

INTEGRATIVE MEDICINE FOR WOMEN'S HEALTH

A therapeutic outline

This therapeutic outline provides an introduction to a variety of integrative medicine therapies that have been used and researched in the management of women's health issues. This includes treatments with either nutraceuticals¹ or herbal medicine monotherapies² or where these are used adjunctively with conventional medical treatments. Mind-body, manual, lifestyle, and other traditional therapies are also reviewed.

The outline has been drafted by experts in the field. However, it is not meant to be an exhaustive review of scientific evidence, such as a systematic review or meta-analysis, which is not its purpose. This outline provides a description of the therapy and a brief narrative review of the emerging evidence considered by the researchers at NICM Health Research Institute to be important science being undertaken in the area of integrative medicine for women's health issues.

Use of integrative medicine by women

Use of complementary medicine (CM) – both medicinal CM products and therapies - is commonplace among women across cultures and geographical areas. Women use CM for promotive and preventive health, but also for reproductive health issues, including menstruation disorders, infertility, menopause, obstetrics/pregnancy and birthing, and a range of other problems ranging from back-pain to cancer.

Both CM products and therapies are commonly used to modify health risks and improve wellbeing as well as to treat symptoms or disease, and women appear to value a holistic approach, choice, personal experience, and autonomy when making health care decisions about CM use.

Women's use of CM for female health complaints is common, particularly for conditions such as:

- premenstrual tension and dysmenorrhoea,(1)
- breast cancer,(2-4) and
- gynaecologic cancers.(5)

As is use of CM during particular life stages, for example:

- to enhance reproductive outcomes for example, by reducing infertility related stress(6, 7, 8, 9)
- to improve menopause symptoms(10, 11) and
- during pregnancy and maternal care.(12-15)

¹ Nutraceuticals are nutrient-based natural products which are produced via pharmaceutical good manufacturing practice, standardised and optimised.

² A monotherapy describes a treatment that has only a single active ingredient. The single active ingredient could be a medicine or a vitamin or a single herbal ingredient.

Effectiveness of integrative medicine for women's health

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Premenstrual syndrome (including premenstrual dysphoric disorder³)

- [Calcium](#) – Systematic reviews found good-quality evidence to support use of calcium in treating premenstrual syndrome (PMS) including premenstrual dysphoric disorder, while limited evidence indicates that continuous vitamin B6 treatment is possibly effective.(16-18)
- [Vitex agnus-castus](#) – Vitex agnus-castus is the herb with the most evidence in support of efficacy for PMS, but poor-quality research limits the reliability of these findings.(17, 19)
 - *Current recommendations:* A recent clinical guideline on PMS recommended that “Women with PMS should be informed that there is conflicting evidence to support the use of some complementary medicines” and stated that there may be benefit from calcium, Vitex, and saffron, and some benefit from reflexology, ginkgo, evening primrose oil, lemon balm, curcumin and wheat germ. Vitamin B6, magnesium, isoflavones and St John's wort showed mixed results, and no recommendations could be made for these treatments.(20)
- [Acupuncture](#) – Despite high levels of methodological shortcoming in acupuncture studies, the data indicate that acupuncture and some traditional Chinese medicines may improve menstrual health.(19, 21-23)
- [Qigong, yoga, massage therapy and reflexology](#) - Preliminary data suggests benefits with Qigong, yoga, massage therapy and reflexology in relieving PMS symptoms but more clinical research is needed to confirm their place in the management of PMS.(17, 24-28)

Dysmenorrhoea - also known as painful periods, or menstrual cramps, is pain during menstruation

- [Ginger \(*Zingiber officinale*\)](#) – The evidence suggests that *Zingiber officinale* rhizome (ginger) and/or ginger root powder may have some effect on dysmenorrhoea.(29-33)
- [Acupuncture and acupressure](#) – There is some evidence that acupuncture and acupressure are effective at reducing severity of menstrual pain in women experiencing dysmenorrhea or painful periods.(34-37)

³ Premenstrual dysphoric disorder (PMDD) is a condition in which a woman has severe depression symptoms, irritability, and tension before menstruation. The symptoms of PMDD are more severe than those seen with premenstrual syndrome.

- [Yoga, aromatherapy massage and mind-body practices](#) – Preliminary data for CM practices such as yoga, aromatherapy massage, and mind-body practices also suggest some benefit.(38-42)

At present, more robust evidence is required and further clinical research is needed to confirm the safety and efficacy of many of these therapies in the treatment of dysmenorrhoea.

Endometriosis

- [Acupuncture](#) - There is preliminary evidence from two sham-controlled trials that acupuncture may help reduce the pelvic pain caused by endometriosis.(43)

The effectiveness and safety of high-frequency transcutaneous electrical nerve stimulation (TENS), dietary supplements, and Chinese herbal medicine are not well established for pain management in women with endometriosis.(44-48)

Polycystic ovary syndrome (PCOS)

- [Inositol](#)⁴ - Inositol may improve metabolic hormones and reduce male hormones in PCOS. A meta-analysis of 10 studies reported that inositol appears to regulate menstrual cycles, improve ovulation and induce metabolic changes in polycystic ovary syndrome; however, evidence is lacking for pregnancy, miscarriage or live birth.(49)
- [Omega-3 fish oils](#) - Omega-3 fish oils may have beneficial effects on insulin resistance in women with PCOS.(50)
- [A herbal formula containing cinnamon, St John's Wort, European licorice, Chinese peony and Tribulus terrestris](#) - A herbal formula containing cinnamon (*Cinnamomum verum*), St John's wort (*Hypericum perforatum*), European licorice (*Glycyrrhiza glabra*), Chinese peony (*Paeonia lactiflora*) and *Tribulus terrestris* improved menstrual cycles in women with PCOS and also led to more weight loss (an additional 2.95kg) in the herbal formula group compared to the control group.(51)

Several CM treatments may have beneficial endocrine, metabolic, and reproductive effects in women with PCOS and reduce severity (e.g.: acupuncture, Chinese herbal medicines and various dietary supplements), but there is limited evidence that these treatments are safe and effective.(52-59)

⁴ Inositol, which is also available as a supplement, is a sugar alcohol that can be endogenously produced by humans from carbohydrates eaten but is also found in large quantities in plants.

Gynaecologic oncology

- [*Acupuncture, mindfulness, imagery and healing touch*](#) - While there is a lack of evidence proving efficacy of CM practices and their safety for patients with gynaecological cancer, there is some limited evidence of effectiveness for CM modalities such as acupuncture, mindfulness, imagery and healing touch for a variety of outcomes in gynaecologic oncology patients ranging from postoperative surgical pain, chemotherapy induced neutropenia, mood, QOL and immunity, particularly in the short term, but none can be fully recommended because of the paucity of rigorous trials.(60-64)
- [*Acupuncture*](#) - A quasi-experimental study found limited evidence indicating that acupuncture may reduce cancer-related postoperative pain.(60)

Fertility

There is some evidence of benefit from acupuncture and herbal medicine (both Western and Chinese herbal medicine) in improving fertility outcomes for women.(65-76)

- [*Acupuncture given in the follicular period or in the implantation period increases clinical pregnancy rate*](#) - While there is limited evidence of the effectiveness of acupuncture for improving fertility, timing of acupuncture appears to be important with acupuncture given in the follicular period or in the implantation period showing significant increases in clinical pregnancy rate (40%).(8)
- [*Acupuncture used as an adjunct to embryo transfer during in vitro fertilization \(IVF\) improves pregnancy-related outcomes*](#) - A meta-analysis examining the efficacy, effectiveness and safety of acupuncture as an adjunct to embryo transfer compared with controls to improve reproductive outcomes in women undergoing IVF was published in 2019. This meta-analysis found increased pregnancies, live births and reduced miscarriage when acupuncture was compared with no adjunctive control (reaching statistical significance), but not when acupuncture was compared to sham controls.(9) The authors concluded acupuncture may have a beneficial effect on clinical pregnancy rates when used in women who have had multiple previous IVF cycles, or where was a low baseline pregnancy rate, regardless of the comparator.(9)
- [*Acupuncture used as an adjunct to IVF in women with PCOS*](#) - For women with PCOS, acupuncture as an adjunct to IVF may increase pregnancy rate and reduce the risk of ovarian hyperstimulation syndrome (meta-analysis of four studies); however, results should be interpreted cautiously because of the limited number of participants and uncertain risk of bias.(77) However, a large randomised controlled trial (RCT) (n=1000) comparing acupuncture, sham acupuncture, clomiphene and placebo did not find a difference between acupuncture and sham; live birth rate was higher in the clomiphene group.(78)

- [Acupuncture, mind-body techniques, and yoga for fertility-related stress](#) - There is limited evidence from single studies showing that acupuncture, mind-body techniques, and yoga may help in reducing infertility-related stress.(7, 79-83)
- [Acupuncture at time of embryo transfer reduces anxiety levels in women undergoing IVF](#) - There is some evidence that acupuncture at the time of embryo transfer reduces anxiety levels in women undergoing IVF. A RCT comparing adjunctive acupuncture treatment at the time of embryo transfer to embryo transfer alone found a statistically significant reduction in anxiety in women randomised to embryo transfer with adjunctive acupuncture when compared to women receiving embryo transfer only.(84)

Menopause

While a large number of studies and systematic reviews on CM practices for menopausal symptoms have been published, there is limited evidence on the effects of herbals and other dietary supplements, such as black cohosh (*Actaea racemosa*), as well as mind-body practices for menopausal symptoms.(85-91) And while some therapies appear risk free, they do not have any evidence testing their effects.

- [Mindfulness and meditation for menopausal symptoms](#) - Limited evidence indicates that mind-body practices such as hypnosis and mindfulness/meditation are beneficial for menopausal symptoms.(92-95)
- [Therapies that may be beneficial for vasomotor symptoms](#) - While some CM therapies may be beneficial in alleviating vasomotor symptoms, such as S-equol derivatives of soy isoflavones and mindfulness-based stress reduction, additional rigorous studies of these therapies are warranted.(85-87, 92)
- [Acupuncture for hot flushes](#) - There is limited evidence that acupuncture improves menopause symptoms such as hot flush frequency and severity,(96) but when compared to usual care or no additional treatment it appears to be effective.(97) It appears acupuncture is less effective than hormone therapy.(98)

[Safety of black cohosh and phytoestrogens](#)

Much of the research assessing the efficacy of black cohosh and phytoestrogen use for menopausal symptoms has been for short periods of time - typically six months or less - and as such the long-term safety effects have not been established.

Regarding black cohosh specifically, clinical trials using various black cohosh preparations to treat menopausal symptoms have shown that its use is associated with a low incidence of adverse effects. The most commonly reported side effects are gastrointestinal upset and rashes, both of which are mild and transient.(99) While liver failure has been reported a causal relationship has not been established.(100)

Pregnancy

- [Ginger, B6 and acupressure/auricular acupuncture for nausea and vomiting in pregnancy](#) - While there is little high-quality and consistent evidence supporting any one intervention, limited evidence from reviews and meta-analyses have showed a benefit for use of ginger, vitamin B6, and acupressure/auricular acupuncture to treat nausea and vomiting in pregnancy.(101-110)
- [Acupuncture for pregnancy-related low back/ pelvic pain](#) - Limited evidence from single studies suggests that acupuncture improves pregnancy-related low back/pelvic pain. Acupuncture is superior to physiotherapy, sham acupuncture or usual care for back pain in pregnant women; for pelvic pain experienced (in the same group), acupuncture is superior to exercise with evening pain, and superior to sham for function but not for pain overall.(111, 112)
- [Manual therapies for pregnancy-related back and pelvic pain](#) - Evidence demonstrating that manual therapies (e.g., massage, chiropractic, and osteopathy) are effective in the treatment of back and pelvic pain in pregnant women is lacking.(112-114)
- [Mind-body therapies for anxiety](#) - Mind-body therapies (including yoga) may assist with treating anxiety in pregnant women. A review by Jiang and colleagues on health effects of yoga on pregnancy, for instance, found those doing yoga consistently presented with lower levels of anxiety ($p < 0.001$), noting that only three of the 10 RCTs included in the review assessed anxiety as an outcome.(115, 116)
- [Mind-body therapies for anxiety](#) - Evidence demonstrating that cranberry can be used in women including pregnant women for the prevention of urinary tract infections is limited.(117)
- [Chinese herbal medicine \(CHM\), nutraceutical and acupuncture for adjunctive treatment of perinatal depression](#) - The evidence is inconclusive to allow any recommendations for depression-specific treatments. However, use of certain CMs (e.g., CHM, nutraceuticals, and acupuncture) with routine therapies may augment treatment for perinatal depression.(118-120)

Labour and birth

- [Acupuncture does not reduce caesarean section rates but does improve cervical maturity](#) - There is no clear benefit from acupuncture or acupressure in reducing caesarean section rates, however, there is limited evidence from single trials that acupuncture improves cervical maturity.(121)
- [Electroacupuncture may reduce rates of caesarean section and increase the rate of instrumental vaginal births](#) - There is no clear evidence for a difference between groups for acupuncture vs sham or usual care in induction of labour. However, subgroup analysis

suggests that electroacupuncture may reduce the rate of caesarean section and increase the rate of instrumental vaginal birth.(121)

- [Acupuncture for labour pain and pain during delivery](#) – A Cochrane review found limited benefit that acupuncture may be effective in the management of labour pain as well as reducing pain intensity, use of analgesia, and rate of instrumental delivery when compared to no intervention. However, lack of high-quality trials suggest there remains insufficient evidence of a consistent treatment effect from acupuncture.(122)
- [Antenatal education incorporating evidence-based CM techniques combined with standard care reduced epidural use and caesarean section](#) – An RCT completed in Australia providing women with low-risk pregnancies with either a two-day antenatal education program incorporating evidence-based CM techniques⁵ combined with standard care or standard care alone found that the intervention significantly reduced epidural use and caesarian section.(123)

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