

# Using Herbs in Pregnancy



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PROFESSIONAL RESOURCES

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## Use of Herbs in Pregnancy

Herbs have been used for centuries in all populations; however, herbalism is a tradition that has deep roots with women. In modern times, we have lost some of the connection to herbal medicine, especially during pregnancy when we must be sensitive to a woman's changing physiology and that of her growing child.

Herbs *can* be a safe and useful addition to pregnancy, providing medicines that are tonifying and in tune with nature and with a woman's body. They can be used to handle some of the minor complaints of pregnancy in lieu of medications, which typically end up falling into Category C, meaning there is not significant evidence of safety.

This white paper will examine several herbs that are safe to use during pregnancy, as well as how to conscientiously choose which ones to use with women for the most common conditions seen during pregnancy.

First and foremost, I want to convey that herbs can be safely used to mitigate the need for unnecessary medical intervention for many common complaints of pregnancy. When women present with concerns during pregnancy, herbs are a helpful place to start. Many herbs are safe, gentle and—even during pregnancy—evidence-informed. However, I must also caution that, especially in pregnancy, we need to know when medical intervention or a more conventional medication is needed.

For example, there are many beneficial herbs that can be used for general nausea and vomiting. However, when a woman is experiencing hyperemesis gravidarum, which poses a risk of dehydration and other, more serious longer-term issues, it is important to identify when the herbs are not working so that a woman can receive further intervention.

Herbs have a very strong history of use during pregnancy. One US study of 463 postpartum women found that one-third used complementary and alternative medicine (CAM) therapies during pregnancy.

The 10 most common reasons for using herbal medicine during pregnancy are:

1. cold or flu
2. nausea
3. urinary tract infection
4. sedative/sleeping problems
5. constipation
6. preparation for labor
7. health promotion

8. water retention
9. gastrointestinal disorders, flatulence
10. pain conditions

## Herbal Safety in Pregnancy

Generally, conventional providers consider most herbs to be unsafe in pregnancy. This is partially because if an obstetrician is not well-versed in herbs, he or she will encourage women to abstain from using them. There is good sense in that, as we want to make sure women are counseled to use only herbs that are safe. Quality is another issue for providers, and it is an important one to mention, especially in light of the recent news of herbs in the marketplace that do not contain the ingredients that are stated on the label.

Many of the studies on such supplements have scientific flaws. However, it is absolutely essential that individuals—especially pregnant women—source herbs that are clean, free of heavy metals and pesticides and herbicides, and that contain what is intended to be in them. They should contain no excipients or anything that could cause harm.

While there is a strong history of traditional use, there are limited studies on herbs in pregnancy due to the ethical considerations of such testing. (There are also limited studies on drugs during pregnancy.) It is difficult to get such studies on medicinal herbs or conventional medications approved by an ethics board, unless there is a very strong data set showing safety in animals, for example. That is why most medications fall into Category C for pregnant women. It is not that an herb or a drug has necessarily been found harmful; it is usually that there is a lack of knowledge.

## Herbs Contraindicated in Pregnancy

Before discussing herbs that can be used during pregnancy, we will examine those that are contraindicated.

**Abortifacients** are herbs that will trigger uterine stimulation and get the uterus to contract, which can trigger a miscarriage or an abortion. These include: Blue Cohosh, Cottonroot Bark, Tansy, Thuja, Wormwood, Rue and Pennyroyal Oil.

**Essential oils** should not be taken internally during pregnancy, but they can be used topically. (Some patients will take it to the extreme and not use soaps, for example, that contain essential oils, but that is not a concern.)

There are exceptions. Peppermint oil, for example, is sometimes used in an enteric-coated capsule that will release in the lower GI tract. This can be used in small doses.

However, if you are not highly comfortable with that product set and population, it should be avoided. Other oils to avoid include Thuja, Oregano, Sage, Peppermint and Pennyroyal.

**Teratogens** will harm a developing fetus. Lupine and Datura are examples of that.

Avoid plants that contain strong **alkaloids**, which can also cause concerns with a growing fetus. These include: Comfrey, Coltsfoot, Borage, Goldenseal, Barberry, Oregon Grape, Butterbur and Life Root.

**Stimulating laxatives** should be avoided because they cause such strong stimulation in the colon that the cytokines and prostaglandins that are released can sometimes trigger and stimulate the uterus. (This is why Castor oil is sometimes used to stimulate labor, as the cathartic laxative effect impacts the uterus as well.) Other examples include: Buckthorn, Aloe latex and Rhubarb.

**Phytoestrogens** such as Hops and Sage should be avoided due to their hormonal impact on both the mother and the fetus' gonads, particularly if it is a male child.

Avoid strong **nervous system stimulants and depressants**, such as Ephedra, Coffee and Kava.

While we will discuss **Licorice root** in greater detail later in this paper, it should be mentioned that it is generally contraindicated during pregnancy. Glycyrrhizin, one of the main active constituents, has been linked to premature delivery in high doses. (This is the component that has an impact on blood pressure.) DGL, or deglycyrrhizinated, licorice is considered safe during pregnancy.

### **Licorice root**

Licorice root is a delicious herb that is quite popular, due to its helpful impact on the adrenals and demulcent effect in the gut. However, studies have shown an association between heavy glycyrrhizin intake (>500 mg/wk) and shorter gestation.<sup>1</sup>

Another, more recent study found that glycyrrhizin inhibits placental 11-beta-hydroxysteroid dehydrogenase type 2, which acts as the fetoplacental barrier to high maternal levels of cortisol.<sup>2</sup> When a woman is exposed to Licorice, it opens the pores of

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<sup>1</sup> Am J Epidemiol. 2002 Nov 1;156(9):803-5.

<sup>2</sup> Am J Epidemiol. 2009 Nov 1;170():1137-46.

the placenta allowing more of her cortisol to affect her fetus. The placenta loses its protective benefits, meaning that if the woman is under a great deal of stress, so is her fetus.

Maternal use of Licorice during pregnancy has been linked to detriments in verbal and visuo-spatial abilities and narrative memory in otherwise healthy children. A Finnish study looked at 321 children born in 1998 as healthy singletons at 35 to 42 weeks. Their mothers had had high intake of glycyrrhizin (>500 mg/week) during pregnancy. Compared with those children with no or low exposure (0-249 mg/week), the ones exposed to Licorice had more trouble externalizing symptoms and were more likely to experience attention, rule-breaking and aggression problems. The effects were comparable to adverse fetal results due to overexposure to glucocorticoids.

## **Herbs Considered Safe in Pregnancy**

Throughout this white paper, the herbs we are considering safe have undergone clinical studies in pregnant women.

Before we look at individual herbs, we will discuss how to incorporate botanical medicines into a prenatal consult. It is important to educate patients about the use of herbs, as well as their safety and efficacy.

When a woman is pregnant, complete and total disclosure is a must. We do not want to overstate safety, nor do we want to scare a patient. Share information about an herb's traditional uses (e.g., food, beverages, tonics or medicine), as well as internal and external use.

Think about the herbal pharmacy and how you might prepare an herbal medicine. You may consider a tea that a woman can take over the course of a day if you want a weaker, longer-term effect. Consider combining teas with extracts or topical applications as needed.

Dosing in pregnancy and lactation is a bit different because of a woman's changing physiology. There are also some herbs that are appropriate during some trimesters but not others. For example, Red Raspberry leaf is not recommended during the first trimester, but it is during the second and third trimesters.

## **Recommended Forms**

During pregnancy, teas are a convenient way to dose with herbs. They are also very safe, as overdosing on tea is difficult.

Capsules are great, as are glycerites, which are sweet and do not contain alcohol. Tinctures can be used in pregnant women, in small amounts that would not lead to the teratogenic effects of alcohol.

Herbs can also be taken as food.

### Red Raspberry leaf



A tonifying herb for the uterus and reproductive system, Red Raspberry leaf tastes delicious and is a common ingredient in most commercially available pregnancy teas.

A retrospective study of 51 women found a decreased likelihood of premature and overdue labor when Red Raspberry leaf was taken.<sup>3</sup>

Another study of 192 low-risk pregnancies gave women 1.2 g of Red Raspberry leaf twice a day or a placebo, starting in the 32nd week. There was no change between the two groups in the first stage of labor, but the second stage was, on average, 10 minutes shorter. In addition, the Red Raspberry leaf group had fewer forceps deliveries (19% versus 30%).<sup>4</sup> Red Raspberry leaf acts as a uterine tonic and allows the uterus to be more productive during labor.

There was no increase in birth defects noted in either study.

**Botanical Name:** *Rubus idaeus*

**Part Used:** leaf

**Dose:** 30 to 100 ml/week(tincture); 1.2-2.4 gr/daily (tablets)

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<sup>3</sup> J Aust Coll Midwives 1999; 3: 20-25

<sup>4</sup> J Midwifery Women's Health 2001; 46: 51-59

Starting in the second trimester, Red Raspberry leaf can be taken as a tea, in doses of 1.5 grams to 5 grams daily. If women do not like the taste, they can make it into a tea and mix with a juice concentrate.

**Actions:** astringent, partus preparator, anti-diarrheal

**Indications:** prepare for labor, dysmenorrhea, mouth ulcers, diarrhea, uterine prolapse, uterine hemorrhage and GI bleeding

Use in second and third trimester.

## Common Conditions of Pregnancy

### Nausea and Vomiting

Between 50% and 90% of pregnant women experience at least some nausea, which usually begins in the fifth or sixth week and continues through 12 weeks gestation. About 15% to 20% of women will continue to experience some nausea into the third trimester and 5% will have nausea until birth.

Hyperemesis gravidarum, which involves very severe nausea and vomiting, occurs in <2% of pregnancies and can be debilitating. (As mentioned, this condition may require conventional treatment or additional intervention.)

There is an upside: Women who experience some degree of nausea and vomiting are less likely to miscarry or experience stillbirth. This is believed to be linked to a high level of progesterone, which is often indicative of a stronger pregnancy.

Vitamin B6 and Ginger have been extensively studied for nausea and vomiting.

The American College of Obstetrics and Gynecology considers Vitamin B6 to be a first-line treatment. A dose of 25 mg is given every 8 hours for 72-96 hours to reduce nausea and vomiting. Lower doses help for nausea but may not prevent vomiting.



## Ginger



Ginger is the best-studied herb for nausea and vomiting. A systematic review of six random controlled trials with 675 patients total and high methodological scoring found favorable results with Ginger. Four showed that Ginger worked better than a placebo; two showed ginger to be as effective as Vitamin B6. One study showed Ginger to be efficacious against hyperemesis gravidarum.<sup>5</sup>

A double-blind, randomized, cross-over, placebo-controlled trial of 30 women diagnosed with hyperemesis gravidarum received 250 mg of Ginger rhizome four times a day, and it provided significantly more effective of symptoms versus placebo.<sup>6</sup>

Another double blind study with 70 Thai women experiencing nausea and vomiting were given 250 mg of Ginger four times daily; they saw an 80% reduction in vomiting and significant improvement in nausea.<sup>7</sup>

In a randomized controlled trial, 120 women who were less than 20 weeks pregnant and experiencing morning sickness were given 1,500 mg of Ginger daily for four days. They experienced significant improvements in nausea and retching. Post-delivery follow-ups revealed birth weights, gestational age and APGAR scores were within the normal limits. (While there were some congenital abnormalities, they were at the same rate as the general population.)<sup>8</sup>

Ginger can be taken as a tea, soda, capsules, as candied ginger or in even cookies.

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<sup>5</sup> Obstet Gynecol. 2005 Apr;105 (4):849-56.

<sup>6</sup> European Journal of Obstetrics and Gynecology and Reproductive Biology, 38: 19-24, 1990

<sup>7</sup> Obstet Gynecol 2001; 97: 577-582

<sup>8</sup> Aust N Z Obstet Gynecol 2003; 43:139-144

**Botanical Name:** *Zingiber officinale*

**Part Used:** rhizome

**Dose:** Powder 250 mg four times daily; up to 1-1.5 grams daily

Tincture 1:5 .5 – 1 ml TID

**Actions:** anti-nausea, anti-emetic

### **Constipation**

Constipation is another common ailment during pregnancy, with prevalence varying between 14% and 40%. There is a greater risk in women who suffer chronic constipation, but it is common in pregnancy even in women without history. When progesterone increases, it decreases gastric motility due to its relaxing effect. Women tend to have less motility and a slower transit time, which increases water reabsorption, increasing the risk of constipation.

During pregnancy, women also have decreased muscle contraction, or peristalsis, to move stool through the colon. When combined, those two things can lead to intense constipation.

Inadequate fiber intake and lack of exercise can exacerbate constipation, so the first place to start is to ensure women get at least 35 grams of dietary fiber daily. Choose fruits and vegetables, which also offer hydration. Encourage exercise—even walking can help. Probiotics can also help, as can magnesium citrate, an osmotic laxative that draws water back into the stool through the gut. (This can be quite strong, so begin with a small dose.)

### **Herbs**

From an herbal perspective, Psyllium husk and Flax seed are bulk laxatives that can offer relief.

Psyllium husk shortens transit time by increasing stool volume and stimulating stretch receptors, thus increasing peristalsis. Work up from ½ to 2 teaspoons per 1 cup of warm water once daily. Many over-the-counter fiber products utilize Psyllium, but a cleaner format, either in capsule or powder form, is a better choice.

Flax seed provides fiber as well as omega-3 fatty acids. In one study, Flax seed was ground into flour and baked into muffins. At a dose of 25 grams twice daily, bowel movements increased by 30%.<sup>9</sup>

If those do not work, consider Senna, a stimulating laxative. Generally taken as a tea, it is approved and considered safe for acute use during pregnancy. Small doses of 1 to 2 grams in a tea taken before bedtime can soften the stool overnight.

### **Varicose Veins**

Varicosities are very common during pregnancy, affecting up to 40% of women. They happen most often on lower legs or as hemorrhoids in the rectum, but they can occur almost anywhere, including on the vulva.

Hormonal changes during pregnancy increase the fragility of blood vessel walls, and in addition, with a 30% increase in blood volume, there is more pressure on those vessels. The enlarged uterus can also cause increase venous pressure, leading to blood stagnation in vessels and rupture of venous valves, especially those that help keep blood flowing up against gravity.

Saphenous veins contain estrogen and progesterone receptors, which may play a contributing role, but there is no clear evidence known.

There are many herbal options for treating varicose veins, with Horse Chestnut Seed being the most common.

### **Horse Chestnut Seed Extract**

**Botanical Name:** *Aesculus hippocastanum*

**Part Used:** seed

**Dose:** Taken orally: Chestnut Seed extract 300 mg containing 50 mg aescin 2x/day for 2-12 weeks

Clinical studies use extracts standardized to 16-20% aescin.<sup>10</sup>

### **Actions:**

It helps strengthen blood vessel walls to protect against varicose veins.

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<sup>9</sup> Am J Clin Nutr 1995;61:62-8.

<sup>10</sup> Arch Dermatol 1998;134:1356-60.

**Indications:**

Several well-designed studies suggesting superiority over placebo, and suggesting supplementation may be equal in efficacy to compression stockings.

It is not generally recommended for use in pregnancy, but this is due to lack of data rather than contraindication or known adverse events. No teratogenic effects have been seen in animals given even very high doses of extract orally, but reduced fetal weight was seen.

You might not want to use it in all pregnancies, but for a woman who is really suffering, it can be beneficial in small doses.

**Bilberry**

**Botanical Name:** *Vaccinium myrtillus*

Other plants rich in anthocyanins, such as blueberries and pomegranates, can be considered.

**Part Used:** berries

**Dose:** 100-400 mg daily for up to 6 months

**Actions:**

Preliminary research shows anthocyanins in fruit can reduce varicosities.

**Indications:**

Can be taken preventively

**Other herbs**

Pycnogenol, made from pine bark, is a flavonoid that can be used for varicosities. By mouth, dosage is usually 100-120 mg tid, but lower doses of 50 mg tid may also be effective.<sup>11</sup>

Nettle leaf, which is a venotonic herb, can be safely taken as a nutritive tea, and you can combine it with herbs such as Red Raspberry leaf.

**Heartburn**

Up to 65% of women experience heartburn in pregnancy, usually after five months gestation. This happens because of relaxed lower esophageal sphincter tone due to

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<sup>11</sup> Phytomedicine 2000;7:383-8.

hormonal changes, including progesterone. This combines with mechanical pressure on the stomach as the baby develops. During pregnancy, heartburn is not usually related to pre-existing heartburn.

The first step is to eliminate common food triggers, such as acidic foods. Eating smaller quantities of food more frequently can help, as it prevents the stomach from being overfilled. Encourage women to avoid eating before bed, as when they lie down, gravity is no longer working to their benefit to keep food in the stomach.

### **Herbs**

The herb that I find most effective in my practice is DGL, or deglycyrrhizinated licorice. As previously discussed, Licorice is not appropriate in its whole plant form during pregnancy, but the DGL form, which has had the glycyrrhizin removed, appears to be safe. It is controversial, as it originates from Licorice, but its degree of safety depends on the reference. Generally, references will say that Licorice is not safe during pregnancy, but some specify that DGL is considered safe.

For a woman who knows she has heartburn, dosing is 400 to 500 mg of DGL up to tid, dosed 20 minutes before a meal. It also can be used after a meal on an as-needed basis.

Some other options are Slippery Elm lozenges, Marshmallow root or other demulcent herbs that can add a soothing coat to the esophagus.

This can be dosed as a cold infusion. Combine 1 heaping tablespoon each of Slippery Elm and Marshmallow in 1 liter of water. Stir and let sit in the fridge overnight. Strain and drink through the day. Using cold water pulls out the mucilaginous components of the plants more slowly, making it easier to drink. Using hot water will cause it to firm up and turn into a thick gel that becomes undrinkable. For a woman who is really irritated, you can also add glutamine powder, another soothing nutrient.

### **Colds & Flu**

While colds and the flu are not necessarily more common during pregnancy, they can feel like more of a nuisance when a woman is experiencing other symptoms and might be unable to take her preferred over-the-counter medications or herbal treatments.

There are plenty of lifestyle options that you can turn to when treating a cold or the flu during pregnancy. This includes saline nasal rinses, using a neti pot or a 30 mL or 50 mL syringe.

Stems with antimicrobial essential oils such as Thyme, Eucalyptus and Lavender are also an option. While women should avoid taking these oils internally, inhaling them

with steam is safe and can be helpful. It provides the antimicrobial properties topically in the lungs, nasal passages and pharynx.

A traditional saltwater gargle works well for a sore throat. For coughs during pregnancy, use Honey. (Honey, it should be noted, cannot be used with infants.)

### **Herbs**

Some herbs are safe to use for treating colds and the flu during pregnancy.

Echinacea is considered safe for use during pregnancy, with studies to back it up. (According to some studies, it is the most widely used herb by pregnant women.)

The first prospective study suggested it can be safely used for 5 to 7 days during pregnancy without adverse effects, even during the first trimester, which is when organogenesis occurs.

Black Elderberry syrup is a favorite herb for immune support, and children like it, too. There have been no published trials during pregnancy, but no adverse events have been noted in the literature, according to the *American Herbal Products Association's Botanical Safety Handbook*.

### **Insomnia**

Insomnia is a very frequent problem in pregnancy, especially into the third trimester, with up to 90% of women reporting disrupted sleep. This is primarily linked to discomfort from the extra weight. Frequent urination is another contributing factor.

Disrupted sleep has been associated with poor obstetric outcomes, with regards to length of labor and type of delivery. One study found that women who slept less than six hours a night had longer labors and were 4.5 times more likely to require a cesarean delivery.

There is no good safety data on nervines or sedatives during pregnancy, so start by focusing on sleep hygiene. Light plays a huge role in our natural production of melatonin, so ensuring the bedroom is dark can help. Also, supportive pillows, especially those designed for pregnancy, can be helpful. Women should also consider their food and drink intake before bed. She might need to cut back on fluids after dinner if she is having issues with frequent urination.

I consider it safe to use relaxing teas including Chamomile, Lavender or Lemon Balm. The use of relaxing and calming nervines could be considered for short-term use in the third trimester, but safety data is lacking and caution is advised.

Valerian, which is a sedative, is reported to have no adverse effects at relatively high doses in animals during pregnancy. However, there are no human trials to support human use.

### **Muscle Cramps**

Muscle cramps are another common complaint of late pregnancy. To start, consider whether a woman experiencing this symptom is getting enough fluids and whether she is getting enough movement, both of which can help alleviate the issue.

Magnesium is my first choice, nutritionally. It can be applied topically through an Epsom salts bath. Add 1 cup to a warm bath, and the magnesium is absorbed through the skin, relaxing the body.

Women can integrate nutritive herbs such as Nettle, Chlorella and Spirulina into food as a way to support healthy muscle tissue.

### **Stress & Occasional Anxiety**

While stress and occasional anxiety can be common during all times in life, it can sometimes increase when big life changes, such as pregnancy, occur. Lifestyle approaches such as exercise and sleep are first-line recommendations for stress and anxiety.

As treatment, you can consider relaxing herb blends, including Lavender, Chamomile, Lemon Balm and Holy Basil.

### **Holy Basil**

Also known as Tulsi, Holy Basil is considered an adrenal adaptogenic herb. While no adrenal herbs have been tested in pregnancy (other than Licorice, which is not considered safe), Holy Basil can be considered if a woman really needs some adrenal support.

Holy Basil is an herb traditionally used to support fertility in both men and women. It has a galactagogue action, and it is really uplifting, calming and relaxing. Some adrenal herbs such as Licorice or Ginseng are rather stimulating, making them ideal herbs for non-pregnant women who are stressed and tired. Those herbs will perk them up. Holy Basil is for women who are stressed and wired, someone who gets more anxiety and gets amped up and needs to calm down and get more grounded.

Holy Basil can be used as a tea. Use 1 teaspoon dry Holy Basil in 8 ounces water, steep 1 to 3 minutes and strain. Dr. Mary Bove provided a recipe for Holy Basil Butter. Mix 8 teaspoons soft butter (1 stick) or ghee with 2 teaspoons of dry Holy Basil or 4 teaspoons finely chopped fresh Holy Basil. Store in the refrigerator and use it like a food.

## **Herbal Safety in Pregnancy**

When treating women with herbs during pregnancy, I recommend referencing *Herbal Medicines in Pregnancy and Lactation: An Evidence-Based Approach* and the aforementioned *American Herbal Products Association's Botanical Safety Handbook*.

### **About the Author**

Dr. Jaclyn Chasse, N.D. is a naturopathic physician who is passionate about integrative medicine and the natural products industry. Dr. Chasse's unique background includes clinical practice, lab sciences, extensive teaching and strategic leadership. Dr. Chasse currently works for Emerson Ecologics, the largest distributor of dietary supplements to health care professionals, where as VP of Scientific and Regulatory Affairs, she provides oversight of the Medical Education and Quality teams. She is a sought-after writer for both peer-reviewed journals and lay publications and speaker at national and international conferences, presenting on topics in regulatory affairs and integrative clinical practice, specifically in the specialty areas of women's health, infertility, and pediatrics. Additionally, Dr. Chasse is very involved in several nonprofit organizations including the American Association of Naturopathic Physicians, where she will take office as President in 2016, and as a Trustee for the American Herbal Products Association. She is the immediate Past-President of the NH Association of Naturopathic Doctors.