

Massage and Other CAM in Pregnancy

by Jewel D. Adams, MS LMT

Abstract: Pregnant women may experience pain, nausea, sleeplessness, anxiety, and depression. Medications are usually contraindicated during pregnancy as they may interfere with the baby's development. Complementary and alternative therapies such as massage therapy, essential oils, and herbs can offer natural relief. Research is limited on the use of herbs for pregnant women; these should be used cautiously. For prenatal health-care practitioners, the opportunity to instruct expectant mothers in alternative therapies can provide hope for those who are unable to find relief through traditional medicine. Suggestions for prenatal education are provided, as well as guidelines for using massage and other complementary therapies during pregnancy.

Keywords: essential oils, massage therapy, prenatal massage, alternative therapies

Alternative Therapies and Pregnancy

For some women, pregnancy and childbirth create physical and emotional strain. Symptoms of pain, sleeplessness, anxiety, nervousness, nausea and depression can bring suffering during a time that should be hopeful and expectant. Alternative therapies can assist pregnant women with the changes they experience and could potentially alleviate the emotional and physical strains which might occur. If pregnant mothers can receive information on massage and other complementary and alternative (CAM) therapies, those mothers who are reluctant or unable to pursue traditional

medicine for relief from these symptoms could find help and hope in other approaches.

Massage in Pregnancy and Labor

Haines and Kimber (2007) report increasing interest among pregnant women in CAM as they seek to avoid pharmacological solutions for pain during childbirth. The benefits of massage can include a decrease in stress and the resulting hormones (catecholamines) as well as an improvement in other hormonal functions and the speed of labor (Stager, 2009). Massage causes oxytocin levels to rise and thus can aid in relieving sleeplessness and enhancing feelings of wellbeing (Haines & Kimber, 2007). There are no discussions in the literature about the dangers of stimulating premature labor when oxytocin is released in massage. Massage during labor and childbirth can reduce the anxiety and fear the mother is experiencing but may not feel safe voicing and can provide exceptional pain relief (Haines & Kimber (2007). Haines and Kimber (2007) recommend the following three elements for massage implementation during labor and delivery:

1. Specific massage techniques for the arms, legs and back, including controlled breathing and visualizations
2. Controlled environment conducive to a positive and relaxing birth, and
3. Scientific understanding of the neurology of touch and massage techniques.

Massage can “increase the frequency and ease with which a mother touched her new infant, benefits known to traditional birth attendants long ago” (Stager, 2009, p. 68). Çoban and Sirin (2010) conducted a study with 80 women near the end of their pregnancy and provided 20 minutes of foot massage for five days, whereas the control group received only standard prenatal care. Women who had received the foot massage had significantly decreased swelling and edema (Çoban & Sirin, 2010).

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Field (2008) reported on two studies where pregnant women received massage therapy. The first study Field reviewed included a 20 minute massage by a massage therapist once a week for five weeks. The results were decreased cortisol levels, a decrease in excessive fetal activity, lower rates of premature birth, decreased anxiety and depression, and decreased back and leg pain (Field, 2008). The second study included depressed pregnant women who received massages from their significant others for 20 minutes once a week for 16 weeks, and the results were similar to the first study, with significantly reduced depression, anxiety, and cortisol levels, as well as improved pregnancy outcomes (Field, 2008). Since elevated cortisol is linked to premature deliveries, Field reported the benefit of massage in reducing cortisol levels could be a contributing factor in reducing premature births among pregnant women who receive massage.

Perineal Massage

While used for centuries, this massage technique resurfaced in the literature in the late nineties. Sampsel, Miller, and Rossie (1997) describe perineal massage as “the technique of massaging during the prenatal period in order to stretch the tissues surrounding the posterior half of the vaginal opening” (para 2). Sampsel et al. explained the theory and techniques for perineal massage are based upon sports massage, which implements slow stretching to prevent injury. The perineal area is dense with collagen fibers which are initially resistant to stretching but relax when exposed to prolonged tension. The feeling of a perineal massage is similar to the pressurized stretching expectant mothers will feel as their babies’ heads are moving through the vagina (Sampsel et al., 1997). Field (2008) reported that women who receive perineal massage have less perineal trauma at birth, require fewer sutures, and in some cases, have avoided the need for an episiotomy.

Eogan, Daly, and O’Herlihy (2006) in a large study instructed women and their partners to use perineal massage at least five minutes each day in the last two months of pregnancy. Eogan et al. thought that perineal massage could act as primary prevention for episiotomy and tearing. Perineal massage significantly reduced postnatal perineal pain scores (Eogan et al., 2006). This study did not find increased incidence of intact perineum at delivery or changes in postnatal continence scores (Eogan et al., 2006); however, other studies

did find that regular perineal massage reduced the incidence of tearing and the need for episiotomies (Mehrnaz et al., 2010).

After perineal trauma, some women might find relief from essential oil application either “through inhalation, as an additive to bath water, or by application onto a sanitary pad” (Jones, 2009, p. 568).

Sampsel, Miller and Rossie (1997) provide instructions for perineal self-massage as follows:

1. Place thumbs 1 1/2 inches inside lower vaginal area.
2. Press downward toward the back, while pressing toward the sides.
3. Continue stretching gently until a “slight burning, tingling, or stinging” (Sampsel et al., 1997, para 13).
4. Hold this pressure until the area feels slightly numb (approximately 2 minutes)
5. Continue pressure using thumbs.
6. Use a lubricant such as olive oil, coconut oil or sweet almond oil (Eogan, Daly & O’Herlihy, 2006), and slowly massage the lower vaginal area for 3 to 4 minutes.
7. Relax in between sessions, and repeat two or three times.

Sampsel et al. (1997) provide instructions for perineal partner massage as follows:

The partner places both index fingers approximately 1 1/2 inches into lower vaginal area.

Partner presses downward towards back, while pressing toward both sides of vagina until the “burning, tingling, or stinging” (para. 15) is felt.

Partner should hold for approximately 2 minutes until the area feels slightly numb.

Partner should adjust pressure to woman’s comfort level.

Partner slowly massages the lower vaginal area for 3 to 4 minutes, using olive oil, coconut oil or sweet almond oil as lubricant is recommended, (Eogan et al., 2006)

Relax and repeat two to three times.

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Caution should be taken to avoid infections through cleanliness, emptying of bladder before massaging, and using a nonsynthetic, natural lubricant such as olive oil; women with vaginal infections or herpes lesions should not massage as the massage could worsen symptoms (Sampselle et al., 1997). Perineal massage should be performed daily, beginning 6 weeks prior to the due date, for 5-10 minutes a day.



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Nausea and Vomiting During Pregnancy

Ågren and Berg (2006) reported that nausea and vomiting occurs in 70-80% of pregnancies. The treatments for nausea and vomiting can include pharmacology, “herbal remedies, acupressure, hypnosis and homeopathy” (Ågren & Berg, 2006, p. 169). Women might also require IV fluids to treat dehydration. Rarely do any of these remedies provide complete respite from nausea and vomiting during pregnancy, and many women are appropriately reluctant to take pharmacological remedies. These discomforts of pregnancy can be very difficult to manage.

Ågren and Berg (2006) enrolled 10 women who had been hospitalized with severe nausea and vomiting during pregnancy (SNVP) for a study in the effects of tactile massage on SNVP. Tactile massage, which can be applied to hands and feet or to the entire body, is a slow and gentle modality. All women who participated in Ågren and Berg’s study reported an improvement in their symptoms, and two reported that the nausea never returned. It is unclear how much of the therapeutic results were based on the physical benefits of the massage work, the emotional relief provided through the care and nurturing touch of the massage, or a placebo effect (Ågren & Berg, 2006). Regardless of the how

the benefits were achieved, Ågren and Berg’s study reported an impressive and significant improvement in SNVP for all participants.

Massage Contraindications

Most massage therapists are taught to be cautious in massaging a pregnant woman’s ankles; in fact, many are taught to avoid this area completely in order to avoid inadvertently triggering acupressure points linked to contractions. Stager (2009) reported this fear is largely based in myth, but some genuine concern could arise if deep acupressure were applied to acupoints around the ankles. The acupoint areas often considered useful for labor induction are located on the hand, inner leg, sacrum, and “one adjunctive point just posterior to the lateral malleolus” (Stager, 2009, p. 73). Most massage therapy will not include deep acupressure points and should be safe and even beneficial in relieving edema (Stager, 2009).



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Yates (2008) reported that massage therapists who are providing bodywork to pregnant women need to be aware of hormonal changes (relaxin and progesterone) which increase blood flow and cause smooth muscle relaxation. As a result of increased blood flow, the tapotement (tapping) techniques normally used in many massage styles would be contraindicated for the pregnant woman. Also contraindicated would be deep stretching, as the muscles might be damaged. Caution should also be exercised if the pregnant woman has varicose veins (Yates, 2008). Specific gentle massage techniques are indicated for varicose veins, as deep techniques could create bruising, and impeded healing. Care should always be taken with pregnant women as the likelihood of having and dislodging a blood clot in the leg is higher and the consequences can be deadly.

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Women who report leg pain in pregnancy should be assessed for blood clots before the legs are massaged.

Lymphatic drainage and circulatory massage are techniques recommended for varicose veins (Jordan, 2001). Massage strokes should move toward the heart, but this is particularly important when addressing venous insufficiency (Jordan, 2001).

Doulas

Burns, Zobbi, Panzeri, Oskrochi, and Regalia (2007) reported interest in CAM has increased globally among healthcare workers as well as patients. CAM can include the services of a doula (a practitioner who provides non-medical support for women through pregnancy and childbirth), herbal medicines, essential oils used for aromatherapy, and massage. Steel, Adams, and Sibbritt (2011) reported that women who used a doula felt they benefited with feelings of stability and security through their birth experience (Steel et al., 2011).

The doula's role is to support the mother and mediate her needs between health providers and her partner without managing or directing (Steel et al., 2011). Doulas' roles have been categorized as "(1) family and friend, (2) social and health service provider and advocate, and (3) general life coach and counselor" (Gentry, Nolte, Gonzalez, Pearson & Ivey, 2010, p. 32). Doulas often assist pregnant women by filling the needs their family and friends cannot provide.

Techniques doulas may use to assist pregnant women during labor and delivery include:

1. Utilizing imagery, massage, acupressure, and patterned breathing for pain relief;
2. Recommending positional changes for the woman to accelerate labor or help in fetal positioning;
3. Providing support to reduce fear and anxiety;
4. Encouraging communication and touch between the woman and her partner during the labor and delivery (Papagni & Buckner, 2006).

Essential Oils

Essential oils, after entering the body through the skin or the nose, evoke the sense of smell which, in turn, stimulates the limbic system of the brain where emotion and memory are processed (Walls, 2009). Essential oils can be administered topically during massage or applied to the skin directly, through inhalation (through diffusers or via oil placed on cotton ball or fabric), or through hydrotherapy (full, foot or sitz bath). Smith, Collins, and Crowther (2011) report that essential oils enhance the natural body's production of its own chemicals of sedation, stimulation, and relaxation.



Essential oils should never be taken orally

Care must be taken when blending essential oils, applying them topically, or adding them in the bath. Essential oils are highly concentrated and are meant to be mixed with a carrier oil. Jones (2009) reported a case where a patient with chronic vulvovaginitis used tea tree and lavender oil for vulval and peri-anal irritation and had an allergic reaction. This case illustrates the need for caution with essential oil concentrations and potential for misdiagnosis if reactions occur. Jones (2009) reported that lavender was found to be cytotoxic to cells in high concentrations. Cell breakdown results from toxins, and cases of significant dermatitis have been reported.

The properties of some essential oils can change when they are blended with other oils. Jones (2009) reports that "in some bacterial strains, lavender and tea tree, and citradel

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and tea tree showed decreased activity when compared to tea tree alone” (p. 569). More research is needed to understand the complexities of the essential oils and how they interact with each other. Also, health practitioners should be aware that essential oils could inactivate or enhance other medications (Jones, 2009).

A guideline for oil blending is as follows: A one half ounce bottle contains 750 drops, and the essential oil should be between 20 and 40 drops, with carrier oils such as almond, coconut, or grapeseed filling the rest of the bottle. Stronger ratios of essential oils to carrier oils can cause skin reactions. It is advisable to blend only one essential oil with one carrier oil at a time, so that if a woman has a reaction to an essential oil or carrier oil, the oil causing her a problem can be identified quickly. The oils’ effects can change when they are blended.

When using essential oils in the bath, 8-10 drops in a bath is recommended. As with the oil blending guidelines, one oil should be used initially, to be able to identify and isolate any oils that cause reactions for the patient. When using essential oils in a diffuser, use 5 drops per 1/4 cup water (about the amount that a diffuser bowl would hold).

Burns et al. (2007) conducted a study of 22 women in Italy to compare the effectiveness of one essential oil to another for pain relief during labor and delivery. Each woman was offered a choice of one of five essential oils: “Roman chamomile (*Chamaemelum nobile*), clary sage (*Salvia sclarea*), frankincense (*Boswellia carteri*), lavender and mandarin (citrus reticulata)” (Burns et al., 2007, p. 839). Although not discussed in Burns et al.’s study, an essential oil blend using bergamot and rosemary are also recommended during labor and delivery (Walls, 2009). The carrier oil for each essential oil, which were certified to be free of contaminants, in the Burns et al. study was sweet almond. The indications for administering the essential oils were to reduce fear and anxiety, augment contractions, and reduce pain (Burns et al., 2007). The women who used aromatherapy had a reduced perception of pain, but there were no differences in intrapartum events, length of labor, or Apgar scores between the essential oil group and the control group (Burns et al., 2007). Lavender was used most often to ease maternal anxiety, pain and fear, and to enhance the mother’s sense of wellbeing (Burns et al., 2007). There were no adverse maternal or neonatal effects from the essential oils in this study (Burns et al., 2007).

Recommendations for Prenatal Educators

Those who are instructing pregnant women should be advised and aware of the CAM options that are available. The education the pregnant women receive in class might be their only exposure to complementary and alternative options. Instructors might consider implementing the following steps, in preparation for training expectant mothers:

1. Locate massage therapists who specialize in prenatal massage, and provide these practitioners’ names and numbers to expectant mothers. Consider inviting these massage therapists to attend the childbirth class.
2. Provide essential oils during class and the opportunity to try some aromatherapy either through diffusion or light inhalation (through cotton balls).
3. Provide the steps for perineal massage and include the benefits of perineal massage. The prenatal education might be the only opportunity to receive the information for this kind of massage.
4. Caution expectant mothers against the use of multiple herbs or multiple essential oils at once, in order to more safely monitor potential reactions to these unregulated substances. It is best to introduce one oil or herb at a time, noting responses to each substance used.

The education from prenatal instructors could make the difference in whether pregnant mothers’ deliveries are stressful and anxious, or whether the women are able to take control with new tools and start their new lives with a confidence they would not have had otherwise.

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