plans
- Osteopathic Principles and Practices:
  - Evaluation and treatment of CPP is based on the understanding or the body as a unit. Recognizing the combination of mind and sprit while developing a comprehensive treatment plan may improve overall care.

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Definition

- *Persistent, noncyclic pain perceived to be in structures related to the pelvis and lasting more than six months*
  - No consensus
  - 3-6 months to allow for any acute process to resolve
  - Unrelated to pregnancy
  - May be constant or episodic
  - Severe enough to cause functional disability or require treatment

Definition

- Chronic regional pain syndrome and/or functional somatic pain syndrome
  - May be more than one etiology
- Frequently associated with mental health disorders

Background

- Prevalence of 3.8%
  - May be as high as 16% based on inclusion criteria
- Anywhere from 10-25% of office visits
- Direct and indirect cost of over 3 billion dollars annually
- Main indication for significant surgery
  - Approximately 20 percent of hysterectomies
  - 40 percent of gynecological laparoscopies

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Patient Experience

- 65% not given a specific diagnosis
- 31% given a gynecologic diagnosis
- 4% given non gynecologic diagnosis
- 30% actively seek treatment

- 1.6 average gynecology visits yearly
- 0.8 average PCP visits yearly
- 0.14 average mental health specialist visits yearly

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Patient Experience:

- Relentless and overwhelming pain
- Unpredictable outcomes
- Struggle to construct pain as normal vs pathological
- Find a culture of secrecy exists
- Higher pain catastrophizing associated with reduced quality of life

Etiologies

- Prevalence in your practice
  - Specialty focus
  - Referral patterns
  - Population
- Many etiologies possible
- One condition could be worsening another
  - May have greater pain
- Specific entity may not be identified
  - Frustrating for you and the patient

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Etiologies: Gynecologic

- Adenomyosis
- Adhesions
- Chronic endometritis
- Endometriosis
- Leiomyomata
- Ovarian cysts
- Ovarian remnant syndrome
- Ovulatory pain
- Pelvic congestion syndrome
- Pelvic inflammatory disease
- Salpingitis

Etiologies: Urologic

- Bladder neoplasm
- Chronic urinary tract infection
- Detrusor dyssynergia
- Interstitial cystitis
- Radiation cystitis
- Urethral diverticulum
- Urethral caruncle
- Urolithiasis

Etiologies: Gastrointestinal

- Chronic intermittent bowel obstruction
- Colitis
- Constipation
- Diverticular disease
- Hernia
- Inflammatory bowel disease
- Irritable bowel syndrome

Etiologies: Musculoskeletal

- Abdominal wall myofascial pain
- Chronic coccygeal pain
- Compression of lumbar vertebrae
- Degenerative joint disease
- Disk herniation
- Fibromyalgia
- Muscle strain
- Pelvic floor muscle spasms

Etiologies: Gynecologic

- Endometriosis
  - Most common at time of laparoscopic for CPP
  - 1/3 diagnosed at time of surgery (as high as 70% specialty practice)

- PID: 30% may develop CPP
  - Persistent tenderness after 30 days
  - Severity of adhesive disease
  - Mechanism not known

Etiologies: Gynecologic

- Adhesions
  - Not well understood
- Pelvic congestion syndrome
  - Controversial
- Adenomyosis
  - Typically age 40-50

Etiologies: Gynecologic

- Ovarian cancer
  - Not a 'silent killer'
- Ovarian remnant syndrome
  - After surgical resection
- Leiomyoma
  - Pressure symptoms
  - Degeneration

Etiologies: Urologic

- IC
  - Common
- Urethral diverticulum
  - May palpate suburethral mass
- Bladder neoplasia
  - May present as IC

Etiologies: Gastrointestinal

- IBS
  - 10% population
  - 35% women CPP in primary care setting
- Inflammatory bowel disease
  - Crohns, UC
- Diverticular disease
  - Less common
- Colon cancer
- Chronic pseudo obstruction
- Celiac disease

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Etiologies: Musculoskeletal

- Fibromyalgia
  - Poorly understood
- Coccydynia
  - Levator ani spasm
- Chronic abdominal wall pain
  - Muscle/nerve
  - 7-9% post Pfannenstiel
- Myofascial pain syndrome
  - Point and referred tenderness
- Osteitis pubis
  - Aggravated by movement

Etiologies: Mental Health

- Somatization
  - Nonspecific
- Opiate dependency
  - Decreased opioid response
- Abuse
  - Up to 47% disclose a hx
- Depression
  - More frequently in CPP
- Sleep disorders
  - Related to CPP

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Initial Assessment

- Extremely detailed history
- Focused examination
- Obtain records when able
- Set plan
  - Patient engagement very important
- Alarm findings require urgent evaluation

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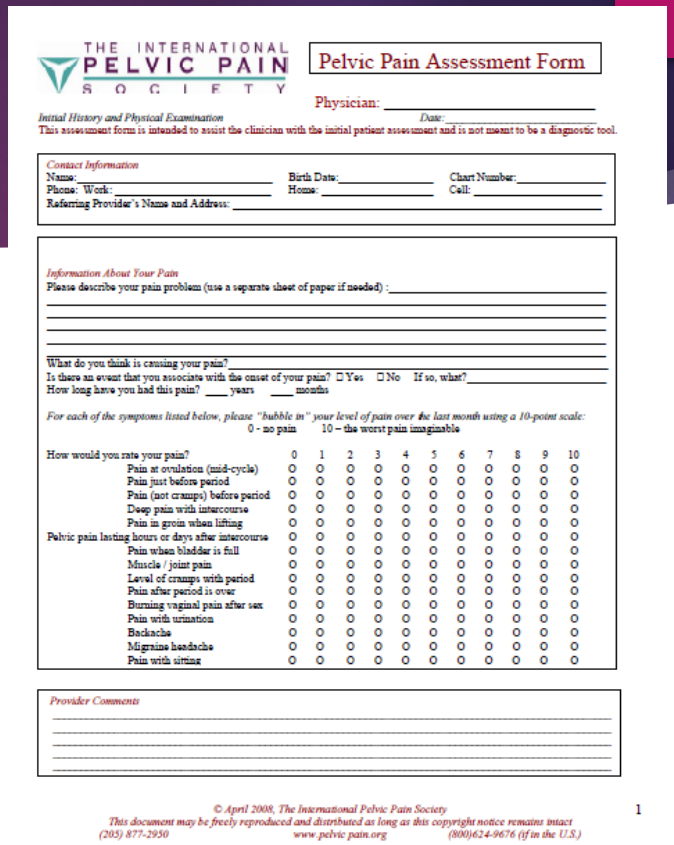
History

- Stepwise approach
- Data gathering before the visit
- Standardized questionnaires
  - IPPS in English, Spanish, French and Portuguese
- May need dedicated visit for history alone
  - Multiple visits
  - Exam on subsequent follow-up



THE INTERNATIONAL PELVIC PAIN SOCIETY

Pelvic Pain Assessment Form

Physician: _____

Initial History and Physical Examination *Date:* _____

This assessment form is intended to assist the clinician with the initial patient assessment and is not meant to be a diagnostic tool.

Contact Information

Name: _____ Birth Date: _____ Chart Number: _____

Phone: Work: _____ Home: _____ Cell: _____

Referring Provider's Name and Address: _____

Information About Your Pain

Please describe your pain problem (use a separate sheet of paper if needed) : _____

What do you think is causing your pain? _____

Is there an event that you associate with the onset of your pain? ☐ Yes ☐ No If so, what? _____

How long have you had this pain? ___ years ___ months

For each of the symptoms listed below, please "bubble in" your level of pain over the last month using a 10-point scale:

0 - no pain 10 – the worst pain imaginable

How would you rate your pain?	0	1	2	3	4	5	6	7	8	9	10
Pain at ovulation (mid-cycle)	O	O	O	O	O	O	O	O	O	O	O
Pain just before period	O	O	O	O	O	O	O	O	O	O	O
Pain (not cramps) before period	O	O	O	O	O	O	O	O	O	O	O
Deep pain with intercourse	O	O	O	O	O	O	O	O	O	O	O
Pain in groin when lifting	O	O	O	O	O	O	O	O	O	O	O
Pelvic pain lasting hours or days after intercourse	O	O	O	O	O	O	O	O	O	O	O
Pain when bladder is full	O	O	O	O	O	O	O	O	O	O	O
Muscle / joint pain	O	O	O	O	O	O	O	O	O	O	O
Level of cramps with period	O	O	O	O	O	O	O	O	O	O	O
Pain after period is over	O	O	O	O	O	O	O	O	O	O	O
Burning vaginal pain after sex	O	O	O	O	O	O	O	O	O	O	O
Pain with urination	O	O	O	O	O	O	O	O	O	O	O
Backache	O	O	O	O	O	O	O	O	O	O	O
Migraine headache	O	O	O	O	O	O	O	O	O	O	O
Pain with sitting	O	O	O	O	O	O	O	O	O	O	O

Provider Comments

_____

_____

_____

_____

_____

(205) 877-2950 *www.pelvic pain.org* *(800)624-9676 (if in the U.S.)*

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History: Pain Characteristics (PPQRST)

- Provocative/ palliative factors
  - Oral intake
  - Urination/defection
  - Positional changes
- Quality
  - Type and severity
- Radiation
- Setting
  - menses
- Temporal
  - Pre/post
  - Events

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History

- Associated symptoms
  - Bowel/urinary complaints
  - Myofascial symptoms
  - Sexual symptoms
  - Autonomic symptoms
- Mental health concerns
  - Known diagnosis
  - Sleep disorders
  - Prior abuse
  - Substance dependency

Physical Examination

- Essential
- May be painful/distressing
- May need staged approach for severe cases
- Not limited to pelvic examination

Physical Examination: General

- Observe gait if able
- Begin seated
  - Spine, lower back, pelvis, lower extremities
  - Abdominal wall
- Supine
  - Pelvis, abdominal wall, lower extremities
- Light, deep palpation
- Pinprick, soft touch

Physical Examination: Pelvis

- Visual inspection
- Sensory testing
  - Cotton swab test
- Assessment of pelvic floor
  - Focusing on muscle tone, point tenderness
  - Vaginal fornices
  - Cervical tenderness
- Bimanual
  - Uterine tenderness
  - Masses
  - Rectovaginal
- Speculum
  - Inspection
  - Wet mount/culture

Diagnostics

- Targeted evaluation
  - Transvaginal ultrasound (if tolerated)
  - MRI
    - Deep infiltrating endometriosis
  - Laboratory evaluation
    - Blood
    - Urine
    - Cultures

Further Assessment

- Surgical
  - Role of laparoscopy controversial
  - Cystoscopy
  - Colonoscopy
- Referral
  - Find the best fit
  - Discuss and circle back with patient

Initial Treatment: Pharmacology

- NSAIDs
- Hormonal Treatment
- Gonadotropins agents
- Neuropathic modulators
- Antidepressants
- Novel agents

Initial Treatment: Pharmacology

- NSAIDs
  - None more superior
  - Acetaminophen for synergy
  - Side effect counseling
    - Ibuprofen 800 mg Q8
    - Naproxen 500 mg Q12
    - Mefenamic acid 250 mg Q6
  - 4-6 week trial
- Combination Hormonal Contraceptives
  - Cyclic or noncyclic
  - Oral or transdermal
  - With NSAIDS
  - 8-12 week trial

Initial Treatment: Pharmacology

- Medroxyprogesterone acetate
  - 10 mg daily, up to 50 mg
  - Side effect counseling
- Norethindrone acetate
  - 2.5 mg daily, up to 30 mg
- Subcutaneous depo-medroxyprogesterone acetate
  - 104 mg Q3 months
- Etonorgestrel Implant
- Levonorgestrel-releasing intrauterine system
  - 2 available

Initial Treatment: Further Pharmacology

- Leuprolide acetate
  - Gonadotropin releasing hormone agonist
  - 3.75 mg IM Q4 weeks
  - 11.25 mg IM Q12 weeks
  - Side effect counseling and addback therapy
- Danazol
  - 200 to 400 mg/day total divided into two doses
  - Increased to a total dose of 800 mg/day
  - Continued uninterrupted for two months and used up to 9 months
  - Side effects counseling

Initial Treatment: Further Pharmacology

- Cimetidine
  - 300 mg BID
- Hydroxyzine
  - 25 mg QHS, up to 100 mg
- Amitriptyline
  - 25-50 mg QHS
- Pentosan
  - 100 mg TID
- Hyoscyamine
  - O.125 mg Q4 prn
- Botulinum toxin
- Tigger point injections
- Topical lidocaine

Initial Treatment: Further Pharmacology

- Aromatase inhibitors
  - Letrozole 2.5 mg daily
  - Side effect counseling and addback
- Gabapentin
  - 100 mg QHS start
- Cyclobenzaprine
  - 5-10 mg start
- SNRI (duloxetine)
  - 30 mg start, up to 60 mg goal
- Bupropion
  - 150mg ER daily
- Trazadone
  - 25-50 mg QHS, up to 200 mg/day

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Future Agents

- Elagolix
  - 150 mg once daily
  - 200 mg twice daily
- Cyclosporin A (IC)
- Capsaicin topically
- Modified sodium channel blockers
- Cannabinoids
- NMDA antagonist
- Recombinant humanized monoclonal antibody targeting NGF

A chance to cut MAY or MAY NOT be a chance to cure

- Extirpative surgery
  - Some will seek hysterectomy and/or oophorectomy
  - Many present after multiple laparoscopies
  - Expectations should be managed
  - Reserve mostly for high suspicion of disease
  - Elective intervention can be supported if relationship has been established
  - Experienced providers
    - Multispecialty if needed on standby

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Initial Treatment: Non Pharmacologic

- Pelvic physical therapy
- Psychosocial counseling
  - Cognitive behavioral therapy
- TENS
- Dietary modification
  - IC
  - IBS

Complementary and Alternative Medicine

- **Over half of women with CPP with have used at least one approach in the past year**
  - Many will continue to utilize
- High interest amongst the public
- Allow multimodal approach along side standard treatments

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Mind/Body Connection

- Yoga
  - Reduction in pain and improved quality of life
  - Feasible in most patients
- Massage
  - Enhanced with aromatherapy
- Mindfulness Meditation
  - Improved quality of life
- Acupuncture
  - Insufficient evidence

Osteopathic Manipulative Treatments

- Data is lacking
- Systemic Review 2016
  - Low study number and heterogeneity prevented indication of treatment effects
- Pilot Study 2016
  - 22/28 completed treatment
  - 17 had positive treatment effect

Geburtshilfe und Frauenheilkunde

Thieme

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Patient Satisfaction

- Known to be improved with:
  - Collaborative decision making
  - Legitimizing their experience
- Embodiment of knowledge through community
- Clear follow up plan and next steps

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Need for Research

- Quality studies
- Randomized, controlled
- Current gaps
  - Diagnostic criteria validation
  - ID of subpopulations
  - Risk factors/comorbid conditions
  - Role of surgery
  - Placebo effect

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What's Next: Central sensitization

- Dysfunctional sensory processing recognized as a systemic disease
- Central pain generators (pain originating from CS) and peripheral pain generators (pain from local tissue damage)
- Explanation for difference in pain amongst patients with similar entities
- Most commonly involves
  - Endometriosis
  - IC
  - Vulvodynia
  - Myofascial pain syndrome
  - IBS
  - Primary dysmenorrhea

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What's Next:

- Neuromodulation
- Surgical techniques
- Novel medications
- Integrative medicine
  - Dietary and supplement modification

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Summary

- CPP is a common complaint
- Comprehensive history and physical exam
- Establish patient engagement and expectations
- Diagnosis specific treatment if able
- Refer and consult as needed
- CAM
- Osteopathic philosophy
- Remember self care as provider

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Resources for patients

- ACOG patient information handouts, FAQ
- Pelvicpain.org
- Ichelp.org
- MISforwomen.org
- Reproductivefacts.org
- Womenshealth.gov

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Thank you!

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References:

- Drugs. 2017 Mar;77(3):285-301. Pharmacological Management of Chronic Pelvic Pain in Women. Carey ET, Till SR, As-Sanie S.
- Obstet Gynecol. 2003 Mar;101(3):594-611. Chronic pelvic pain. Howard FM
- Clin Obstet Gynecol. 2003 Dec;46(4):749-66. The role of laparoscopy in the chronic pelvic pain patient. Howard FM
- J Am Assoc Gynecol Laparosc. 1996 Nov;4(1):85-94. The role of laparoscopy in the evaluation of chronic pelvic pain: pitfalls with a negative laparoscopy. Howard FM
- Obstet Gynecol. 1996 Mar;87(3):321-7. Chronic pelvic pain: prevalence, health-related quality of life, and economic correlates. Mathias SD, Kuppermann M, Liberman RF, Lipschutz RC, Steege JF.
- International Pelvic Pain Society. Pelvic Pain Assessment Form. Available at: http://pelvicpain. org/docs/resources/forms/history-and-physical-formenglish.aspx.
- Am Fam Physician. 2016 Mar 1;93(5):380-7. Chronic Pelvic Pain in Women. Speer LM, Mushkbar S, Erbele T.
- Noncyclic Chronic Pelvic Pain Therapies for Women: Comparative Effectiveness [Internet]. Editors Andrews 1, Yunker A, Reynolds WS, Likis FE, Sathe NA, Jerome RN. Source Rockville (MD): Agency for Healthcare Research and Quality (US); 2012 Jan. Report No.: 11(12)-EHC088-EF. AHRQ Comparative Effectiveness Reviews.
- Best Pract Res Clin Obstet Gynaecol. 2006 Oct;20(5):695-711. Chronic pelvic pain: aetiology and therapy. Cheong Y, William Stones R.

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References:

- Pain Med. 2015 Feb;16(2):328-40. Prevalence and use of complementary health approaches among women with chronic pelvic pain in a prospective cohort study. Chao MT, Abercrombie PD, Nakagawa S, Gregorich SE, Learman LA, Kuppermann M.
- Pain Manag. 2013 Sep;3(5):387-94. New directions in the treatment of pelvic pain. Udoji MA, Ness TJ.
- Complement Ther Med. 2016 Jun;26:72-8. Osteopathic manipulative treatment in gynecology and obstetrics: A systematic review. Ruffini N, D'Alessandro G, Cardinali L, Frondaroli F, Cerritelli F.
- Altern Ther Health Med. 2010 Jan-Feb;16(1):28-33. Chronic pelvic pain. Herbert B.
- American College of Obstetricians and Gynecologists. Frequently asked questions: Gynecologic problems, FAQ099, August 2011. http://www.acog.org/Patients/FAQs/Chronic-Pelvic-Pain
- Royal College of Obstetricians and Gynaecologists. The initial management of chronic pelvic pain. Green-top Guideline No. 41, May 2012. https://www.rcog.org.uk/globalassets/documents/guidelines/gtg_41.pdf
- Obstet Gynecol Surv. 2012 Jul;67(7):417-25. Systematic review of therapies for noncyclic chronic pelvic pain in women. Yunker A, Sathe NA, Reynolds WS, Likis FE, Andrews J. Best Pract Res Clin Obstet Gynaecol. 2006 Oct;20(5):695-711. Epub 2006 Jun 9.
- Cochrane Database Syst Rev. 2014 Mar 5;(3). Non-surgical interventions for the management of chronic pelvic pain. Cheong YC, Smotra G, Williams AC.

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References:

- Eur Urol. 2013 Sep;64(3):431-9. doi: 10.1016/j.eururo.2013.04.035. Epub 2013 Apr 28. The 2013 EAU guidelines on chronic pelvic pain: is management of chronic pelvic pain a habit, a philosophy, or a science? 10 years of development. Engeler DS, Baranowski AP, Dinis-Oliveira P, Elneil S, Hughes J, Messelink EJ, van Ophoven A, Williams AC; European Association of Urology.
- Clin Obstet Gynecol. 2017 Sep;60(3):485-496. Medical Management of Endometriosis. Rafique S, Decherney AH.
- Obstet Gynecol Surv. 2012 Jul;67(7):417-25. Systematic review of therapies for noncyclic chronic pelvic pain in women. Yunker A, Sathe NA, Reynolds WS, Likis FE, Andrews J.
- Future Research Needs for Noncyclic Chronic Pelvic Pain Therapies for Women: Identification of Future Research Needs From Comparative Effectiveness Review No. 41 [Internet]. Editor sReynolds WS, Potter SA, Andrews J1. SourceRockville (MD): Agency for Healthcare Research and Quality (US); 2012 Sep. Report No.: 12-EHC126-EF. AHRQ Future Research Needs Papers.
- N Engl J Med. 2017 Jul 6;377(1):28-40. doi: 10.1056/NEJMoa1700089. Epub 2017 May 19. Treatment of Endometriosis-Associated Pain with Elagolix, an Oral GnRH Antagonist. Taylor HS, Giudice LC, Lessey BA, Abrao MS, Kotarski J, Archer DF, Diamond MP, Surrey E, Johnson NP, Watts NB, Gallagher JC, Simon JA, Carr BR, Dmowski WP, Leyland N, Rowan JP, Duan WR, Ng J, Schwefel B, Thomas JW, Jain RI, Chwalisz K.
- Obstet Gynecol. 2014 Sep;124(3):616-29. Chronic pelvic pain. Steege JF, Siedhoff MT

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References:

- Geburtshilfe Frauenheilkd. 2016 Sep;76(9):960-963. Osteopathy for Endometriosis and Chronic Pelvic Pain - a Pilot Study. Sillem M, Juhasz-Böss I, Klausmeier I, Mechsner S, Siedentopf F, Solomayer E.
- Clin J Pain. 2017 Jul 20. Pain Catastrophizing and Pain Health-related Quality-of-life in Endometriosis. McPeak AE, Allaire C, Williams C, Albert A, Lisonkova S, Yong PJ.
- Clin Obstet Gynecol. 2017 Sep;60(3):524-530. Management of Chronic Pelvic Pain. Bishop LA.
- J Adv Nurs. 2014 Dec;70(12):2713-27. A meta-ethnography of patients' experiences of chronic pelvic pain: struggling to construct chronic pelvic pain as 'real'. Toye F, Seers K, Barker K.
- Frank F Tu, MD, MPH, Sawsan As-Sanie, MD, MPH Section Editor: Howard T Sharp, MD Deputy Editor :Kristen Eckler, MD, FACOG. Treatment of chronic pelvic pain in women. Up To Date online database. Last updated July 21, 2017. Accessed July 2017.
- J Altern Complement Med. 2017 Jan;23(1):45-52. The Practice of Hatha Yoga for the Treatment of Pain Associated with Endometriosis. Gonçalves AV, Barros NF, Bahamondes L.
- Am J Obstet Gynecol. 2016 Dec;215(6):760.e1-760.e14. Multifactorial contributors to the severity of chronic pelvic pain in women. Yosef A, Allaire C, Williams C, Ahmed AG, Al-Hussaini T, Abdellah MS, Wong F, Lisonkova S, Yong PJ.
- Curr Rheumatol Rev. 2015;11(2):146-66. Central and peripheral pain generators in women with chronic pelvic pain: patient centered assessment and treatment. Hoffman D.

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References:

- Pain Med. 2017 Apr 15. Development and Feasibility of a Group-Based Therapeutic Yoga Program for Women with Chronic Pelvic Pain. Huang AJ, Rowen TS, Abercrombie P, Subak LL, Schembri M, Plaut T, Chao MT.
- Cochrane Database Syst Rev. 2016 Apr 18;4. Acupuncture for dysmenorrhoea. Smith CA, Armour M, Zhu X, Li X, Lu ZY, Song J.
- Complement Ther Clin Pract. 2017 May;27:5-10. Effect of aromatherapy massage on pain in primary dysmenorrhea: A meta-analysis. Sut N, Kahyaoglu-Sut H.
- Eur J Obstet Gynecol Reprod Biol. 2015 Nov;194:1-6. Effectiveness of complementary pain treatment for women with deep endometriosis through Transcutaneous Electrical Nerve Stimulation (TENS): randomized controlled trial. Mira TA, Giraldo PC, Yela DA, Benetti-Pinto CL.
- Cochrane Database Syst Rev. 2016 Mar 22;3. Dietary supplements for dysmenorrhoea. Pattanittum P, Kunyanone N, Brown J, Sangkomkamhang US, Barnes J, Seyfoddin V, Marjoribanks J.
- Urology. 2017 Aug;106:50-54. Clinical Efficacy of 1-Year Intensive Systematic Dietary Manipulation as Complementary and Alternative Medicine Therapies on Female Patients With Interstitial Cystitis/Bladder Pain Syndrome. Oh-Oka H.
- J Minim Invasive Gynecol. 2009 Mar-Apr;16(2):130-5. doi: 10.1016/j.jmig.2008.11.006. Epub 2009 Jan 22. The use of botulinum toxin in the pelvic floor for women with chronic pelvic pain-a new answer to old problems? Abbott J.

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