



رَبِّهِمْ  
يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ  
وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ





# طب سوزنی در بیماریهای زنان و بارداری: یک مرور مبتنی بر شواهد

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# اولین دوره توانمند سازی متخصصین طب ایرانی در حیطة زنان و ناباروری

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برگزار کننده: دانشکده طب سنتی دانشگاه علوم پزشکی و خدمات بهداشتی درمانی شهید بهشتی



**نام مدرس: دکتر هدا عزیزی، دانشیار گروه طب سوزنی دانشگاه علوم پزشکی مشهد**

## **نام مبحث: طب سوزنی در بیماریهای زنان و ناباروری، یک بررسی مبتنی بر شواهد**



**تاریخ برگزاری: ۲۷ دی ماه ۱۴۰۲**

**فهرست:**

- مقدمه
- طب سوزنی در دیسمنوره
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- ایمنی طب سوزنی در بارداری
- طب سوزنی در درمان تهوع بارداری، اختلالات خلقی، درد کمر و لگن، پرزانتاسیون بریج، لیبر، جفت باقیمانده، اختلالات پست پارتوم



**در پایان این جلسه شما قادر خواهید بود:**

**بیماریهای زنان و ناباروری را که طب سوزنی با شواهد قابل قبول در آنها قابل استفاده است، جهت ارجاع بیماران به متخصص طب سوزنی نام ببرید و رویکرد بالینی را بیان کنید.**



# Introduction

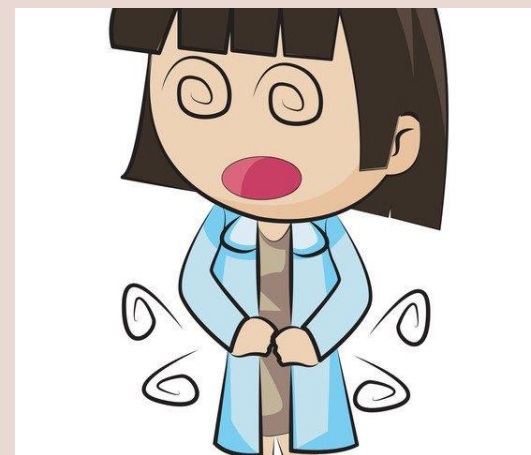
- The use of acupuncture in gynecology is widespread
- The evidence is not of highest level
- Current evidence indicates that acupuncture is a suitable treatment in most OBG disorders with few adverse effects





# Dysmenorrhea and endometriosis

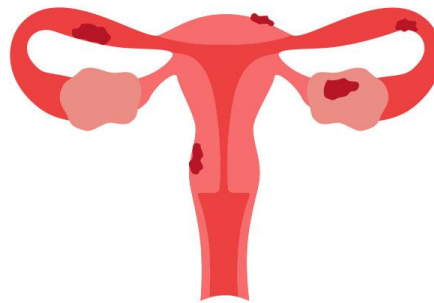
- Approximately 25% of women of reproductive age
- Painful menstruations that interfere greatly with daily activities as well as health-related QOL
- Pain quality: sharp or dull, throbbing, and nauseating
- Associated with cramps in the lower abdomen and sometimes in the back
- Classification: primary or secondary (endometriosis)
- Cause: ? Prostaglandin  $F2\alpha$  from the endometrium causes myometrium contractions





# Endometriosis

- Approximately 10 % of women of reproductive age
- Constant abdominal pain during the menstrual cycle with increased intensity during menstruation
- Often associated with symptoms of depression
- Abnormal presence of endometrial tissue outside the uterus in the abdominal/pelvic cavity
- Cause:?
- Role of sex steroids





# Treatment of dysmenorrhea and endometriosis

## □ **First-line:** limited evidence

- Dysmenorrhea: analgesics; NSAIDs; paracetamol; aspirin; and paracetamol-opiate combination analgesics
- Endometriosis: combined OCP, progestogens, danazol and GnRH agonists; Laparoscopic excision; antidepressants

## □ **Non-pharmacological treatment:**

- Exercise
- Heat pad
- Relaxation treatment
- TENS
- multidisciplinary approach: lifestyle changes, behavioral therapy
- Acupuncture





# EVIDENCE ON ACUPUNCTURE FOR DYSMENORRHOEA

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Acupuncture has been demonstrated to improve symptoms

- Numerous reviews
- Numerous trials

## Cochrane review:

- There exists some evidence for the use of acupuncture in managing period pain
- Importantly, no significant adverse effects were identified



# Systematic Reviews of Acupuncture for Dysmenorrhea

Woo HL, Ji HR, Pak YK, et al: The efficacy and safety of acupuncture in women with primary dysmenorrhea: A systematic review and meta-analysis. Med .2018, 97(23):e11007

-Number of trials: n=60

-Modalities included: Acupuncture

*"...acupuncture might reduce menstrual pain and associated symptoms more effectively compared to no treatment or NSAIDs, and the efficacy could be maintained during a short-term follow-up period."*

Smith CA, Armour M, Zhu X, et al. Acupuncture for dysmenorrhoea. Cochrane Database Syst Rev. 2016;4(CD007854).

-Number of trials: n=42 (32 acupuncture)

-Modalities included: Acupuncture & acupressure

Chen MN, Chien LW, Liu CF. Acupuncture or Acupressure at the Sanyinjiao (SP6) Acupoint for the Treatment of Primary Dysmenorrhea: A Meta-Analysis. Evid Based Complement Alternat Med. 2013; 2013:493038.

-Number of trials: n=7 (3 acupuncture)

-Modalities included: Acupuncture or acupressure

Cho SH & Hwang EW. Acupuncture for primary dysmenorrhoea: a systematic review. BJOG. 2010a;117(5):509-21.

-Number of trials: n=27

-Modalities included: Acupuncture

*"The review found promising evidence in the form of RCTs for the use of acupuncture in the treatment of primary dysmenorrhoea compared with pharmacological treatment..."*

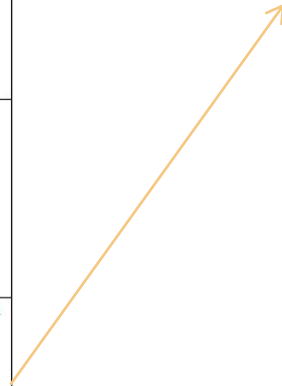
"...acupuncture might reduce menstrual pain and associated symptoms more effectively compared to no treatment or NSAIDs, and the efficacy could be maintained during a short-term follow-up period. Despite limitations... acupuncture might be used as an effective and safe treatment for females with primary dysmenorrhea."



# Selected Acupuncture Trials for Dysmenorrhea

1. Shetty GB, Shetty B, Mooventhan A: Efficacy of Acupuncture in the Management of Primary Dysmenorrhea: A Randomized Controlled Trial. <i>J Acupunct Meridian Stud.</i> 2018;11(4):153-158. -Trial size: n=60 -Interventions: 2 Group: 1) Acupuncture; or 2) No Tx control [(45 standardized Tx's over 3mths) -Conclusion: "Acupuncture could be considered as an effective treatment modality for the management of primary dysmenorrhea."
2. Liu CZ, Xie JP, Wang LP, et al. A randomized controlled trial of single point acupuncture in primary dysmenorrhea. <i>Pain Med.</i> 2014;15(6):910-20. -Trial size: n=501 -Interventions: 3 Groups, all received electroacupuncture: 1) Classical acupoint (SP-6); Unrelated acupoint (GB-39); Non-acupoint control [3sessions in a row at onset of menses] -Conclusion: "Specific acupoint acupuncture (SP-6) produced a statistically, but not clinically, significant effect compared with unrelated acupoint and non-acupoint acupuncture..."
3. Miao EY, Miao MY, Kildea DG, Lao YW. Effects of electroacupuncture and electroacupuncture plus Tao Hong Si Wu Wan in treating primary dysmenorrhea. <i>J Acupunct Meridian Stud.</i> 2014;7(1):6-14. -Trial size: n=128 -Interventions: 3 groups: Acupuncture (6 standardized Txs) plus herbs (Tao Huang Si Wu Tang); acupuncture plus "control" herbs (Shen Qi Da Bu Wan); NSAIDs only (ibuprofen 600mg bid) -Conclusion: Compared to NSAIDs, the use of acupuncture led to less menstrual pain (post Tx & 3 month follow-up). The combined use of acupuncture and herbs led to better long-term pain relief (1yr follow-up) than in the group receiving acupuncture and control herbs.
4. Ma YX, Ye XN, Liu CZ, et al. A clinical trial of acupuncture about time-varying treatment and points selection in primary dysmenorrhea. <i>J Ethnopharmacol.</i> 2013;148(2):498-504. -Trial size: n=600 -Interventions: 5 Groups: 1) Single acupoint (extra acupoint Shiqizhui), Tx pre-menses; 2) Shiqizhui, Tx started with onset of pain; 3) Acupuncture at multiple acupoints (pre-menses); 4) Acupuncture at multiple acupoints (onset of pain); 5) No treatment control -Conclusion: Best effects are obtained when using a combination of acupoints and initiating treatment prior to menses. If treating once menses begins, best effects are observed with the use of the single acupoint Shiqizhui.
5. Witt CM, Reinhold T, Brinkhaus B, et al. Acupuncture in patients with dysmenorrhea: a randomized study on clinical effectiveness and cost-effectiveness in usual care. <i>Am J Obstet Gynecol.</i> 2008;198:166-168. -Trial size: n=649 (208 randomized) -Interventions: Acupuncture (15 individualized treatments over 3 months) or wait-list control; all participants continued using biomedical care as needed -Conclusion: "Additional acupuncture in patients with dysmenorrhea was associated with improvements in pain and quality of life as compared to treatment with usual care alone and was cost-effective within usual thresholds."

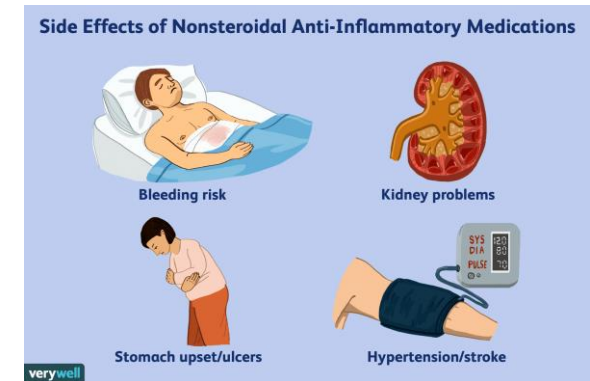
- The largest RCT of acupuncture for dysmenorrhoea
- clinical effectiveness and cost-effectiveness
- **15 treatments over 3 months; Manual stimulation**





## ACUPUNCTURE vs. NSAIDS FOR DYSMENORRHOEA-Notes

- Current guidelines suggest NSAIDs as first line therapy for dysmenorrhea, with a usual course consisting of a loading dose followed by regular maintenance dosing for three menstrual cycles
- Chronic NSAID use has been linked to ~32,000 GI bleed-related hospitalizations and ~3,200 deaths per year in the US.
- So, the conclusions of the large-scale pragmatic trial from Germany, that acupuncture is cost-effective and should be considered for primary dysmenorrhea, should be strongly encouraged as a safe alternative to NSAIDs.





## ACUPRESSURE FOR DYSMENORRHOEA

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- Acupressure offer benefit for women with primary dysmenorrhea
- The combination of acupuncture supplemented with between-visit self-administered acupressure may prove to be a cost-effective treatment combination for primary dysmenorrhea



## Clinical approach

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### Typical protocol for Dysmenorrhea:

- Weekly for 3 weeks followed by a week of no treatment during menses
- 3 menstrual cycles

### Protocol for ENDOMETRIOSIS

- 10 acupuncture treatments twice a week
- 5 weeks

**Acupuncture is effective for treating dysmenorrhea, but it is uncertain whether this is a specific effect.**

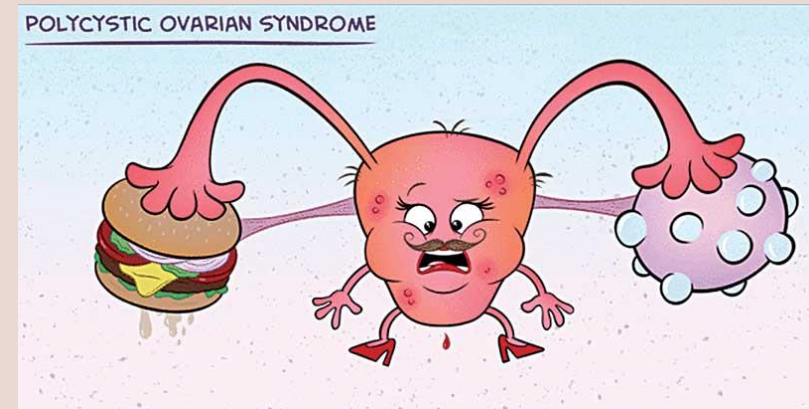
- ❖ Some early studies suggest acupuncture may be of benefit for **vulvodynia**.



# Polycystic ovary syndrome

- ✓ Clinical or biochemical hyperandrogenism: hirsutism, persistent acne and biochemical abnormalities
- ✓ Oligo- or amenorrhea: overweight/obesity, hyperinsulinaemia, insulin resistance and progression to type 2 diabetes, and dyslipidaemia
- ✓ Polycystic ovaries (PCOs) with or without increased ovarian volume

High circulating levels of androgens in women with PCOS is also associated with high sympathetic nerve activity





# Evidence on Acupuncture in PCOS

## □ Cochrane 2019

- Number of intermenstrual days may have improved in participants receiving true acupuncture compared to sham acupuncture.
- Low-frequency electroacupuncture improved menstruation frequency at 32 weeks (level: low)
  - compared to physical exercise (MD 0.22, 95% CI -0.01 to 0.45; 1 RCT, 40 women; very low-quality evidence)
  - compared to no intervention (MD 0.37, 95% CI 0.21 to 0.53; 1 RCT, 31 women)





# Evidence on Acupuncture in Irregular Cycles in PCOS

- ❑ Repeated acupuncture treatments decreased total testosterone and other sex-steroid levels, reduced LH/FSH ratio, and improved menstrual frequency without negative side effects
- ❑ **Ovulation induction** in women with PCOS:
  - **14 low-frequency electroacupuncture (EA) treatments** (combination of electrical and manual stimulation) **over 16 weeks**; total 20–26 treatments
  - This regulation occurs at ovarian level
  - More frequent treatment results in more pronounced effects



# Evidence on Acupuncture in Metabolic Abnormalities / Mental health in PCOS

- ❑ Reviews support the hypothesis that acupuncture has beneficial effects on **obesity and insulin sensitivity** with no negative side effects
- More frequent acupuncture treatments or 4–5 weeks of voluntary exercise ameliorated insulin resistance
- Regulation of adipose and skeletal muscle tissue signalling pathways
- Acupuncture and exercise each partly restore divergent gene and protein expression associated with insulin resistance, obesity and inflammation
- ❑ Acupuncture and exercise may improve symptoms of **anxiety and health-related quality of life** (modest effect)
- Need of further research within this area

# Acupuncture in PCOS

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**The evidence indicates that acupuncture induces more regular menstrual cycles and ovulation in women with PCOS, and may serve as a complement to standard care**



# Acupuncture and in vitro fertilization

- ❑ **ACUPUNCTURE 4 WEEKS PRIOR TO OOCYTE ASPIRATION:** increases uterine artery blood flow by decreasing a high pulsatility index (low-frequency EA, twice a week)
- ❑ **PAIN RELIEF DURING OOCYTE ASPIRATION:** to reduce the dose of fast acting opiates, decrease subjective pain and increase well-being
- ❑ **DURING ET**

9 treatments before oocyte retrieval with one treatment within 24 h before and one treatment within 1 h after the ET





# Acupuncture for hot flashes

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## ☐ Menopausal hot flashes

## ☐ hot flashes in women with breast cancer:

- Acupuncture+ applied relaxation: improved psychological well-being and vasomotor symptoms
- Acupuncture as effective as venlafaxine; fewer side effects
- ❖ Filshie protocol: six weekly acupuncture treatments, 10 min without stimulation; If tolerated: minimal acupuncture weekly for up to 6 years: long-term relief of vasomotor symptoms
- ✓ Stimulation: manual or low-frequency EA



# Acupuncture in Pregnancy

- An emerging area of clinical practice
- Throughout pregnancy, including the first trimester
- Wide range of conditions
- Australian cohort: 32.8% of pregnant women used complementary therapies during their pregnancy with 6% using acupuncture
  - Headaches (44%)
  - Back pain (39%)
  - Difficulties sleeping (29%)
  - Severe tiredness (46%)

newly qualified practitioners better avoiding working with pregnant women until gaining more clinical experience.



## General guidelines for the practice of acupuncture in pregnancy

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- Fewer needles
- Minimal needle stimulation: only *de qi*
- No moxibustion



## The safety of acupuncture use during pregnancy

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- Generally a safe modality with the risk of minor side effects small (a risk of 1.3 per 1000 treatments)
- Debate within the acupuncture literature to the existence of forbidden acupuncture points (BL60, BL67, CV4 and SP6)

Concerns: increased risk of miscarriage or early labour (based on traditional understanding)

□ **Safety:** maternal and neonatal outcomes





# Nausea and vomiting of pregnancy

❑ **Acupressure** (using finger pressure or a wristband with a button)

Reduction in nausea (relative risk (RR) 0.55, 95% CI: 0.38–0.77)

❑ **Manual acupuncture**: **twice weekly for a minimum of 2 weeks**; more frequent treatment in *hyperemesis*

- PC6
- Selected fixed points
- Upon TCM diagnosis

❑ **Electrical stimulation**

❖ **Commence acupuncture early!**

Moderate evidence suggests that acupuncture is effective for nausea and vomiting of pregnancy



# Mood disorders during pregnancy

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- Pregnancy: time of emotional wellbeing
- Mean prevalence rate of depression across the antenatal period: 10%
- Alarm: if symptoms persist beyond 2 weeks
- Limited treatment options: great potential value of non-pharmacological approaches
- Growing body of evidence for the effect of acupuncture in depression; few for depression during the antenatal period
- **8 weeks: twice a week for 4 weeks, then weekly for an additional four treatments**
- Acupuncture was associated with a clinically significant remission rate of 29%

**The results are encouraging and suggest acupuncture could be a useful treatment option for pregnant women**



## Back and pelvic pain

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- A common complaint during pregnancy (68%)
- In response to the physiological changes associated with pregnancy
  - altered posture
  - increased lumbar lordosis
  - loose ligaments
- Increases as the pregnancy advances; interferes with daily activities and sleep
- **Treatment frequencies: between 1 -3 times per week**
- less pain in the evening (46% in the acupuncture group, 20% in the exercise group and 6% in the control); back to work, daily living activities, improvements in quality of life

**Moderate evidence suggests acupuncture is effective for the management of back and pelvic pain in pregnancy.**



## Moxibustion for breech presentation

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- Three to four percent of babies at term are in a breech presentation
- From 37 weeks external cephalic version (ECV): unsuccessful in 40%; low acceptability
- *Artemisia vulgaris* (mugwort)
- Mainly applied prior to 37 weeks gestation, for 10–14 days: once or twice a day for either 20–30 min in total (10–15 min each side).
- 2–5 cms above BL67

Moderate evidence shows that moxibustion to BL67 is effective in converting breech to vertex presentation. The physiological basis is unknown.



## Proposed mechanism for moxibustion facilitating cephalic version

- A combination of **thermal** (infrared radiation) and **aroma** (fume) of the materials used stimulating physiological responses
- Moxa sticks have been shown to emit primarily long-wavelength infrared radiation (IR-C) indicating that moxa mainly affects the skin where heat receptors are located
- Due to the limited skin penetration of IR-C, thermal effects on internal organs are more likely to arise from reflex mechanisms
- Moxibustion might stimulate adrenocortical activity: increase in the production of placental oestrogens: potentially leading to greater sensitivity of the myometrium, and changes in the relationship between F and E prostaglandins: reduction in type E, type F would remain unchanged: resulting in an increase in uterine contractions and foetal activity: leading to version of the foetus
- Stimulation of heat may result in reduced muscle tone which may facilitate cephalic version



# Cervical ripening, induction of labour and augmentation of labour

- The role of acupuncture to ripen the cervix or to stimulate labour
- Cochrane 2017
- MA or EA 30 min, Maximum 5 treatments over a 2-week period
- EA at 1–2 Hz for 30–45 min
- Surface electro-stimulation (5 or 50 Hz), 30 min every 7 h up to 3 sessions in a 24 h period
- Auricular acupuncture
- MA 30 min, needles were stimulated every 10 min.

Acupuncture showed some benefit in improving cervical maturity, however, more well-designed trials are needed



## Proposed mechanism for acupuncture in labour induction

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- Stimulation of the uterus by hormonal changes or by the nervous system
- Stimulation of acupuncture points is known to increase the discharge of thalamic nuclei and the hypothalamic anterior pituitary system
- Acupuncture neuronal stimulation may increase uterine contractility either by central oxytocin release or by parasympathetic stimulation of the uterus



# Pain management in labour

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- The role of acupuncture to ripen the cervix or to stimulate labour
- Cochrane 2020
- 40 min of manual acupuncture, electro-acupuncture
- Fewer epidural by EA
- Individualised TCM acupuncture treatments
- Logistically difficult due to the unpredictability of time of onset of labour and availability of support

Acupuncture and acupressure may have a role with reducing pain, increasing satisfaction with pain management and less use of pharmacological methods





## Retained placenta

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- Complication of the third stage of labour
- The principal cause of postpartum hemorrhage
- Administering acupuncture at this time is challenging
- little research
- **acupuncture 30 min after delivery for 15 min**
- 77% of placentas separated successfully in a case-series

**Acupuncture may help to facilitate placental separation but further controlled trials are needed.**



# Postpartum disorders

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## ❑ Breast engorgement

- Randomized, nonblinded studies in an outpatient Swedish lactation clinic

## ❑ breastfeeding support

- Two systematic reviews concluded that acupuncture and acupressure are effective in increasing breastmilk volume
- Acupressure combined with back massage increase serum prolactin and milk production more than either alone
- **Acupuncture; acupressure; EA; Auricular therapy**
- **de qi elicited; 30 min; twice weekly for 3 weeks**

## Acupuncture and acupressure may help in increasing breastmilk volume

Drugs and Lactation Database (LactMed®) [Internet]. Bethesda (MD): National Institute of Child Health and Human Development; 2006-. Acupuncture. 2023 Aug





دختر سالم

مادر سالم جامعه سالم

