

EBM Journal Club

acupuncture induce abortion?

R2 王甜如

指導醫師：陳曉暉 醫師
陳星諭 醫師

Outline

- Clinical Scenario
- Background
- A
- A
- A
- A
- A

必考題：AAAAA

PICO

Clinical Scenario



Background

- During pregnancy → pregnant women's health
→ the infant
 - Over drug use → other treatments ?
 - Survey :
 - 575 women (Chinese medical care) → 17.4% received acupuncture for reproductive conditions.
 - acupuncture (North Carolina) → 19.5% of nurse midwives during pregnancy.
- safety of acupuncture for pregnant women ?

Background

- Prospective survey on adverse events (AEs)
 - acupuncture sessions : 0.01 per 10 000
 - individual patients : 0.09 per 10 000 **‘very low’**
 - A systematic review (paediatric acupuncture)
 - AEs were mild, and rare serious harms were identified.
 - sporadic data during pregnancy
 - general population : safe
 - pregnant women : risk vs. benefit ? ? ?
- AEs associated with acupuncture + during pregnancy

執行實證醫學五大步驟

- 提出問題(Ask: PICO)
 - Formulate an answerable question
- 搜尋證據(Acquire)
 - Track down the best evidence
- 嚴格評讀(Appraisal: VIP)
 - Critically appraise the evidence
- 恰當應用(Apply: 3E)
 - Integrate with clinical expertise and patient values
- 評估結果(Audit)
 - Monitoring your performance

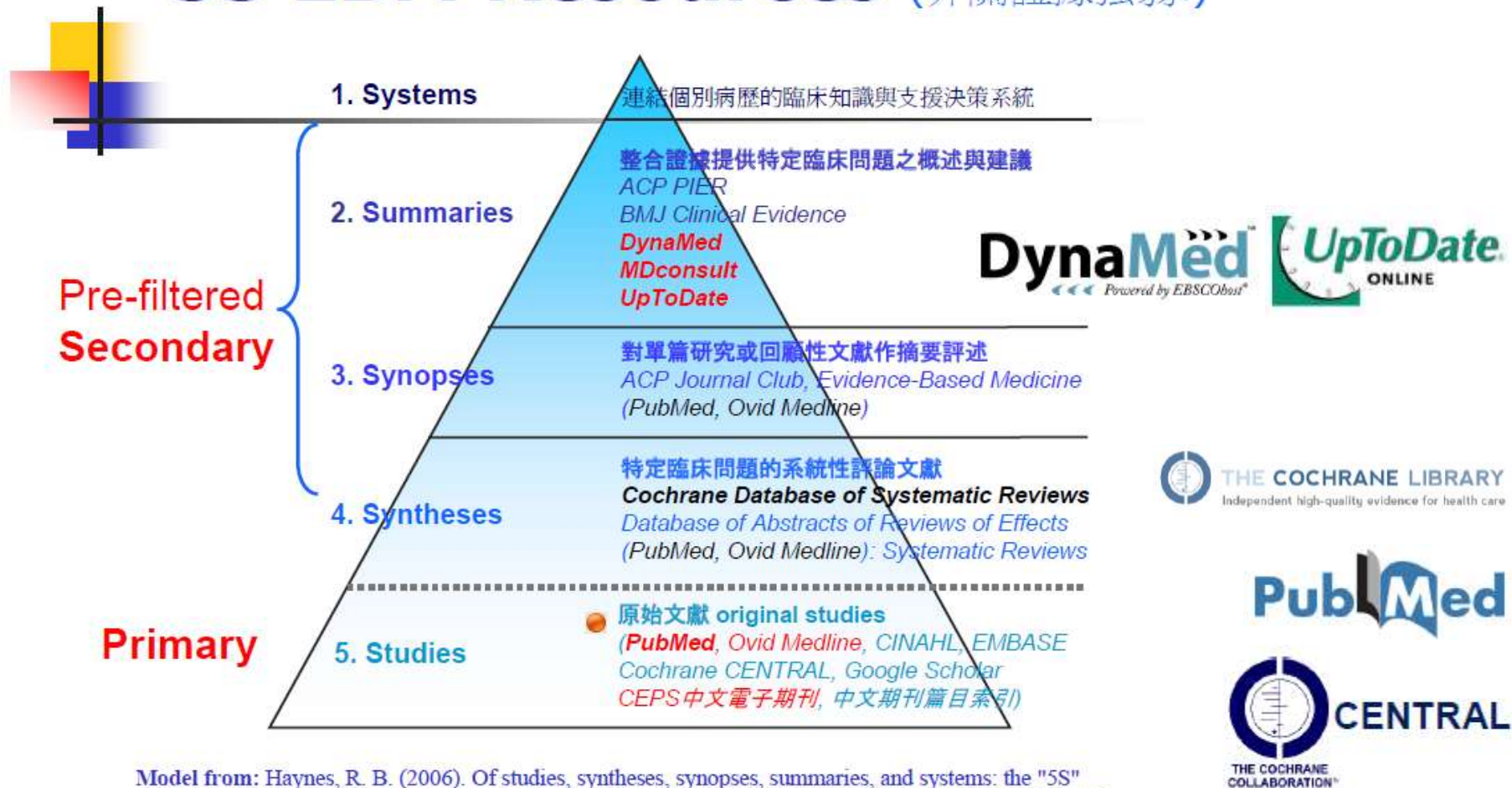


Step 1: Asking

P roblem 病人問題	Pregnancy
I ntervention 介入處置	Acupuncture
C omparison 對照的處置	No acupuncture
O utcome 臨床結果	Abortion rate → side effect/adverse effect?

Step 2: Acquire

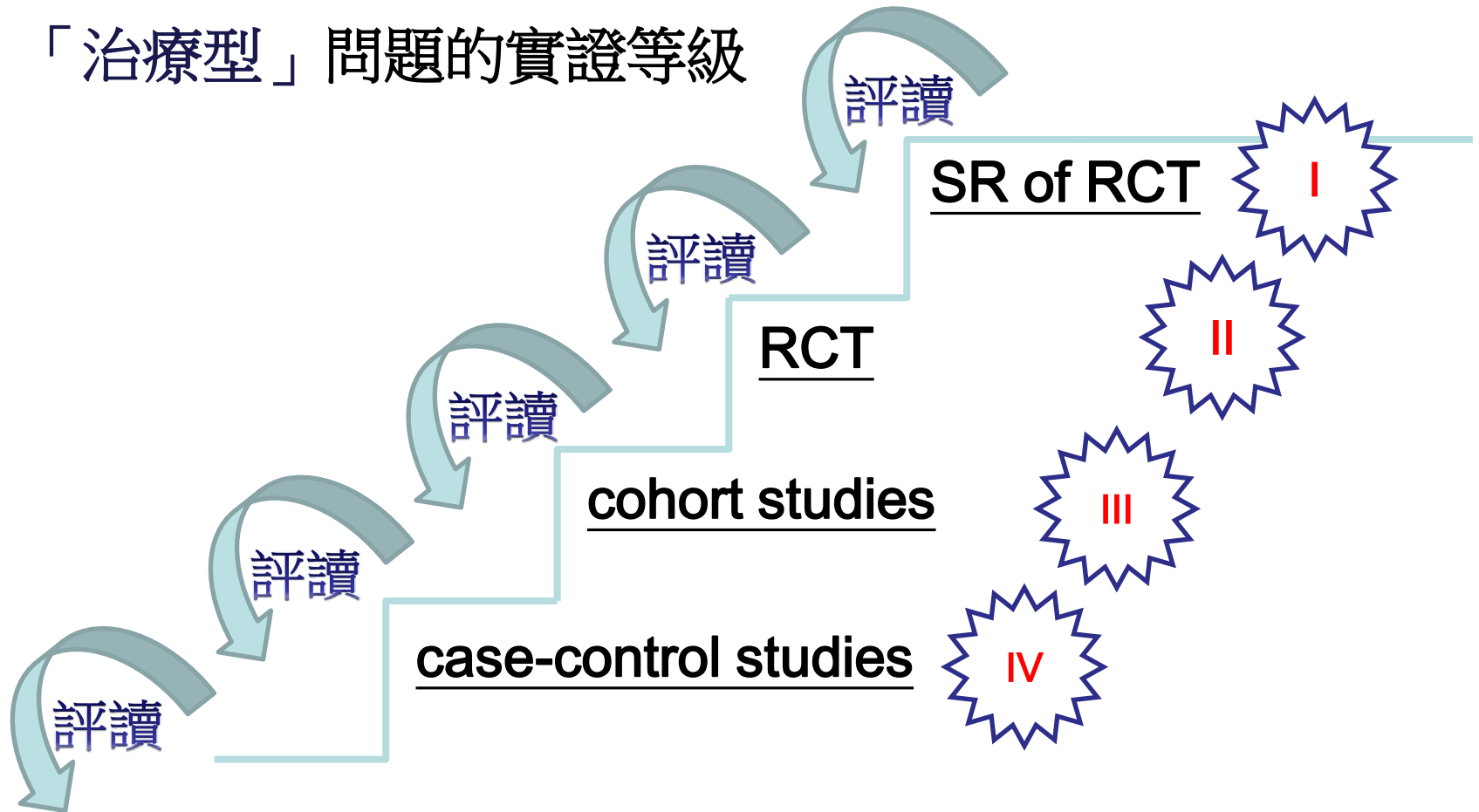
5S EBM Resources (非關證據強弱!)



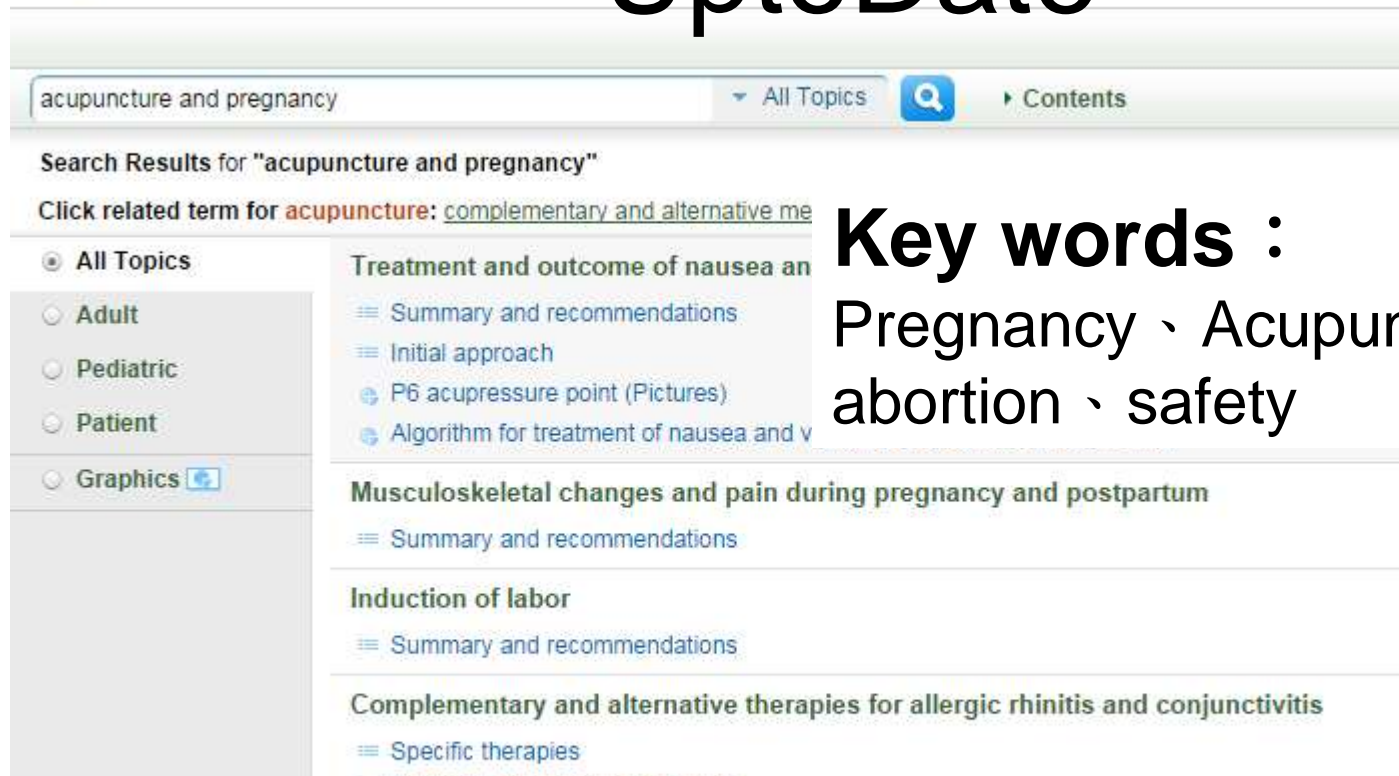
Model from: Haynes, R. B. (2006). Of studies, syntheses, synopses, summaries, and systems: the "5S" evolution of information services for evidence-based health care decisions. ACP Journal Club, 145(3), A8.

Search Strategy

◆ 「治療型」問題的實證等級



UptoDate



The screenshot shows the UpToDate website interface. At the top, there is a search bar containing the text "acupuncture and pregnancy". To the right of the search bar are two buttons: "All Topics" and "Contents". Below the search bar, the text "Search Results for 'acupuncture and pregnancy'" is displayed. A link is provided: "Click related term for **acupuncture**: [complementary and alternative me](#)". On the left side, there is a sidebar with a list of categories: "All Topics", "Adult", "Pediatric", "Patient", and "Graphics". The "All Topics" category is selected. The main content area displays a list of search results. The first result is "Treatment and outcome of nausea an", with sub-links for "Summary and recommendations", "Initial approach", "P6 acupressure point (Pictures)", and "Algorithm for treatment of nausea and v". The second result is "Musculoskeletal changes and pain during pregnancy and postpartum", with a sub-link for "Summary and recommendations". The third result is "Induction of labor", with a sub-link for "Summary and recommendations". The fourth result is "Complementary and alternative therapies for allergic rhinitis and conjunctivitis", with a sub-link for "Specific therapies".

Key words :

Pregnancy 、 Acupuncture
abortion 、 safety

Pregnancy is not an absolute contraindication, since acupuncture has been used and studied for gestational conditions such as breech presentation and pregnancy-associated nausea [[95-100](#)]. According to acupuncture theory, however, **some points can induce labor**, and the acupuncturist should be informed of the pregnancy [[101,102](#)]

Dynamed

Home | Recent Updates | E-Newsletter | Mobile | Calculators v

DynaMed Powered by EBSCOhost

acupuncture safety pregnancy

Result List 1 of 58

Treatments of discomforts during pregnancy

- addition of **acupuncture** to
- osteopathic manipulation compared to wait list control in 1 trial with 57 women
- Reference - *Cochrane Database Syst Rev* 2013 Aug 1;(8):CD001139
- **antenatal acupuncture may be more effective than multimodal physical therapy in pregnant women with back pain (level 2 [mid-level] evidence)**
 - based on systematic review with limited evidence
 - systematic review of 4 trials evaluating physical therapy and/or **acupuncture** in 566 pregnant women with any low back and/or pelvic pain
 - clinical heterogeneity in patient populations, treatments, and functional outcomes precluded meta-analysis
 - 2 trials evaluated women with back pain
 - **acupuncture** associated with improved functional outcomes compared to multimodal physical therapy in 1 trial with 60 women with low back pain at < 32 w (no p value reported)
 - BellyBra support garment associated with improved walking, sleeping, and getting up from sitting compared to tubular bandage in 1 trial with 115 women with pain at 20-36 weeks gestation ($p < 0.01$ for each) with no significant difference between groups in pain scores
 - Reference - *Acta Obstet Gynecol Scand* 2012 Sep;91(9):1038
- **therapeutic aquatic exercise may benefit patients with chronic or pregnancy-related low back pain (level 2 [mid-level] evidence)**
 - based on systematic review of low quality trials
 - systematic review of 7 randomized or controlled trials evaluating therapeutic aquatic exercise for treatment of low back pain (5 trials with 288 adults) or pregnancy-related low back pain (2 trials with 719 women)
 - all trials were low quality with heterogeneity
 - after 4 weeks, significant improvement in disability in aquatic group compared to no treatment ($p = 0.04$)
 - no significant differences in pain or function scores between aquatic group and land-based group (2 trials), but both groups showed improvement in low back pain
 - therapeutic aquatic exercise associated with lower pain scores ($p < 0.05$ in 2 trials) and reduced number of sick days related to low back pain ($p = 0.09$ in 1 trial)
 - Reference - *Clin Rehabil* 2009 Jan;23(1):3
- **insufficient evidence to suggest wearing maternity support belt reduces pregnancy-related low back pain (level 2 [mid-level] evidence)**

Send Comment to Editor

100%

Key words :

Pregnancy 、 Acupuncture 、
abortion 、 safety

EBM ALL

Key words :

Pregnancy 、 safety 、
Acupuncture 、 abortion 、
side effect

RESULT :
Review(0)

Search	Journals	Books	Multimedia	My Workspace	OvidMD
▼ Search History (8 searches) (close)					
<input type="checkbox"/>	# ▲	Searches			
<input type="checkbox"/>	1	acupuncture safety.mp. [mp=ti, ot, ab, tx, kw, ct, sh, hw]	▶		
<input type="checkbox"/>	2	pregnancy.mp. [mp=ti, ot, ab, tx, kw, ct, sh, hw]	▶		
<input type="checkbox"/>	3	acupuncture side effect.mp. [mp=ti, ot, ab, tx, kw, ct, sh, hw]	▶		
<input type="checkbox"/>	4	abortion.mp. [mp=ti, ot, ab, tx, kw, ct, sh, hw]	▶	2543	Advanced Display More >>
<input type="checkbox"/>	5	1 and 2	▶	0	Advanced Delete Save
<input type="checkbox"/>	6	2 and 3	▶	0	Advanced Delete Save
<input type="checkbox"/>	7	3 and 4	▶	0	Advanced Delete Save
<input type="checkbox"/>	8	1 and 4	▶	0	Advanced Delete Save
Remove Selected Save Selected Combine selections with: And Or			Save Search History		

EBM ALL

Key words :

Pregnancy 、
Acupuncture safety 、
Acupuncture side effect 、
Abortion

RESULT :
Review(0)

<input type="checkbox"/>	1	acupuncture.mp. [mp=ti, ot, ab, tx, kw, ct, sh, hw]	▶			More >>
<input type="checkbox"/>	2	complication.mp. [mp=ti, ot, ab, tx, kw, ct, sh, hw]	▶			
<input type="checkbox"/>	3	pregnant.mp. [mp=ti, ot, ab, tx, kw, ct, sh, hw]	▶			
<input type="checkbox"/>	4	abortion.mp. [mp=ti, ot, ab, tx, kw, ct, sh, hw]	▶			
<input type="checkbox"/>	5	adverse event.mp. [mp=ti, ot, ab, tx, kw, ct, sh, hw]	▶			
<input type="checkbox"/>	6	1 and 3	▶	149	Advanced	<input type="button" value="Display"/> More >>
<input type="checkbox"/>	7	5 and 6	▶	9	Advanced	<input type="button" value="Display"/> More >>
<input type="checkbox"/>	8	1 and 2 and 3	▶	15	Advanced	<input type="button" value="Display"/> More >>
<input type="checkbox"/>	9	1 and 3 and 5	▶	9	Advanced	<input type="button" value="Display"/> More >>
<input type="checkbox"/>	10	acupuncture during pregnancy.mp. [mp=ti, ot, ab, tx, kw, ct, sh, hw]	▶	13	Advanced	<input type="button" value="Display"/> More >>

Author	Elden H, Ostgaard HC, Fagevik-Olsen M, Ladfors L, Hagberg H
Institution	Perinatal Center, Department of Obstetrics and Gynecology, Institute for Clinical Sciences, Sahlgrenska Academy, Sahlgrenska University Hospital/East, Gothenburg University, Gothenburg, SE-416 85, Sweden. helen.elden@vgregion.se
Title	<u>Treatments of pelvic girdle pain in pregnant women: adverse effects of standard treatment, acupuncture and stabilising exercises on the pregnancy, mother, delivery and the fetus/neonate.</u>
Source	BMC complementary and alternative medicine. Vol.8, pp.34, 2008.
Abstract	<p>BACKGROUND: Previous publications indicate that acupuncture is efficient for the treatment of pelvic girdle pain, PGP, in pregnant women. However, the use of acupuncture for PGP is rare due to insufficient documentation of adverse effects of this treatment in this specific condition. The aim of the present work was to assess adverse effects of acupuncture on the pregnancy, mother, delivery and the fetus/neonate in comparison with women that received stabilising exercises as adjunct to standard treatment or standard treatment alone.</p> <p>METHODS: In all, 386 women with PGP entered this controlled, single-blind trial. They were randomly assigned to standard treatment plus acupuncture (n = 125), standard treatment plus specific stabilising exercises (n = 131) or to standard treatment alone (n = 130) for 6 weeks. Acupuncture that may be considered strong was used and treatment was started as early as in the second trimester of pregnancy. Adverse effects were recorded during treatment and throughout the pregnancy. Influence on the fetus was measured with cardiotocography (CTG) before-during and after 43 acupuncture sessions in 43 women. A standardised computerized method to analyze the CTG reading numerically (Oxford 8000, Oxford, England) was used. After treatment, the women rated their overall experience of the treatment and listed adverse events if any in a questionnaire. Data of analgesia and oxytocin augmentation during labour, duration of labour, frequency of preterm birth, operative delivery, Apgar score, cord-blood gas/acid base balance and birth weight were also recorded.</p> <p>RESULTS: There were no serious adverse events after any of the treatments. Minor adverse events were common in the acupuncture group but women rated acupuncture favourably even despite this. The computerized or visually assessed CTG analyses of antenatal recordings in connection with acupuncture were all normal.</p> <p>CONCLUSION: This study shows that acupuncture administered with a stimulation that may be considered strong led to minor adverse complaints from the mothers but had no observable severe adverse influences on the pregnancy, mother, delivery or the fetus/neonate.</p>
Publication Type	Journal Article. Randomized Controlled Trial. Research Support, Non-U.S. Gov't

← acupuncture safety pregnancy

Treatment and outcome of nausea and vomiting

Topic Outline

SUMMARY & RECOMMENDATIONS

INTRODUCTION

GOAL OF TREATMENT

INITIAL APPROACH

- Diet
- Nonpharmacologic interventions
 - Avoidance of triggers
 - **Acupuncture** and acupressure
 - Hypnosis
- Pharmacologic



Key words :

Acupuncture during pregnancy

Acupuncture safety pregnancy

▼ All Topics 🔍 ▶ Contents Patient Info acupuncture 3 個, 共 9 個 ^

g of pregnancy

Supplements containing iron should be avoided until symptoms resolve, as iron causes gastric irritation and can worsen nausea and vomiting [13].

vitamins before bed with a snack, instead of in the morning or on an empty stomach, may also be helpful [13].

Acupuncture and acupressure — P6 acupressure wristbands (picture 1) do not require a prescription and have become a popular self-administered intervention [14]. A 2014 systematic review of randomized trials did not find P6 acupuncture or acupressure wristbands significantly more effective than placebo [15]. One reason may be that a strong placebo effect has been observed in patients who receive sham therapy [16-19]. Self-administered nerve stimulation therapy over the volar aspect of the wrist at the P6 acupressure point using a commercial device also showed some promise in a randomized, controlled trial [20]. P6 acupuncture or acupressure has not been associated with any adverse effects on pregnancy outcome.

Hypnosis — Hypnosis has been reported to be helpful in some patients [21]. Psychotherapy can also be a useful adjunctive therapy, particularly if psychological sources of anxiety are identified and can be ameliorated [22,23].

Pharmacologic treatment — Historically, pregnant women have been excluded from most clinical drug trials. Thus, there are limited data from pregnant women to support the safety and efficacy of agents used to treat nausea and vomiting. A number of reports have demonstrated that antiemetic drug therapy is more effective than placebo and does not increase the incidence of congenital anomalies [24]. However, there is little evidence from well-designed comparative trials upon which to base a

Pubmed

PubMed Clinical Queries

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use [PubMed](#) directly.

Clinical Study Categories

Category:

Scope:

Systematic Reviews

Results: 3 of 3

The safety of acupuncture during pregnancy: a systematic review.

Park J, Sohn Y, White AR, Lee H.
Acupunct Med. 2014 Jun; 32(3):257-66. Epub 2014 Feb 19.

Effects of acupuncture on the outcomes of in vitro fertilization: a systematic review and meta-analysis.

Qu F, Zhou J, Ren RX.
J Altern Complement Med. 2012 May; 18(5):429-39. Epub 2012 Apr 27.

'Forbidden points' in pregnancy: do they exist?

da Silva AV, Nakamura MU, da Silva JB.
Acupunct Med. 2011 Jun; 29(2):135-6. Epub 2011 Mar 20.

[See all \(3\)](#)

Medical Genetics

Topic:

Results: 0 of 0

This column displays citations per genetics. See more [filter information](#)

This column displays citations for systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine

Key words :
Pregnancy 、
Acupuncture
Abortion 、
side effect 、 safety

RESULT :
Review(2)

Pubmed

Results: 3

☐ [The safety of **acupuncture** during pregnancy: a **systematic** review.](#)

1. Park J, Sohn Y, White AR, Lee H.
Acupunct Med. 2014 Jun;32(3):257-66. doi: 10.1136/acupmed-2013-010480. Epub 2014 Feb 19.
PMID: 24554789 [PubMed - in process] **Free PMC Article**
[Related citations](#)

☐ [Effects of **acupuncture** on the outcomes of in vitro fertilization: a **systematic** review and meta-analysis.](#)

2. Qu F, Zhou J, Ren RX.
J Altern Complement Med. 2012 May;18(5):429-39. doi: 10.1089/acm.2011.0158. Epub 2012 Apr 27. Review.
PMID: 22540969 [PubMed - indexed for MEDLINE]
[Related citations](#)

☐ ['Forbidden points' in pregnancy: do they exist?](#)

3. da Silva AV, Nakamura MU, da Silva JB.
Acupunct Med. 2011 Jun;29(2):135-6. doi: 10.1136/aim.2010.003699. Epub 2011 Mar 20.
PMID: 21422007 [PubMed - indexed for MEDLINE]
[Related citations](#)

[Display Settings:](#) ☒ Summary, Sorted by Recently Added

[Send to](#)



OPEN ACCESS

The safety of acupuncture during pregnancy: a systematic review

Jimin Park,¹ Youngjoo Sohn,² Adrian R White,³ Hyangsook Lee⁴

'Forbidden points' in pregnancy: do they exist?

André V Guerreiro da Silva,¹ Mary Uchiyama Nakamura,¹
João Bosco Guerreiro da Silva²

Emperor's Book of Acupuncture, The Systematic Classic of Acupuncture and Moxibustion and The Classic of Difficult Issues,^{20–22} modern authors state that many points are related to be danger-

Levels of Evidence

- **Level 1 (likely reliable) Evidence:**

randomized trials with at least 80% follow up, inception cohort studies for prognostic information, systematic review of Level 1 evidence reports.

- **Level 2 (mid-level) Evidence:**

randomized trials with less than 80% follow up, non-randomized comparison studies, and diagnostic studies without adequate reference standards.

- **Level 3 (lacking direct) Evidence:**

case series, case reports, expert opinion and conclusions extrapolated indirectly from scientific studies.

Grade	US Preventive Task Force	NHS R&D Center for EBM	
A	This is <u>good evidence</u> to support the Recommendation	1a	<u>SR of RCT</u> (with narrow confidence interval)
		1b	individual RCT (with narrow confidence interval)
		1c	All-or-none studies
B	There is <u>fair evidence</u> to support the Recommendation	2a	SR of cohort studies (with homogeneity)
		2b	individual cohort study or low-quality RCT(<80% follow up)
		2c	outcome research ; Ecological studies
		3a	<u>SR of case-control study</u>
		3b	individual case-control study
C	There is insufficient evidence for or against, but recommendation may be made on other grounds	<u>Case series</u> and poor quality cohort/case-control Studies	
D	There is fair evidence to exclude the Recommendation	Expert opinion without explicit critical appraisal, or based on bench research	
E	There is good evidence to exclude the recommendation		

Studies included in the review:
n=105
RCTs: 42
CCTs: 6
Case series/reports: 54
Surveys: 3

Step 3: Appraisal



- Critical appraisal sheet of CEBM, university of Oxford
 - Are the results of the review valid?
 - What were the result?

SYSTEMATIC REVIEW: Are the results of the review valid?

What question (PICO) did the systematic review address?

What is best?

The main question being addressed should be clearly stated. The exposure, such as a therapy or diagnostic test, and the outcome(s) of interest will often be expressed in terms of a simple relationship.

Where do I find the information?

The **Title**, **Abstract** or final paragraph of the **Introduction** should clearly state the question. If you still cannot ascertain what the focused question is after reading these sections, search for another paper!

This paper: Yes ☒ No ☐ Unclear ☐

Comment:

- Title

Original paper

The safety of acupuncture during pregnancy: a systematic review

- Abstract

ABSTRACT

Objective Although there is a growing interest in the use of acupuncture during pregnancy, the safety of acupuncture is yet to be rigorously investigated. The objective of this review is to identify adverse events (AEs) associated with acupuncture treatment during pregnancy.

SYSTEMATIC REVIEW: Are the results of the review valid?

What question (PICO) did the systematic review address?

What is best?

The main question being addressed should be clearly stated. The exposure, such as a therapy or diagnostic test, and the outcome(s) of interest will often be expressed in terms of a simple relationship.

Where do I find the information?

The **Title**, **Abstract** or final paragraph of the **Introduction** should clearly state the question. If you still cannot ascertain what the focused question is after reading these sections, search for another paper!

This paper: Yes ☒ No ☐ Unclear ☐

Comment:

- Last paragraph of introduction

This systematic review therefore aimed to summarise and critically evaluate all available reports on AEs associated with acupuncture treatment during pregnancy to safeguard against avoidable AEs.

F - Is it unlikely that important, relevant studies were missed?	
What is best?	Where do I find the information?
The starting point for comprehensive search for all relevant studies is the major bibliographic databases (e.g., <u>Medline, Cochrane, EMBASE, etc</u>) but should also include a search of reference lists from relevant studies, and contact with experts, particularly to inquire about unpublished studies. <u>The search should not be limited to English language only.</u> The search strategy should include both MESH terms and text words.	The Methods section should describe the search strategy, including the terms used, in some detail. The Results section will outline the number of titles and abstracts reviewed, the number of full-text studies retrieved, and the number of studies excluded together with the reasons for exclusion. This information may be presented in a figure or flow chart.
This paper: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unclear <input type="checkbox"/>	
Comment:	

METHODS

Search strategy

Electronic searches were conducted in the following databases from inception to February 2013: Ovid Medline, Cochrane Central Register of Controlled Trials, Embase, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and the Allied and Complementary Medicine Database (AMED). We also

searched Korean databases including Korean Studies Information Service System (KISS), Korea Institute of Science and Technology Information (KISTI), DBPIA, Korea National Assembly Library and Korean Traditional Knowledge Portal (KTKP). Reference lists of reviews and relevant articles were screened for additional studies. For commentaries, letters, responses or editorials, the original articles were sought.

F - Is it unlikely that important, relevant studies were missed?	
What is best?	Where do I find the information?
The starting point for comprehensive search for all relevant studies is the major bibliographic databases (e.g., <u>Medline, Cochrane, EMBASE, etc</u>) but should also include a search of reference lists from relevant studies, and contact with experts, particularly to inquire about unpublished studies. <u>The search should not be limited to English language only.</u> The search strategy should include both MESH terms and text words.	The Methods section should describe the search strategy, including the terms used, in some detail. The Results section will outline the number of titles and abstracts reviewed, the number of full-text studies retrieved, and the number of studies excluded together with the reasons for exclusion. This information may be presented in a figure or flow chart.
This paper: Yes <input type="checkbox"/> No <input type="checkbox"/> Unclear <input checked="" type="checkbox"/>	
Comment:	

- Methods
 - Search strategy

The following search terms were used: 'acupunct*', 'moxibustion', 'moxa', and 'pregnan*' in the title and abstract for Ovid Medline and modified terms and limits were used for other databases. As we were concerned that most articles poorly report AEs and are poorly indexed, we decided not to combine search terms for AEs at the cost of sensitivity. Trials published in English, Korean and Chinese were considered.

NCBI Resources How To

MeSH MeSH **fruit fly** 1.輸入關鍵字

Save search Limits Advanced

Display Settings: ☒ Summary

Showing results for **fruit fly**. Search instead for *fruit fly* (0)

Results: 3

☒ **Drosophila** 2.點進可能的 MeSH Term

1. A genus of small, two-winged flies containing approximately 900 described species. most extensively studied of all genera from the standpoint of genetics and cytology.

「Medical Subject Headings」
一套生物醫學領域的主題詞表(索引)
代表特定的主題範疇。

Display Settings: ☒ Full

Drosophila

A genus of small, two-winged flies containing approximately 900 described species. These organisms are the most extensively studied of all genera from the standpoint of genetics and cytology.

PubMed search builder options

Subheadings:

☐ analysis ☐ ge

3.確認相符，
點選Add to search builder，加入查詢

Send to: ☒

PubMed search builder

"Drosophila" [Mesh]

Add to search builder AND

A - Were the criteria used to select articles for inclusion appropriate?	
What is best?	Where do I find the information?
The inclusion or exclusion of studies in a systematic review should be clearly defined a priori. The eligibility criteria used should specify the patients, interventions or exposures and outcomes of interest. In many cases the type of study design will also be a key component of the eligibility criteria.	The Methods section should describe in detail the inclusion and exclusion criteria. Normally, this will include the study design.
This paper: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unclear <input type="checkbox"/>	
Comment:	

- Methods

Study selection

Studies were **included** if they (1) had original patient data; (2) involved pregnant women treated for any condition; (3) involved acupuncture treatment which includes needling and/or moxibustion as they are often used together; and (4) included reporting of AEs. Studies reporting that no AEs had occurred were also included. We also kept records of reports that did not mention harms. We **excluded** studies investigating the effect of acupuncture on delivery, abortion, assisted reproductive technology or postpartum conditions. There was no restriction to the type of studies

Identification

Records identified through
database searching
n=2107

Records after overlapping articles removed
n=1590

Screening

Records screened
n=1590

Records excluded based
on the title/abstract
n=1268

Eligibility

Full-text articles assessed for
eligibility
n=322

Full-text articles excluded
with reasons: n=217
Not specific to the area of
review: 32
No clinical studies: 70
No needling involved: 19
Not available in English,
Korean or Chinese: 68
Full texts unavailable: 3
Others*: 25

Included

Studies included in the review:
n=105
RCTs: 42
CCTs: 6
Case series/reports: 54
Surveys: 3

A - Were the included studies sufficiently valid for the type of question asked?

What is best?

The article should describe how the quality of each study was assessed using predetermined quality criteria appropriate to the type of clinical question (e.g., randomization, blinding and completeness of follow-up)...

Where do I find the information?

The **Methods** section should describe the assessment of quality and the criteria used. The **Results** section should provide information on the quality of the individual studies.

This paper: Yes ☒ No ☐ Unclear ☐

Comment:

Quality assessment of the included studies

The quality assessment of AE data from RCTs and CCTs included in our review was performed on the following items, which were adopted and modified from previous suggestions.⁹⁻¹²

• Methods

1. Was the definition of AEs given?
2. Was the method used to monitor or collect AEs reported?
3. Were the type and frequency of AEs in each group reported in detail?
4. Was the severity of AEs assessed?
5. Was the causality between acupuncture and AEs assessed?
6. Were the participant withdrawals or drop-outs due to AEs described adequately?

Each item was given Y for yes, N for no and U for unclear reporting. Disagreements were resolved by discussion.

Table 2 Assessment of the quality of AE data from RCTs and CCTs included in the review

Author (year)	Was the definition of AEs given?	Was the method used to monitor or collect AEs reported?	Were the type and frequency of AEs in each group reported in detail?	Was the severity of AEs assessed?	Was the causality between acupuncture and AEs assessed?	Were the participant withdrawals and drop-outs due to AEs described adequately?
<i>RCTs/quasi-RCTs</i>						
Vas (2013) ⁴	N	Y	N	N	N	Y
Guerreiro da Silva (2012) ²³	N	N	Y	N	N	Y
Manber (2010) ²⁸	N	Y	Y	N	Y	Y
Guerreiro da Silva (2009) ²⁴	N	N	Y	N	N	Y
Wang (2009) ²⁹	N	N	Y	N	N	N
Elden (2008) ⁴⁶	N	N	Y	N	N	Y
Guittier (2008) ³⁶	N	Y	Y	N	N	Y
Guerreiro da Silva (2007) ²⁵	N	N	Y	N	N	Y
Guerreiro da Silva (2005) ²⁶	N	Y	Y	N	N	Y
Elden (2005) ^{18, 20}	N	Y	Y	N	N	Y
Du (2005) ³⁰	N	N	Y	N	N	Y
Cardini (2005) ³¹	N	N	Y	N	N	U
Guerreiro da Silva (2004) ²⁷	N	N	Y	N	N	Y
Kvornig (2004) ³²	N	N	Y	N	N	N
Smith (2002) ^{19, 21}	Y	Y	Y	N	N	Y
Knight (2001) ³³	N	Y	Y	N	N	Y
Wedenberg (2000) ³⁴	N	Y	Y	N	N	Y
Cardini (1998) ³⁵	N	N	N	N	N	Y
<i>CCTs</i>						
Liang (2004) ³⁷	N	N	Y	N	N	Y
Cardini (1993) ³⁸	N	N	Y	N	N	Y

AE, adverse event; CCT, controlled clinical trial; N, no; RCT, randomised controlled trial; U, unclear; Y, yes.

Studies included in the review.
n=105
RCTs: 42
CCTs: 6
Case series/reports: 54
Surveys: 3

T - Were the results similar from study to study?

What is best?

Ideally, the results of the different studies should be similar or homogeneous. If heterogeneity exists the authors may estimate whether the differences are significant (chi-square test). Possible reasons for the heterogeneity should be explored.

Where do I find the information?

The **Results** section should state whether the results are heterogeneous and discuss possible reasons. The forest plot should show the results of the chi-square test for heterogeneity and if discuss reasons for heterogeneity, if present.

This paper: Yes ☒ No ☐ Unclear ☐

Comment:

Mild Adverse effect – Maternal 302/22283

- needle or unspecified pain (n=48),
- local bleeding (n=40),
- haematoma, tiredness, headache and/or drowsiness (n=21 for each),
- Worsened symptom/condition (n=19),
- dizziness, discomfort at needling points (n=15 for each),
- ecchymosis/bruise, uterine contractions with or without abdominal pain and unpleasant odour with or without nausea and throat problems (n=14 for each),
- heat or sweating (n=10),
- nausea (n=9),
- unpleasantness with treatment (n=5),
- feeling faint (n=4),
- sleep disturbance and excessive fatigue (n=3 for each),
- irritability/agitation, heaviness of arms, rash at needling points, feeling energised, local anaesthesia, itching and unspecified problems (n=2 for each),
- weakness, altered taste, pressure in nose, transient ear tenderness, bed rest, thirst, sadness, oedema, tattooing of the skin at needling points, shooting sensation with intense paraesthesia down the leg to the foot by needling, breech engagement, threatened preterm labour which spontaneously disappeared completely within a day followed by a normal delivery in the 42nd week (n=1 in each)

Mild adverse effect – Fetal 20/22283

- small for date (n=13) and multiple twists of the umbilical cord around the neck (n=4) or shoulder (n=3)

Moderate Adverse effect 6/22283

- fainting (n=5)
- transient fall in blood pressure (n=1)

Supplementary Table 2. Mild/Moderate adverse events in acupuncture studies for pregnant women

Author (year) Country	Condition/ mean gestational weeks	Acupuncture group (A) and control group (C)	How AE data were collected	Details of AEs	Incidence per group	Severity [†]	Association with acupuncture [‡]	Practitioner
RCTs/quasi-RCTs								
Vas (2013) ¹ Spain	Fetal malposition/ A: 34.0 C1: 33.0 C2: 34.0	A: Moxa plus usual care C1: Sham moxa plus usual care C2: Usual care	(Presumably) Participant/ obstetrician reported	Maternal: Burn during combustion of the moxa Dizziness Gastrointestinal disturbances (heartburn, nausea and vomiting) Mild hypertensive disorders Oligohydramnios Abdominal pain	(Probably A or C1) 1/3730 A 2/1865; C1 2/1865 8/NA 7/NA 2/NA C1 1/1865	Mild	Possible	Family member
Guerreiro da Silva (2012) ² Brazil	Tension-type headache/ A: 19.8 C: 19.4	A: MA plus usual care C: Usual care	(Presumably) participant reported	Maternal: Ecchymosis at needling points	A 2/200	Mild	Certain	Acupuncturist
Manber (2010) ³ United States	Depression/ A: 19.8 C1: 21.3 C2: 21.1	A: MA C1: Sham MA C2: Prenatal massage	Participant/ practitioner reported	Maternal: Transient discomfort at needling points Local bleeding Tiredness Irritability or agitation Sleep disturbance Headache Nausea Worsened symptom Transient discomfort related with massage	A 14/456; C1 7/407 A 1/456 A 10/456; C1 9/407; C2 4/NA A 2/456; C1 2/407 A 1/456; C1 2/407 A 3/456; C1 1/407 A 2/456 A 1/456; C1 1/407 C2 5/NA	Mild Mild Mild Mild Mild Mild Mild Mild	Certain Possible Possible Possible Possible Possible Possible	Acupuncturist
Guerreiro da Silva (2009) ⁴ Brazil	Dyspepsia/ A: 20.5 C: 21.3	A: MA C: No MA	(Presumably) participant reported	Maternal: Ecchymosis at needling points	A 1/201	Mild	Certain	Acupuncturist
Wang (2009) ⁵ United States	Low back and pelvic pain/ A: 30 C1: 29 C2: 29	A: AA plus PRLP self-care [§] C1: Sham AA plus PRLP self- care C2: PRLP self- care	(Presumably) Participant reported	Maternal: Transient ear tenderness resolved spontaneously Bed rest after the study period	A 1/112; C1 3/104 A 1/112; C1 1/104; C2 1/NA	Mild Mild	Certain Possible	Acupuncturist

Elden (2008) ⁵ Sweden	Pelvic girdle pain/ A: 22.4 C: 23.6	A: MA plus usual care C: Sham MA plus usual care	Participant reported	Maternal: Fainting Slight bleeding Haematoma Needle pain Drowsiness	A 5/672; C 4/624 A 35/672; C 34/624 A 17/672; C 17/624 A 12/672; C 13/624 A 3/672; C 2/624	Moderate Mild Mild Mild Mild	Probable Certain Certain Certain Possible	Midwife
Guerreiro da Silva (2007) ⁷ Brazil	Emotional complaints / A: 19.9 C: 21.0	A: MA plus counseling with or without phytomedicine C: Counselling with or without phytomedicine	(Presumably) participant/ obstetrician reported	Maternal: Ecchymosis at needling points	A 4/253	Mild	Certain	Acupuncturist
Guerreiro da Silva (2005) ⁸ Brazil	Insomnia/ A: 20.6 C: 22.2	A: MA plus sleep hygiene C: Sleep hygiene ^{††}	(Presumably) participant reported	Maternal: Ecchymosis at needling points	A 1/125	Mild	Certain	Acupuncturist
Elden (2005) ⁹⁻¹⁰ Sweden	Pelvic girdle pain/ A: 24.4 C1: 24.4 C2: 24.4	A: MA plus usual care C1: Usual care C2: Usual care plus stabilizing exercise	(Presumably) Participant/ obstetrician reported	Maternal: Needle pain Worsened symptom Unpleasant with treatment Drowsiness Feeling energised Headache plus severe drowsiness Headache only Rash at needling points Nausea Feeling faint Sweating Dizziness Thoracic pain Low back pain Discomfort because of rubbing from pelvic belt Uterine contraction Premature bleeding	A 23/1380 A 15/1380; C1 2/NA; C2 2/NA A 5/1380 A 12/1380 A 1/1380 A 1/1380 A 1/1380 A 2/1380 A 4/1380 A 4/1380 A 4/1380 A 4/1380 C2 1/NA C2 17/NA C1 5/NA C1 1/NA; C2 1/NA C2 1/NA	Mild Mild Mild Mild Mild Mild Mild Mild Mild Mild Mild Mild Mild	Certain Possible Probable Possible Possible Possible Possible Certain Possible Probable Possible Possible	Acupuncturist
Du (2005) ¹¹ China	Fetal malposition/ 24-28	A: Moxa plus knee-chest position C: Knee-chest position	(Presumably) Participant/ obstetrician reported	Maternal: Abdominal pain	C 5/NA			NR
Cardini (2005) ¹² Italy	Breech presentation/ 32.4-33.4	A: Moxa C: No moxa	(Presumably) Participant/ obstetrician reported	Maternal: Unpleasant odour with or without nausea and throat problems Abdominal pain because of contractions	A 14/1085 A 11/1085	Mild Mild	Certain Possible	Participant

					Other less frequently problems	A 2/1085	UA	UA	
Guerreiro da Silva (2004) ¹³ Brazil	Low back pain/ A: 19.9 C: 21.0	A: MA plus medication ⁺⁺ C: Medication	(Presumably) participant/obstetrician reported		Maternal: Small bruise or ecchymosis Pain	A 5/270 A 1/270	Mild Mild	Certain UA	Acupuncturist
Kvornig (2004) ¹⁴ Sweden	Low back and pelvic pain/ A: 30 C: 30	A: MA C: No MA	Participant/midwife reported		Maternal: Local pain Heat or sweating Local haematoma Tiredness Nausea Weakness	A 6/222 A 5/222 A 2/222 A 2/222 A 2/222 A 1/222	Mild Mild Mild Mild Mild Mild	UA Possible Certain Possible Possible Possible	NR
Smith (2002) ¹⁵⁻¹⁶ Australia	Nausea and vomiting/ 8.5	A1: Traditional MA plus usual care A2: PC6 MA plus usual care C1: Sham MA plus usual care C2: Usual care	Participant reported / collected from case notes		Fetal: Birth weight small for gestational age	A1 8/668; A2 5/672; C1 7/668; C2 7/NA	Mild	Unlikely	Acupuncturist
Knight (2001) ¹⁷ UK	Nausea and vomiting/ A: 7.8 C: 8.0	A: MA C: Sham MA	Participant reported		Maternal: Tiredness Sleep disturbance Heaviness of arms More energy Altered taste Bruise Pressure in nose Headache Increased vomiting Flatulence Vivid dreams Feeling of coldness	A 2/103; C 2/100 A 2/103 A 2/103 A 1/103 A 1/103; C 2/100 A 1/103 A 1/103 A 1/103 C 1/100 C 1/100 C 1/100 C 1/100	Mild Mild Mild Mild Mild Mild Mild Mild Mild	Possible Possible Possible Possible Possible Certain Possible Possible	Acupuncturist
Wedenberg (2000) ¹⁸ Sweden	Low back and pelvic pain/ A: 24.2 C: 24.2	A: AA with or without MA C: Physiotherapy	Participant reported		Maternal: Small subcutaneous haematomas in the ear Uterine contraction Preeclampsia	A 2/300 C 3/192 C 1/192	Mild	Certain	NR
Cardini (1998) ¹⁹ China	Fetal malposition/ 33	A: Moxa C: Usual care	(Presumably) participant/obstetrician reported		Maternal: Braxton Hicks contraction Breech engagement Sense of tenderness and pressure in the epigastric region Epigastric crushing (one of the hypochondria)	A 1/1779 A 1/1779 NR NR	Mild Mild	Possible Possible	Participant

Severe Adverse effect - Maternal 86/22283

- hypertension and/or pre-eclampsia (n=37),
- preterm delivery between 20 and 37 weeks of pregnancy (n=19),
- miscarriage (n=15),
- premature rupture of the membranes (n=5),
- antepartum haemorrhage/abruption or placenta praevia (n=6),
- pregnancy termination due to unspecified reasons (n=2),
- caesarean delivery (n=1),
- tachycardia and atrial sinus arrhythmia (n=1)

Severe Adverse effect - Fetal 5/22283

- congenital defects (n=12)
- preterm delivery (n=1)
- stillbirth (n=1)
- neonatal death (n=1)

Supplementary Table 3. Severe adverse events/death in acupuncture studies for pregnant women

Author (year) Country	Condition/ mean gestational weeks	Acupuncture group (A) and control group (C)	How AE data were collected	Details of AEs	Incidence per group	Severity [†]	Association with acupuncture [‡]	Practitioner
RCTs/quasi-RCTs								
Vas (2013) ¹ Spain	Fetal malposition/ A: 34.0 C1: 33.0 C2: 34.0	A: Moxa plus usual care C1: Sham moxa plus usual care C2: Usual care	(Presumably) Participant/ obstetrician reported	Maternal: Did not progress due to lack of uterine contractions PROM Fetal: Fetal hiccup Cord pathology	6/NA 5/NA 5/NA 6/NA			Family member
Manber (2010) ² United States	Depression/ A: 19.8 C1: 21.3 C2: 21.1	A: MA C1: Sham MA C2: Prenatal massage	Participant/ practitioner reported	Maternal: Preeclampsia Preterm delivery of twins Pregnancy loss Hospitalisation for oesophageal spasms Hospitalisation for dehydration and low amniotic fluid Hospitalisation for isolated atrial fibrillation Hospitalisation for premature contractions Fetal: Neonatal death Receiving prolonged NIC Congenital defects	A 2/456 A 1/456 C1 1/407 C2 1/NA C1 1/407 C2 1/NA C2 1/NA A 1/456 A 1/456; C2 1/NA	Severe Severe	Unlikely Unlikely	Acupuncturist
Guittier (2008) ³ Switzerland	Fetal malposition/ 34-36	A: Moxa C: No moxa	(Presumably) Participant/ obstetrician reported	Maternal: Hypertension, later developed preeclampsia Cesarean delivery PROM	A 1/56 A 1/56 A 1/56	Severe Severe Severe	Unlikely Unlikely Unlikely	NR
Du (2005) ⁴ China	Fetal malposition/ 24-28	A: Moxa plus knee-chest position C: Knee-chest position	(Presumably) Participant/ obstetrician reported	Maternal: Vaginal redness Vaginal running water Placental abruption Fetal: Abnormal fetal heart rate	C 5/NA C 3/NA C 3/NA C 5/NA			NR
Cardini (2005) ⁵	Fetal malposition/	A: Moxa C: No moxa	(Presumably) Participant/	Maternal: Preterm delivery at 34 weeks [§]	A 2/1085	Severe	Unlikely	Participant

[illegible]

Adverse effect causality

- Certain (n=144), Probable (n=15), Possible (n=132), Unlikely (n=124), Unassessable (n=14)
- Certain, Probable, Possible
 - →mild or moderate adverse effect
- Unlikely
 - →severe AEs or death

Incidence of Adverse effect

- Acupuncture group: 4.8% (1067/22283)
 - Certain, Probable, Possible: 1.9%
(418/22283)

Author (year)	Acupuncture group (No. of AEs reported/ no. of sessions (%))	Control group (No. of AEs reported/ no. of sessions (%))	Incidence of AEs related to acupuncture treatment in acupuncture group* (No. of AEs related/ no. of sessions (%))
RCTs/quasi-RCTs			
Acupuncture as an adjunct			
Vas (2013) ¹	2/1865 (0.1)	0/NA (—)	2/1865 (0.1)
Guerreiro da Silva (2012) ²	2/200 (1.0)	0/NA (—)	2/200 (1.0)
Do (2011) ³	0/200 (0.0)	0/NA (—)	0/200 (0.0)
Wang (2009) ⁴	2/112 (1.8)	1/NA (—)	2/112 (1.8)
Guerreiro da Silva (2007) ⁵	4/253 (1.6)	0/NA (—)	4/253 (1.6)
Yang (2006) ⁵	0/1442 (0.0)	0/1442 [†] (0.0)	0/1442 (0.0)
Elden (2005) ⁷⁻⁸	76/1380 (5.5)	8/NA (—)	76/1380 (5.5)
Guerreiro da Silva (2005) ⁹	1/125 (0.8)	0/NA (—)	1/125 (0.8)
Du (2005) ¹⁰	0/250 (0.0)	21/700 [†] (3.0)	0/250 (0.0)
Guerreiro da Silva (2004) ¹¹	6/270 (2.2)	0/NA (—)	5/270 (1.9)
Neri (2004) ¹²	0/456 (0.0)	0/NA (—)	0/456 (0.0)
Chen (2004) ¹³	0/438 (0.0)	0/414 [‡] (0.0)	0/438 (0.0)
Smith (2002) ¹⁴⁻¹⁵	96/1340 (7.2)	53/NA (—)	0/1340 (0.0)
Lin (2002) ¹⁶	0/454 (0.0)	0/1510 [§] (0.0)	0/454 (0.0)
Total	189/8785 (2.2)	21/4066 (0.5)	92/8785 (1.0)

Author (year)	Acupuncture group (No. of AEs reported/ no. of sessions (%))	Control group (No. of AEs reported/ no. of sessions (%))	Incidence of AEs related to acupuncture treatment in acupuncture group* (No. of AEs related/ no. of sessions (%))
RCTs/quasi-RCTs			
Acupuncture vs. sham acupuncture			
Vas (2013) ¹	2/1865 (0.1)	3/1865 (0.2)	2/1865 (0.1)
Manber (2010) ¹⁷	40/456 (8.8)	24/407 (5.9)	34/456 (7.5)
Wang (2009) ⁴	2/112 (1.8)	4/104 (3.8)	2/112 (1.8)
Elden (2008) ¹⁸	72/672 (10.7)	70/624 (11.2)	72/672 (10.7)
Smith (2002) ¹⁴⁻¹⁵	96/1340 (7.2)	53/668 (7.9)	0/1340 (0.0)
Knight (2001) ¹⁹	11/103 (10.7)	8/100 (8.0)	11/103 (10.7)
Carlsson (2000) ²⁰	0/212 (0.0)	0/207 (0.0)	0/212 (0.0)
Total	223/4760 (4.7)	162/3975 (4.1)	121/4760 (2.5)

Author (year)	Acupuncture group (No. of AEs reported/ no. of sessions (%))	Control group (No. of AEs reported/ no. of sessions (%))	Incidence of AEs related to acupuncture treatment in acupuncture group (No. of AEs related/ no. of sessions (%))
RCTs/quasi-RCTs			
Acupuncture vs. usual care			
Manber (2010) ¹⁷	40/456 (8.8)	13/NA (—)	34/456 (7.5)
Guittier (2009) ²¹	0/1050 (0.0)	0/NA (—)	0/1050 (0.0)
Mao (2009) ²²	0/420 (0.0)	0/630 ^{***} (0.0)	0/420 (0.0)
Yang (2007) ²³	0/1967 (0.0)	0/1956 [†] (0.0)	0/1967 (0.0)
Wedenberg (2000) ²⁴	2/300 (0.7)	4/192 ^{††} (2.1)	2/300 (0.7)
Cardini (1998) ²⁵	9/1779 (0.5)	16/NA (—)	2/1779 (0.1)
Total	51/5972 (0.9)	4/2778 (0.1)	38/5972 (0.6)
Acupuncture vs. no treatment			
Guerreiro da Silva (2009) ²⁶	1/201 (0.5)	0/NA (—)	1/201 (0.5)
Guittier (2008) ²⁷	3/56 (5.4)	0/NA (—)	0/56 (0.0)
Cardini (2005) ²⁸	29/1085 (2.7)	0/NA (—)	25/1085 (2.3)
Kvornig (2004) ²⁹	18/222 (8.1)	0/NA (—)	12/222 (5.4)
Habek (2003) ³⁰	0/204 (0.0)	0/NA (—)	0/204 (0.0)
Total	51/1768 (2.9)	0/NA (—)	38/1768 (2.1)
RCTs total	374/17512 (2.1)	187/10819 (1.7)	251/17512 (1.4)

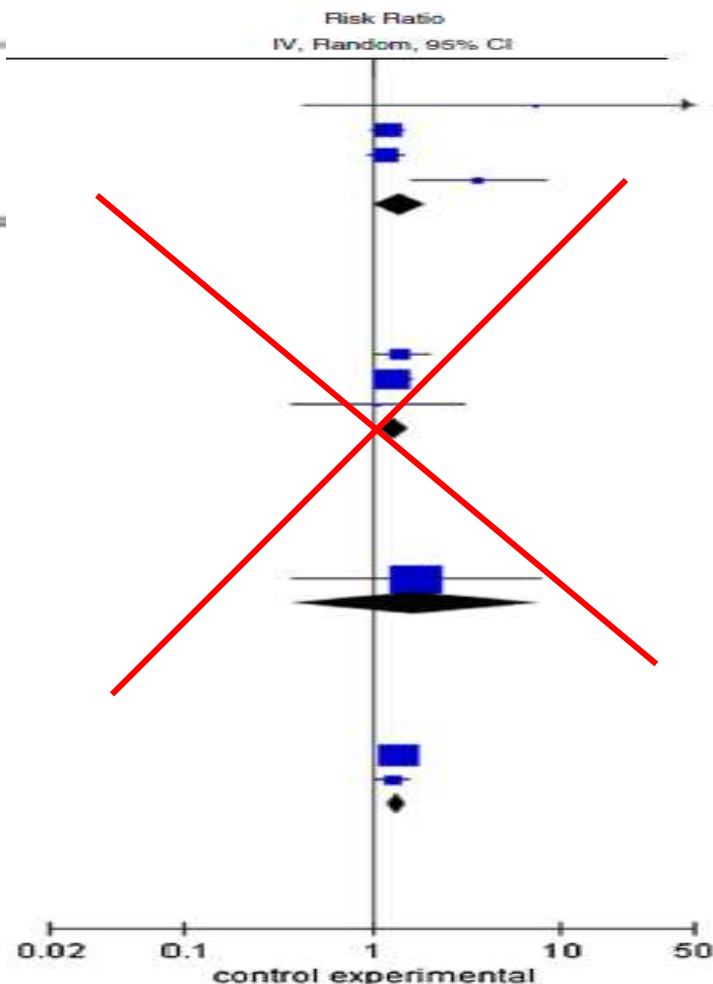
What were the results?

How are the results presented?

A systematic review provides a summary of the data from the results of a number of individual studies. If the results of the individual studies are similar, a statistical method (called meta-analysis) is used to combine the results from the individual studies and an overall summary estimate is calculated. The meta-analysis gives weighted values to each of the individual studies according to their size. The individual results of the studies need to be expressed in a standard way, such as relative risk, odds ratio or mean difference between the groups. Results are traditionally displayed in a figure, like the one below, called a forest plot.

This paper: Yes ☐ No ☒ Unclear ☐

Comment: No forest plot



Discussion

DISCUSSION

Main findings

This systematic review has found that the majority of AEs associated with acupuncture during pregnancy are mild and transient, and serious AEs are very rare. Needling or unspecified pain was the most commonly reported mild AE, followed by bleeding. AEs were largely mild in severity. We found acupuncture treatment during pregnancy was associated with few serious AEs and all of them were evaluated as unlikely to have been caused by acupuncture treatment. The estimated incidence of AEs associated with acupuncture in pregnant women was 193 per 10 000 acupuncture sessions. Limiting the calculation to AEs evaluated as certain, probable or possible in the causality assessment resulted in an incidence of 131 per 10 000 treatments. These values are comparable to or less serious than those investigated in the general population receiving acupuncture treatment (table 1).

Table 1 Estimated AE incidences associated with acupuncture treatment compared with previous studies*

Author (year) Country	Design	Condition	No. of patients	AE incidence (per 10 000 sessions)	Most frequent AEs	Authors' comments
Yamashita (2000) ⁴⁴ Japan	Prospective survey	NR†	391	6849	Tiredness, drowsiness, symptom aggravation, minor bleeding on needle withdrawal	'Although some adverse reactions associated with acupuncture were common even in standard practice, they were transient and mild.'
White (2001) ⁴⁵ UK	Prospective survey	NR‡	NR	671	Bleeding or haematoma, needling pain	'All AEs were mild and no serious AE occurred.'
Witt (2009) ⁵ Germany	Prospective survey	Chronic OA, LBP, neck pain, headache, allergic rhinitis, asthma or dysmenorrhoea	229 230	111	Bleeding or haematoma, pain	'Acupuncture provided by physicians is a relatively safe treatment.'
Park (2009) ⁷ Korea	Retrospective survey	CVA, headache, hypertension, dizziness, numbness and others	1095	339	Minor bleeding	'Acupuncture treatment is safe if the practitioners are well educated, trained, and experienced.'
Present study (2013) Various	Systematic review	Various conditions in pregnant women	2460	131§/188¶	Needling pain	'Acupuncture during pregnancy appears to be associated with few AEs when correctly applied.'

*Incidence rate may slightly vary as definition of AEs, survey methods or acupuncture methods are all different across studies.

†Patients receiving acupuncture treatments at Tsukuba College of Technology Clinic in Japan.

‡Patients receiving acupuncture treatments from medical doctors and physiotherapists in the UK.

§AE incidence varies: 193 per 10 000 acupuncture sessions when the analysis included reported AEs in the original reports; 131 per 10 000 acupuncture sessions when the calculation is limited to the AEs evaluated as certain, probable or possible in the causality assessment.

¶AE incidence varies: 479 per 10 000 when the calculation is expanded to poor pregnancy outcomes which were not originally reported as acupuncture-related AEs and, among them, 188 were evaluated as certain, probable or possible in the causality assessment.

AE, adverse event; CVA, cerebrovascular accident; LBP, low back pain; NR, not reported; OA, osteoarthritis.

Limitation

- the first systematic review on this topic
- lack of appropriate information regarding obstetric complications
 - difficult to make meaningful conclusions about important AEs
- focus on the benefit of the intervention
 - neglect the information on harm
- inadequate reporting of harms
 - observational studies: no incidence of AEs
 - Clinical trials: unsuitable for new, rare or long-term AEs
exclude high comorbidity patient

Limitation

- Predefined poorly
 - the definition and severity of AEs
 - causality between the intervention and AEs
 - the collecting and monitoring methods of AEs

Conclusion

- Acupuncture during pregnancy appears to be associated with few AEs when correctly applied.
- Large prospective studies would give us better information and a more accurate estimate of AEs associated with acupuncture in pregnant women.
- Trimester? Acupoint? Intensity? Frequency?

Step 4: Apply

1. 我們的病人是否與研究中的病人類似？
 - 同樣是罹患有懷孕的病人
2. 此治療目前是否可行？
 - 本院目前並無明文規定孕婦不得針灸，可行
3. 我們的病人是否可以從該項治療中獲益？
 - 若病患因其它考量不想使用西藥時，可以考慮使用針刺治療替代，且相關副作用多屬輕微
4. 我們的病人如何看待此治療結果？
 - 正向，可參考

替代方案

- 口服中藥？
- 灸療？
- 復健治療？
- 芳香治療？
- 音樂治療？
- 氣功治療？

Step 5: Audit

要趕快回家查
關於口服中藥
的EBM了.....

醫生，懷孕的人針
刺治療後會不會有
甚麼副作用？

目前的研究顯示孕婦在
針刺治療後，僅約有2%
的病人有輕微的副作用，
例如.....



謝謝聆聽 敬請指教

<https://www1.cgmh.org.tw/intr/intr5/c6g100/learning/pdf/20140715.pdf>

<http://mulicia.pixnet.net/blog/post/20902397->

[%E8%AD%89%E6%93%9A%E5%BC%B7%E5%BA%A6-strength-of-evidence](http://mulicia.pixnet.net/blog/post/20902397-%E8%AD%89%E6%93%9A%E5%BC%B7%E5%BA%A6-strength-of-evidence)

<http://tul.blog.ntu.edu.tw/archives/7253>