

# Effects of Acupuncturre for the Treatment of Premenstrual



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## Premenstrual Syndrome (PMS)

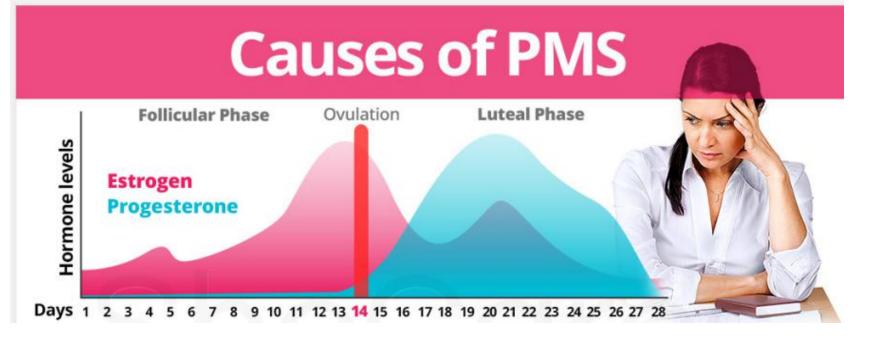
Its symptoms are different for every woman, you may get: Physical symptoms or Emotional symptoms or Both.

You may experience:

- Tender breasts
- Mood swings
- Fatigue
- Food cravings
- Irritability
- Depression

PMS has a wide variety of signs and symptoms.

It is estimated to be that approximately 75 % of menstruating women have experienced some form of PMS.



- PMS is a condition that affects a woman's emotions, physical health, and behavior during certain days of the menstrual cycle, generally just before her menses.
- PMS symptoms start five to 11 days before menstruation and typically go away once menstruation begins. The cause of PMS is unknown.
- However, many researchers believe that it's related to a change in both sex hormone and serotonin levels at the beginning of the menstrual cycle.
- Levels of estrogen and progesterone increase during certain times of the month. An increase in these hormones can cause mood swings, anxiety, and irritability.

## **PMS** by TCM

- ✓ name of western medicine.
- ✓ no record of such a name in ancient Chinese medicine books
- can be found in ,"Meridian headache", "meridian cold", "meridian fever", "meridian body pain",etc.
- ✓ belong to the category of premenstrual syndrome





- By traditional Chinese medicine, the dysfunction of zang-fu organs is the main cause of this disease, especially the liver disorder.
- PMS symptoms are caused due to imbalances and liver Qi stagnation.

刘小倩. 陈莹教授治疗经前期综合征经验辑要[D]. 辽宁中医药大学, 2010.

## Zang &Fu

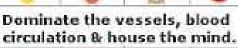
- The Zang-fu is a collection organs that produce and regulate qi within the body.
- Unlike in western
  medicine, these organs
  should not be thought of
  as anatomical structures,
- but rather as interconnected functions that explain how qi is produced within the body.

#### Zang & Fu organs Element Sense Manifest Tissue Emotion



#### Maintaining potency of Qi, Blood Storage & Maintain Qi flow











Govern digestion, absorb nutrients and produce Qi & blood.







Control Qi, respiration and distribution of blood & body fluid.



Stores essence, control reproduction, receive Qi, produce marrow & blood.

### **Liver Qi Stagnation**

#### Symptoms:

### Premenstrual distention pain in breasts

Hypochondrium

🗅 HA

Dizziness

🗅 Insomnia

Bitter taste.

🖵 T: dusky

Thin white coatP: wiry

Soothe liver, regulate Qi

#### Formulas& Herbs :

Treatment :

Chai Hu Shu Gan Wan:

chai hu, bai shao, zhike, xiang fu, chuanxiong, chen pi, gan cao



Xiao Yao Wan or Dan Zhi Xiao Yao San

During their reproductive years about 10% of women experience some kind of symptoms before menstruation (PMS) in a degree that affects their quality of life (QOL).



I have PMS...got it?



Acupuncture
 & herbal medicine
 has been a recent favorable

therapeutic approach.

Jang, S.H., Kim, D.I. & Choi, M. Effects and treatment methods of acupuncture and herbal medicine for premenstrual syndrome/premenstrual dysphoric disorder: systematic review. BMC Complement Altern Med 14, 11 (2014).

### Acupuncture ?

Acupuncture is a 3,000-year-old healing technique of Traditional Chinese Medicine.

- In 1997, the U.S. National Institutes of Health (NIH) documented and publicized acupuncture's safety and efficacy for treating a wide range of conditions. Acupuncture improves the body's functions and promotes the natural self-healing process by stimulating acupoints.
- TCM describes the body is healthy that constant flow of energy (Qi) keeps the yin and yang forces balanced.Acupuncture therapy can release blocked qi in the body and stimulate function, evoking the body's natural healing response through various physiological systems.



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### **Chinese herbs?**

- Chinese herbal medicine is part of a larger healing system called Traditional Chinese Medicine.Herbs are prescribed to restore energy balance to the opposing forces of energy Yin and Yang that run through invisible channels in the body.
- Chinese herbal medicines are mainly plant based, but some preparations include minerals or animal products. Different herbs have different properties and can balance particular parts of the body.





### **Treatment of the PMS**

TCM believes that the occurrence of the PMS is related to

the dysfunction of zang-fu organs in the early menstrual period.



#### Western Medicine:

Western

Medicine

- selective serotonin inhibitor (SSRI)
- gonadotropin-releasing hormone agonist (GnRHa)

Danazol

TCM:

In the literature on acupuncture for the treatment of the PMS, the cure rate of acupuncture for the PMS is between 85% and 100%, but there is no systematic evaluation.

### **Treatment of the PMS**

Acupuncture could improve microcirculation, balance organ

function and adjust mental activitie.



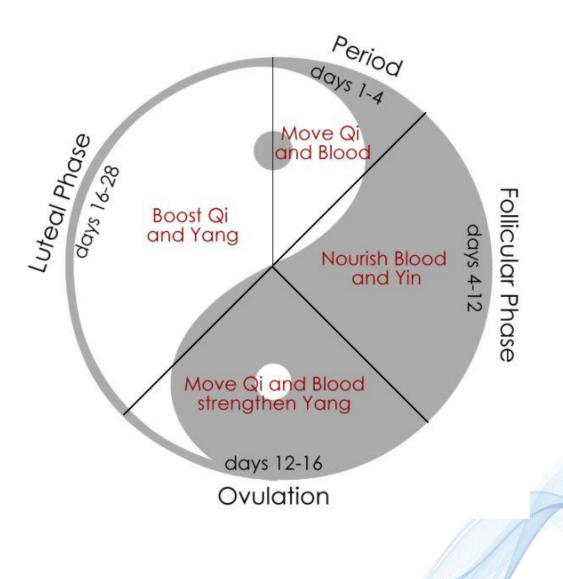
**To assess** alterations of the brain activity induced by acupuncture stimulation in PMS patients by rs-fMRI scan at SP6 acupoint in the late luteal phase of menstrual.

**Finding that** SP6-related acupuncture stimulation may modulate the neural activity in patients with PMS.

Duan, Gaoxiong & Chen, Ya & Pang, Yong & Feng, Zhuo & Liao, Hai & Liu, Huimei & Zou, Zhuocheng & Li, Min & Tao, Jien & He, Xin & Li, Shasha & Liu, Peng & Deng, Demao. (2020). Altered fractional amplitude of low frequency fluctuation in Women with Premenstrual Syndrome Via Acupuncture at Sanyinjiao(SP6). 10.21203/rs.3.rs-17771/v1.

### **How Aupuncture Impotant with Hormone**

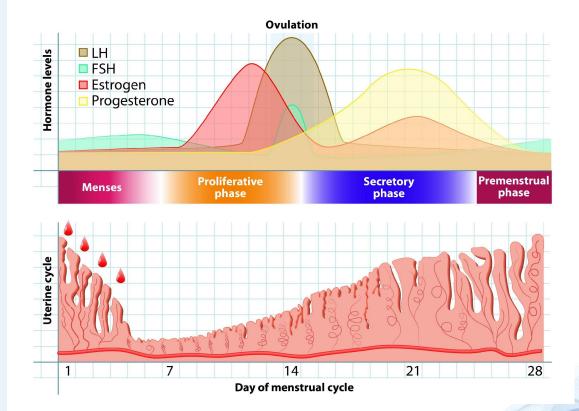
- Traditional Chinese Medicine (TCM) excels at diagnosing hormonal irregularities and balancing them.
- Acupuncture and herbs are used to resolve PMS.
- The period cycle itself offers an excellent opportunity to diagnose and address hormonal imbalances.



#### Acupuncture for Premenstrual Syndrome at Different Intervention Time: A Systemic Review and Meta-Analysis

- A total of 15 studies, comprising of 1103 cases, were included.
- To current meta analysis reveals that acupuncture leads to better effective rate, but the intervention time has no significant effect on the efficacy of acupuncture treatment for PMS.
- SP6, LR3, and RN4 are the most commonly used acupoints in treating PMS.

#### MENSTRUAL CYCLE



Zhang, J., et al., Acupuncture for Premenstrual Syndrome at Different Intervention Time: A Systemic Review and Meta-Analysis. Evidence-Based Complementary and Alternative Medicine, 2019. 2019; p. 6246285.

#### Effects and treatment methods of acupuncture and herbal medicine for PMS: systematic review.

- Eight acupuncture treatments and 11 herbal medical treatments were identified and evaluated.
- The data presented here provide support for the effectiveness of acupuncture and herbal medicine in PMS with a 50% or better reduction in symptoms than the initial state.





Jang, S.H., Kim, D.I. & Choi, M. Effects and treatment methods of acupuncture and herbal medicine for premenstrual syndrome/premenstrual dysphoric disorder: systematic review. BMC Complement Altern Med 14, 11 (2014). https://doi.org/10.1186/1472-6882-14-11

#### Table 2 Therapeutic effect of acupuncture on PMS

#### Table 2 Therapeutic effect of acupuncture on premenstrual syndrome

8	Acupuncture points	Frequency		2 cycles of pre-rating	Baseline	Outcome	Control	Adverse	P-value
		Tx sessions				(end-of-Tx score)	(no of CG)	Events	
1	SP6 CV6 + LR3, LR2, SP10, LI4 or + ST36 <sup>8</sup>	13 @ L/FP	10	Not reported	MSSL	7.56 ± 2.36	SI 5	None reported	P < 0.05
		2/wk, 8 wks			16.78 ± 4.30	16.78 ± 4.30	ST 40		
		(2 cycles)					(10)		
2	DU20 LI4 H3 REN3,4,6 PE6 GB34 UB23, Auriculoacu-point Shenmen <sup>9</sup>	2~4@LP	18	Not reported	Diagnosed as PMS	77.8% reduction	Sham acupuncture	One subcutaneous	
		(1 cycle)					(17)	abdominal hematoma	
3	Hand acupuncture therapy <sup>10</sup>	10 @ L/FP	7	Not reported	MSSL	3.94 ± 1.66	No treatment received	No serious AE observed	p < 0.001
	A5,A6,A8,A12,A16,A18,N18,F6	3/wk, 4 wks			$20.63 \pm 10.32$		(10)		
		(1 cycle)							
4	Hand moxibustion therapy <sup>10</sup>	10 @ L/FP	8	Not reported	MSSL	$3.40 \pm 1.78$	No treatment received	None reported	p < 0.001
	A5,A6,A8,A12,A16,A18,N18,F6 3/wk, 4 wk (1 cycle)	3/wk, 4 wks			20.65 ± 6.12		(10)		
		(1 cycle)							
5	Back-Shu points <sup>11</sup>	30 @ LP	20	Not reported	Met Chinese standards for diagnosis for PMS	Better than CG	Standard acupuncture	None reported	p<0.05
	BL15,17,18,20,21,23	7/wk				score n/a	(20)		
		(3 cycles)							
6	Point-through-point12	30 @ LP	30	Not reported	Diagnosed for PMS by OB/GYN textbook	Better than CG	Medication - progestin	None reported	p < 0.05
	GV3~8 BL18~23 BL47~52	7/wk				score n/a	(medroxyprogesterone, 6 mg daily) (30)		
		(3 cycles)							
7	BL17,18,20,23 GV20 CV4,17 SP6 PC6 LR3 <sup>13</sup>	30 @ LP	31	Not reported	Diagnosed as DSM-IV-TR	Better than CG	Medication - medroxy-progesterone	None reported	p<0.05
		7/wk				score n/a	4 mg, diazepam 2.5 mg twice daily (31)		
		(3 cycles)							
8	Electroacupuncture on scalp <sup>14</sup>	30 @ L/FP	35	Not reported	Diagnosed as PMS by OB/GYN textbook	Better than CG score n/a	Medication - medroxy-progesterone 4 mg, diazepam 2.5 mg twice daily (35)	None reported	p<0.05
	MS1,5 + MS2,3,4	3/wk							
		(3 cycles)							
9	GV20 Ex-HN3,5 SP6,10 + LR3 CV17 LR14 Ex-CA1 CV4 SP9 ST36 CV6 PC6 HT7 BL23 GV4 Kl3 <sup>15</sup>	21 @ LP		Not	Met ICD-10 criteria d	Better than CG	Sham acupuncture	Two hypo menorrhea during 2 <sup>nd</sup> cycle	p < 0.05
		3~4/wk		reported		score n/a	Selection of points N/A		
		(3 cycles)				(33)			

Literatures yield 9 studies as interventions. It comprises of acupuncture points and technique, treatment sessions marking the period of the session (either at luteal phase (LP) or at both LP and follicular phase as L/FP, Duration of the session as in weeks and by menstrual cycles, Baseline score and the outcome score, the control type, and p-value. \*n/a, not available; NS, not significantly different between groups; CG, control group.

#### Table 3 The effect of herbal medicine for PMS

#### Table 3 The effect of herbal medicine for premenstrual syndrome

#	Intervention	Frequency	Sample Size	2 cycles of pre-rating	Initial state M	Outcome	Control (no of CG)	Adverse Events	P-value
	(dosage/day) -form	(Tx Duration)				(Improved rate or end-of-Tx score)			
10	Vitex Agnus castus <sup>13**</sup> (VAC, 8NO 1095) 40 mg -Tablet	1/day	33	Confirmed	PMSD sum score	PMSD sum score 14.66 ± 0.52	Placebo	No notable AE observed	=0.0001
		(3 cycles)			29.38 ± 7.63 (p = 0.752)		(34)		
11	Vitex Agnus castus <sup>18</sup> (VAC, BNO 1095, 4.0 mg of dried ethanolic (7096)) 40 mg -Tablet	2/day	101	Confirmed	PMSD 29.13 ± 7.88 (p = 0.4017)	PMSD 6.41 ± 7.94	Placebo	No serious AE observed	< 0.05
		(3 cycles)			PMTS 26.17 ± 4.79 (p = 0.1649)	PMTS 9.92 ± 9.01	(101)		
12	Vitex Agnus castus extract <sup>19**</sup> (AC extract)	1/day	19	Confirmed	DSR 171.758.1 (p > 0.05) HAM-D 15.24.7 (p > 0.05) CGI-SI 4.11.4 (p > 0.05)	DSR 82.849.5 HAM-D 7.64.3	Flucxetine (19)	No serious AE observed from TG 2CG: Sexual dysfunction	>0.1 i
	20-40 mg -Tablet	(2 cydes)				CGH 1.20.7 five symptoms diminished 50% or more			
13	Vitex Agnus castus <sup>20</sup> (Vitex agnus extract)	1/day	62 Confirme	Confirmed	d DSR 30% higher score @ LP	Better than CG	Placebo (66)	No serious AE observed	<0.0001
		@ LP							
	40 drops (4.5 mg) -Liquid	(6 cycles)							
14	Hypericum Perforatum <sup>21</sup>	2/day	17	Confirmed	DSR score in LP 12.6	DSR score 5.80 (F [1,30] = 4.82; p = 0.04; partial Z2 = 0.14)	Placebo (15)	No serious AE observed	>0.05
	(Li 160 (80% methanolic dry extract, 0.18% hypericin, 3.38% hyperforin) 900 mg -Tablet	(2 cydes)							
15	Hypericum Perforatum <sup>22</sup> (St. John's wart extract, 300 mg of extract, 900 ug of hypericin) 1800ug hypericin (600 mg) -Tablet	2/day	64	Confirmed	MD score 326.33§	MD score 230.28 (p ≤ 0.007)	Placebo	No serious AE observed	<0.007
		(2 cycles)					(61)		
16	Hypericum Perforatum <sup>23</sup>	2/day	85	Confirmed	DSR 149.07	DSR 86.13	2 Cellulose	No serious AE observed	<0.05
	(extract N/A) two 1340 ug hypericin -Tablet	(2 cycles)			Anxiety 41.15 ± 9.74 Crying 20.52 ± 11.73 Depression 29.26 ± 7.49 Craving 22.01 ± 11.03 Hydration 36.13 ± 8.50	Anxiety 23.08 $\pm$ 14.78 (p = 0.223) Grying 5.87 $\pm$ 10.23 (p = 0.001, 71%) reduction) Depression 13.82 $\pm$ 6.48 (p < 0.001, 52% reduction) Graving 17.26 $\pm$ 7.41 (p < 0.001) Hydration 26.10 $\pm$ 10.18 (p < 0.090)	Tablets		
							(85)		
17	Xiao Yao San or Dan Zhi Xiao Yao San <sup>a</sup> -Powder form	3/day	31	Confirmed	Diagnosed as PMS	Physical MDQ 68.9% reduction	Placebo	No AE	< 0.001
		@ LP			Physical MDQ psychological MDQ BDI	Psychological MDQ 74.8% reduction	(30)		
		(3 cydes)			ANX ANG PSS diagnosed as PMS (p < 0.005)	BDI 43.1% reduction ANX 23.8% reduction ANG 39.3% reduction PSS 16.4% reduction (p < 0.001)			
18	Crocus sativus (saffron) <sup>24</sup> 30 mg -Tablet	2/day	24	Confirmed	DSR < 50 PMS diagnosed by HDRS	50% reduction in severity	Placebo	No severe AE reported	<0.001
		(2 cycles)				of symptoms by DSR and HDRS (P < 0.001)	(23)		
19	Elsholtzia splendens <sup>25</sup> 120 mg -Tablet	1/day	10	Not recorded	BDI 33.50 ± 5.82	BDI 23.60 ± 4.79 (p < 0.01) STAI 48.10 ± 5.20 (p < 0.05) STAI 52.00 ± 6.18	Placebo	None reported	<0.01

#### Evaluation of Clinical Therapeutic Effects and Safety of Acupuncture Treatment for PMS

### **Objective:**

To assess the effectiveness and safety of various types of

acupuncture in treatment of PMS.

#### Methods:

Search Chinese and English databases of the Cochrane Library,

CENTRAL, MEDLINE, EMBASE, CBM, CNKI and reference lists of

correlative academic conference proceedings.

Yu JN, Liu BY, Liu ZS, Robinson V. Zhongguo Zhen Jiu. 2005;25(6):377-382.

#### Evaluation of Clinical Therapeutic Effects and Safety of Acupuncture Treatment for PMS

#### **Results:**

Eight controlled studies involving 807 women (range, 61-225) meeting the enrolled criteria. Among them 7 studies showed that therapeutic effects of acupuncture were superior to other methods.

### **Conclusion:**

Acupuncture can effectively treat PMS. However, more randomized controlled trials are needed to assess the effectiveness and adverse-effect of acupuncture for treatment of PMS.

Yu JN, Liu BY, Liu ZS, Robinson V. Zhongguo Zhen Jiu. 2005;25(6):377-382.

#### FIG. 1 Curative effect analysis of the recovery group

And a start of

Review: Comparison: Outcome:	Acupuncture for Premenstrual Syndrome(中文版) 01针刺治疗经前期综合征 01痊愈								
Study or sub-category		治疗组 n/N	对照组 n/N	RR (fixed) 95% CI	Weight %	RR (fixed) 95% CI			
01耳穴电针配 王全权 2003	合西药VS西药	29/49	13/43		100.00	1.96[1.18, 3.26]			
02体针VS西药 张伟范 1994	ī	49/60	10/50		100.00	4.08[2.32, 7.20]			
03针灸中药并 张林 2000	用VS西药	39/50	9/40		100.00	3.47[1.91, 6.28]			
04体针VS西药 郑建宇 2001	前治疗经行头痛	40/60	16/40	-	100.00	1.67[1.10, 2.54]			
05针刺合药物穴位注射VS西药 赵景明 1994		治疗经行头病 96/150	1 21/75		, 100, 00	2.29[1.56, 3.35]			
			0.01 有利	0.1 1 10  于对照组 有利于?	100 台疗组				

图1 痊愈组的疗效分析



### Summary

- → It seemed that stagnation of liver qi has been generally thought as the basic pathological change of PMS.
- → PMS is caused by ovarian hormone, central nervous transmission and autonomic nervous system dysfunction.
- → Xiaoyao Powder and Caihu shugan Powder are the representative prescriptions.
- → The curative rate of acupuncture for PMS is higher than other therapies, and the inefficiency is lower than other methods, and there is no side effect.

曹亚芳, 王辉皪, 董岷,等. 从"肝失疏泄"论治经前期综合征探讨[J]. 辽宁中医药大学学报, 2009(12):49-50.

兰蕾, 刘迈兰, 唐勇, et al. 针灸治疗经前期综合征的疗效追踪评价[C]// 中国针炙学会经络分会学术会议. 2009.

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# 2020 Thank You!

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