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HERBS IN PREGNANCY AND LACTATION: A REVIEW APPRAISAL

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ABSTRACT

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Pregnancy can be the most paranormal and exciting time for expectant mother. Nature provides us with many tools for supporting both the mother and baby through this time of growth and renewal, to strengthen the spirits and body to promote a healthy pregnancy and birthing process. Pregnant and lactating mother need to be educated on the need for caution when using herbs during pregnancy and lactation particularly in view of lack of complete information. The women self administer herbal medicines both before and after pregnancy often without any recognition of their potential hazards. The use of herbal supplements in pregnancy and lactation is likely to be relatively high and its importance ascertains what supplements women are taking. Pregnancy and lactation care providers should be aware of common herbal supplements used by women and of evidence regarding potential benefits or harm. Midwives and obstetricians have an obligation to facilitate women's wishes without condemnation, but this must be tempered with accurate information to ensure that use of herbal remedies in pregnancy and breastfeeding is not only appropriate but also safe if use with proper caution. The herbs listed in this review are recommended by experienced herbalist and have been used safely by women for centuries.

INTRODUCTION: Herbs are not pharmaceutical medications. Herbs are part of whole plants, not isolated or not synthesized chemicals. Herbal effects have to do with the synergistic action of nature's formulation. Drugs and herbs are used differently but both can be extremely beneficial when used appropriately. During pregnancy, drug ingestion may not affect only mother, it may cross the placenta also adversely affect the unborn fetus, causing congenital malformation and other deleterious effect. Some herbs are unsafe during pregnancy because they can induce uterine contractions that could lead to miscarriage, a premature birth or injury to the fetus. Others herbs are harmful during pregnancy because they can cause high blood pressure, birth defects or even death.

Although herbs have served us well for centuries as seasonings and natural remedies, these herbs to avoid during pregnancy are potentially harmful to mothers and developing babies ¹. The use of herbal medicines in pregnancy is extremely fashionable although there is very little real evidence of safety ².



The incidence of use by expectant mother is unconfirmed, but is usually associated with prior knowledge, and has been quoted as varying between 7% and 55% with Echinacea and ginger most frequently used³. Although the majority of women discontinue taking herbal medicines once they are aware of their pregnancies, many others commence taking them on advice of their maternity care providers⁴.

However, while pregnant women recognize the potential of dangers of inappropriate drug use, they fail to appreciate that the chemicals in herbal medicines also have the power, if used incorrectly, to trigger abnormal pathology through toxicity. There appears to be in an implicit belief that, because herbal remedies are natural, they are autonomically safe⁵ but important is that pregnant women do not view them as a panacea for all their symptoms, without understanding that there is that a complex pathophysiology and pharmacology involved.

There is limited data on the extent of women's use of herbal medicines during pregnancy, despite the fact that knowledge of the potential benefits or harms of many of these herbs is sparse, particularly with respect to their pregnancy and lactation.

The present study suggests that there is need for improved education of health care professionals and consumers, as well as quality control legislation and further well-designed studies to establish safety and efficacy of various herbal remedies for pregnant and lactating mother.

Herbs that safe during pregnancy: During the first trimester of pregnancy (the first 13 weeks), the baby's organs are developing rapidly. It is during this time that fetus is most vulnerable to the harmful effects of external factors. All food, liquids, medications and other substances that the mother ingests pass through the placenta to the developing fetus⁶.

In general, the safest herbs to use during pregnancy are those considered food or tonic herb. These herbs are used as food and can be eaten on daily basis without toxic concerns. They may be taken in capsule form or used as a tea or infusion.

Although herbs are not necessarily needed by all women during pregnancy, the following herbs are recommended by experienced herbalists and have been used safely by women for centuries⁷.

TABLE 1: HERBS THAT SAFE DURING PREGNANCY⁸⁻¹¹

Herb	Reason for safe during pregnancy
Black Haw (<i>Viburnm prunifolium</i>)	Prevent miscarriage, relaxes uterine muscle, and eases the tension that precipitates uterine contractions.
Blessed milk-thistle (<i>Cnicus benedictus</i>)	Stimulate blood flow to mammary glands, increases and enriches milk flow.
Burdock (<i>Arctium lappa</i>)	High in vitamin and minerals, mild diuretic and strengthening for uterus.
Chamomile (<i>Maricaria chamomilla</i>)	Carminative, digestive aid, reduce inflammation.
Crampbark (<i>Viburnm opulus</i>)	Prevent miscarriage.
Dandelion (<i>Taraxacum officinale</i>)	High in vitamin A, calcium and iron, aids digestion, liver tonic, boosts energy and acts as a diuretic.
Ginger (<i>Gingiber officinalis</i>)	Ease morning sickness and digestive problems, tonic for reproductive system.
Lady's mantle (<i>Alchemilla vulgaris</i>)	Settles digestion, morning sickness and tones uterus.
Lemon balm (<i>Mellisa officinalis</i>)	Calm and relax nervous system to relive headaches, depression and insomnia.
Nettle leaf (<i>Urtica dioica</i>)	Rich in calcium, iron, vitamin and minerals, provides energy and mild diuretics.
Oatstraw (<i>Avena sativa</i>)	Rich in calcium and magnesium, calms nervous stress and tension, heals yeast infection.
Red Raspberry (<i>Rubus idaeus</i>)	It's a nourishing, building herb that has an affinity for the reproductive system.
Slippery Elm Bark (<i>Ulms rubra</i>)	Treats colds, infections, vaginal infection and morning sickness.
Squaw vine (<i>Mitchella repens</i>)	Tone and nourish uterus.
Straberry (<i>Fragaria vesica</i>)	Uterine tonic, cooling to system.

Herbs that avoid in pregnancy¹²:

- 1. Herbs traditionally used to stimulate menstruations (Emmenagogue's):** These may stimulate the smooth muscle of the uterus and may thus pose a risk of reliable abortifacient viz. Angelica, celadine, bearberry, motherwort, southernwood, black cohosh, Ephedra, mugwort tansy, blue cohosh, feverfew.
- 2. Alkaloid containing herbs:** Alkaloids are a diverse group of chemical plant constituents that have a wide range of pharmacological impact upon the body. Sometimes these compounds have very potent and have been isolated as medication or have been identified as the active ingredients. These are best avoided in pregnancy. Viz. Autumn crocus, broom comfrey mandrake, barberry, coffee, blood root, goldenseal.

- 3. Oil containing plants and essential oil:** Some essential oil is potentially very dangerous to the pregnancy if taken internally during pregnancy. All essential oils should be treated with great respect and appropriately diluted for the intended use. Sometimes the whole plant use in moderation is relatively safe, but exceptions to this exist and it is best to avoid any ingestion of following plants; *Arbore vitae*, Juniper, Pennyroyal, Nutmeg.
- 4. Anthraquinones Laxative:** These compounds are very potent stimulators of bowel peristalsis. Overstimulation of bowel or inflammations of the bladder are known to irritate the uterus in sensitive women and cause premature labor; *Alder buckthorn*, *Cascara sagrada*, *Purging buckthorn*, Senna.
- 5. Herb thought to have an effect on the hormonal system.** Viz. Ginseng, Liquorice.

TABLE 2: HERBS ARE UNSAFE IN PREGNANCY AND LABOUR¹³⁻¹⁵

Herbs	Reason to avoid in pregnancy and labour
Aloe vera (<i>Aloe barbadens</i>)	Stimulate uterine contraction.
Alder buckthorn (<i>Rhamnus frangula</i>)	Can cause cramp-like discomfort and nausea. Long term use leading to heart problems and muscle weakness.
Angelica (<i>Angelica archangelica</i>)	A menstrual stimulant can bring on strong contractions.
Arbor Vitae (<i>Thuja occidentalis</i>)	Causes uterine contractions.
Aspartame	Cause mental retardation.
Autumn Crocus (<i>Colchicum autumnale</i>)	Affect cell division and lead to birth defects.
Barberry (<i>Berberis vulgaris</i>)	Stimulate uterine contractions.
Basil Oil (<i>ocimum sanctum</i>)	Uterine stimulant.
Beth root (<i>Trillium erectum</i>)	A uterine stimulant and stomach irritant.
Bitter orange (<i>Citrus aurantium</i>)	Can cause heart irregularities and stroke.
Black Cohosh (<i>Cimufuga racemosa</i>)	Cause premature contractions.
Bloodroot (<i>Sanguinaria anadensis</i>)	Can cause nausea, low blood pressure, skin irritation and lethargy. In high doses can lead to coma.
Blue Cohosh (<i>Caulophyllum thalictroides</i>)	Uterine stimulant. Safe during childbirth
Bugleweed (<i>Lycopus americanus</i>)	Causes thyroid gland enlargement and may affect pituitary hormones.
Caffeine	Can cause high blood pressure.
Caraway (<i>Carum carvi</i>)	May cause uterine contractions, miscarriage or premature labour.
Cocaine	It causes an increase in maternal heart rate; constriction of the blood vessels of the placenta, allowing less blood to reach the fetus which causes constriction of uterine blood vessels; and increased uterine contractility.
Cascara (<i>Rhamnus purshiana</i>)	Long-term use can cause fluid loss and potassium deficiency.
Celery seed (<i>Apium graveolens</i>)	May cause uterine contractions, miscarriage or premature labour in medicinal amounts.
Cinnamon (<i>Cinnamomum cassia</i>)	Large amounts can lead to liver toxicity.
Clary sage (<i>Salvia sclarea</i>)	Strong uterine stimulant. May cause miscarriage or premature labour if used before 37 weeks of pregnancy. Large doses in labour may potentially cause fetal distress from very strong contractions.

Comfrey (<i>Symphytum officinale</i>)	Contains toxic chemicals that could cross the placenta.
Cotton Root (<i>Gossypium herbecure</i>)	Uterine stimulant
Cumin Seed	Can cause premature labor, miscarriage or cramping.
Chamomile (<i>Matricaria chamomilla</i>)	Cause severe allergic reactions
Devil's claw (<i>Harpagophytum procumbens</i>)	May cause miscarriage, diarrhea, nausea, vomiting, headache, abdominal pain, allergic skin irritation and changes in blood.
Elderberry (<i>Sambucus nigra</i>)	May cause nausea, vomiting, or severe diarrhea if elderberries are not well cooked before eating. Eating unripe fruit or fruit juice made from unripe berries may cause weakness, dizziness, numbness.
Ephedra (Ma Huang)	An unsafe stimulant.
False Unicorn Root	May cause nausea and vomiting.
Feverfew (<i>Tanacetum parthenium</i>)	uterine stimulant
Fennel (<i>Foeniculum vulgare</i>)	May cause allergic reactions, uterine contractions, miscarriage or premature labour.
Fenugreek (<i>Trigonella foenum-graecum</i>)	Large amounts may cause uterine contractions, miscarriage or premature labour.
Garlic (<i>Allium sativa</i>)	Medicinal amounts may cause tummy upsets, potentially causing uterine contractions, miscarriage or premature labour.
Ginseng, Siberian (<i>Eleutherococcus senticosus</i>)	May cause drowsiness, anxiety, irritability, breast tenderness and uterine bleeding in large doses. Can cause palpitations, fast heartbeat and high blood pressure. Long-term use may cause sciatica and muscle spasms.
Golden Seal (<i>Hydrastis anadensis</i>)	Leads to premature labor or miscarriage.
Golden ragwort (<i>Senecio aureus</i>)	May affect your baby's development and be toxic to liver. Uterine stimulant which may cause miscarriage or premature labour.
Juniper and Juniper Oil (<i>Juniper communis</i>)	Uterine stimulants which may cause premature labour and severe jaundice and severe brain damage to baby. Use only during labor.
Licorice (<i>Glycyrrhiza glabra</i>)	Cause high blood pressure.
Lovage (<i>Levisticum officinale</i>)	May cause uterine stimulation, miscarriage or premature labour.
Marijuana	Greater risk of fetal distress.
Marjoram (<i>Origanum vulgare</i>)	Large amounts may cause uterine contractions, miscarriage or premature labour.
Motherwort (<i>Leonurus cardiac</i>)	May lead to birth defects.
Mistletoe (<i>Viscum album</i>)	Uterine stimulant which may cause miscarriage, premature labour and increased blood pressure.
Mugwort (<i>Artemesia vulgaris</i>)	May cause miscarriage, premature labour, abnormalities in your baby and allergic reactions. Mugwort sticks which are burnt in moxibustion to turn breech babies are, however, safe to use in pregnancy.
Myrrh (<i>Commiphora molmol</i>)	May cause uterine stimulation, miscarriage or premature labour.
Parsley (<i>Petroselinum crispum</i>)	A uterine stimulant that may cause birth defects.
Passion flower (<i>Passiflora incarnata</i>)	May cause uterine stimulation, miscarriage or premature labour.
Pennyroyal (<i>Hedoma pulegioides</i>)	May lead to birth defects.
Peruvian Bark (<i>Cinchona officinalis</i>)	Highly toxic and can cause coma, blindness or even death.
Poke Root (<i>Phytolacca decandra</i>)	Cause birth defects.
Pulsatilla (<i>Anemone pulsatilla</i>)	May cause uterine stimulation, miscarriage or premature labour, as well as abnormalities in your baby.
Rosemary (<i>Rosmarinus officinalis</i>)	May have uterine contracting effects if consumed in large amounts. The essential oil increases blood pressure and may potentially trigger seizures if you have epilepsy.
Rue (<i>Ruta graveolens</i>)	Can cause uterine stimulation, miscarriage or premature labour, as well as liver or kidney failure.
Saccharin	Crosses into the placenta and may remain in fetal tissue.
Tansy (<i>Tanacetum vulgare</i>)	Uterine stimulant may cause birth defects.

White horehound (<i>Marrubium vulgare</i>)	May have uterine stimulating effects, possibly causing miscarriage and premature labour. May cause diarrhea and skin irritation.
Wild yam (<i>Dioscorea villosa</i>)	A uterine stimulant. Safe during labor.
Wormwood (<i>Artemisia absinthium</i>)	Cause birth defects.
Wood betony (<i>stachys officinalis</i>)	Reduces blood pressure and may cause diarrhea.
Yarrow (<i>Achillea millefolium</i>)	Stimulate contraction

Lactation: Although the benefits of breastfeeding may be self evident, they are also increasingly demonstrated by science. Benefits include the superior nutritional composition of breast milk ¹⁶, reduce incidence of feeding intolerance and necrotizing enterocolitis in preterm infants ¹⁷, and enhanced resistance to infectious diseases ¹⁸. There is also a significant psychological benefit for both mother and infant. It is beyond the scope of this article to explore the myriad

of ways botanical medicine could be safely used by breastfeeding women. Some constituents of herbs are excreted in breast milk and are, therefore ingested by a nourishing baby. Some of the herbs on list are included because they contain constituents that may be harmful to mother or baby. Other herbs should be avoided because they are traditional antilactagogues used during weaning and can reduce breast milk production.

TABLE 3: HERBS USED DURING LACTATION

Herbs	Reason for use
Anise (<i>Pimpinella anisum</i>)	It is digestive herb that helps dispel gas and relive indigestion and nausea as well as increase milk flow. It is used in the combination with fennel seed and caraway seed in dyspeptic conditions.
Blessed thistle (<i>Cnicus benedictus</i>)	It is a bitter tonic herb used in galatogogue teas and tincture.
Goat's Rue (<i>Galega officinalis</i>)	Used as galatogogue.
Fennel (<i>Foeniculum vulgare</i>)	Used as galatogogue.
Fenugreek (<i>Trigonella foenum-graecum</i>)	Used to help increase breast milk supply, it is help to sooth digestion and effectively decrease cholesterol and blood sugar.
Milk thistle (<i>Silybum marianum</i>)	Used as galatogogue.
Oats (<i>Avena sativa</i>)	Oatmeal a good supportive herb to nourish lactating women.
Red raspberry (<i>Rubus idaeus</i>)	Helpful for good milk production and useful to strengthen postpartum and breastfeeding women.

TABLE 4: HERBS AVOIDED DURING LACTATION ¹⁹⁻²²

Herbs	Reason for avoid in lactation
Alder buckthorn (<i>Rhamnus frangula</i>)	Closely related to <i>casgara sagrada</i> purgative, laxative intestinal irritant, anthraquinones glycosides excreted in breast milk.
Alkanet (<i>Alkanna tinctoria</i>)	Hepatotoxic pyrrolizidine alkaloids secreted in breast milk.
Aloe (<i>Aloe barbedensis</i>)	Purgative, anthraquinones glycosides excreted in breast milk.
Basil (<i>Ocimum basilicum</i>)	Possible mutagenic effect of essential oil.
Bearberry (<i>Arctostaphylos Urv ursi</i>)	Potential hepatotoxic hydroquinone secreted in breast milk.
Black Cohosh (<i>Cimifugia racemosa</i>)	Digestive tract irritant may cause digestive irritation for the baby.
Bladderwrack (<i>Fucus vesiculosus</i>)	High levels of iodine and possible heavy metal contamination.
Borage (<i>Borago officinalis</i>)	Hepatotoxic pyrrolizidine alkaloids excreted in breast milk.
Butterbur (<i>Petasites hybridus</i>)	Hepatotoxic pyrrolizidine alkaloids excreted in breast milk.
Casgara sagrada (<i>Rhamnus purshiana</i>)	Purgative, laxative intestinal irritant, anthraquinones excreted in breast milk.
Chaparral (<i>Larrea tridentate</i>)	Potential toxicity to the infant.
Coltsfoot (<i>Tussilago farfara</i>)	Hepatotoxic pyrrolizidine alkaloids excreted in breast milk.
Comfrey (<i>Symphytum officinale</i>)	Hepatotoxic pyrrolizidine alkaloids excreted in breast milk.
Dong Quai (<i>Angelica sinensis</i>)	Contain estrogenic compounds.

Elecampane (<i>Imula helenium</i>)	Potential toxicity to the infant.
Ephedra (<i>Ephedra sinica</i>)	Stimulants excreted in breast milk.
Goldenseal (<i>Hydrastis canadensis</i>)	May increase infant bilirubin levels.
Guarana (<i>Paullinia cupana</i>)	Stimulants secreted in breast milk.
Joe-pye weed (<i>Eupatorium purpureum</i>)	Hepatotoxic pyrrolizidine alkaloids excreted in breast milk.
Kava Kava (<i>Piper methysticum</i>)	Possible passage of pyrones into breast milk, central nervous system depressant.
Indian snake root (<i>Rauwolfia serpentina</i>)	Reserpine alkaloids, potential toxicity to the infant.
Licorice root (<i>Glycyrrhiza glabra</i>)	potential toxicity to the infant,
Madder root (<i>Rubia tinctorum</i>)	Potential toxicity to the infant.
Male fern (<i>Dryopteris filix-mas</i>)	Potential toxicity to the infant.
Mate leaves (<i>Ilex paraguayensis</i>)	Stimulant excreted in breast milk.
Prickly ash bark (<i>Zanthoxylum americanum</i>)	Digestive tract irritant may cause digestive irritation for the baby.
Pulsatilla plant (<i>Anemone pulsatilla</i>)	Digestive tract irritant may cause digestive irritation for the baby.
Rhubarb (<i>Rheum palmatum</i>)	Potential toxicity to the infant may cause digestive irritation for the baby.
Senna leaf (<i>Cassia Spp.</i>)	Genotoxic anthraquinones excreted in breast milk.
Tobacco (<i>Nicotine tabacum</i>)	Diminished milk production, excreted in breast milk.
Wintergreen (<i>Gaultheria procumbens</i>)	Potential toxicity to infant.
Wormwood (<i>Artemis absinthium</i>)	Potential neurotoxins excreted in breast milk.

Depending on circumstances, these herbs ingest combination in the form of pills, tablet, granules, tincture and decoction (tea). Some of the treatment plans involve using single herb combination regularly, while other suggests using two or even three different formula.

CONCLUSION: In present study showed herbs can provide substantial relief for common complaints and concerns that arise during pregnancy, childbirth and lactation, the power of herbs should be respected, in short they should be used with caution. However, many herbs may be contraindicated on the basis of very limited findings, erroneous reports, or by association with a problem rather than a proven causal effect. Good diet, exercise, a healthful lifestyle, a positive outlook and strong social support are the cornerstones of an optimal childbearing experience.

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