

Mindful Fitness: Guidelines for Prenatal Practice

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Abstract: Mindfulness exercise practices offer a form of physical activity which is uniquely suited to support both psychological and physical health during pregnancy. Mindfulness exercise practices, which include yoga, qi gong, tai chi, and martial art forms such as kung fu, karate, and tae kwon do, combine physical activity with deliberate breathing exercises and focused attentional strategies. The purpose of this article is to review the various forms of mindfulness exercise and outline basic guidelines for mindfulness exercise training during pregnancy.

Keywords: pregnancy, exercise, mindfulness, Yoga, Tai Chi

Both the American College of Sports Medicine (ACSM, No date) and the American Congress of Obstetricians and Gynecologists (ACOG, 2011) recommend exercise during pregnancy to support health outcomes, including improved psychological health such as improved mood and energy, and improved physical health, for instance, reduced pain and constipation, improved posture, and reduced risk of gestational diabetes. However, research from the University of North Carolina indicates that only 23% of pregnant women achieve the minimum recommendation for physical activity during pregnancy (Evenson, 2010). Providing pregnant women with a variety of exercise practices may increase access to activity and therefore encourage women to engage in physical activity during pregnancy. Mindfulness exercise practices offer a form of physical activity which is uniquely suited to support both psychological and physical health during pregnancy.

Mindfulness is the practice of complete present-moment awareness (Lasater, 2000). Mindfulness exercise practices, which include yoga, Qi Gong, Tai Chi, and martial art forms such as Kung Fu, karate, and Tae Kwon Do, combine physi-

cal activity with deliberate breathing exercises and focused attentional strategies. This combination of activity, breathing, and focus helps the individual practitioner to develop an increased capacity for self-control. Self-control is correlated with improved psychological health in mindfulness practitioners (Bonura & Tenenbaum, 2014). Research demonstrates the wide-reaching benefits of mindfulness practices, including improved psychological health (through reduced stress, anxiety, and depression, and increased satisfaction with life) and improved physical health (reduced blood pressure and cholesterol, improved hormonal profiles). Research with mindfulness exercise practices indicate that the combination of exercise and mindfulness strategies may offer unique psychological and physical benefits above and beyond either meditation training or exercise training alone.

For pregnant women, mindfulness exercise practice may be particularly useful, as it prepares the pregnant woman for both the physical and psychological demands of pregnancy, labor and delivery, and postnatal recovery. The purpose of this article is to briefly review the various forms of mindfulness exercise, and outline basic guidelines for mindfulness exercise training during pregnancy.

Yoga

Yoga practice can be a good adjunct to birthing education, providing an opportunity for gentle physical exercise, mental focus training, and breathing exercises, which can be helpful during labor and delivery. Regular yoga practice during pregnancy can improve both quality of life and interpersonal relationships (Rakhshani, Maharana, Raghuram, Nagendra, and Venkatram, 2010). Yoga also reduces both stress and anxiety in pregnant women (Beddoe, Yang, Kennedy, Weiss, & Lee, 2009; Satyapriya, Nagendra, Nagarathna, & Padmalatha, 2009). Further, yoga is an effective strategy for pain management both during pregnancy (Beddo, Yang, Kennedy, Weiss, & Lee, 2009) and during labor (Chuntharapat, Petpichetchian, & Hatthakit, 2008). A well-rounded prenatal yoga program should include several core components, including meditation training, breathing

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practice, standing poses, and squats. Yoga Alliance, the national registry of yoga teachers, offers a Registered Prenatal Yoga Teacher designation, which indicates a yoga teacher with both training and experience in working with pregnant women. For a more detailed review of prenatal yoga recommendations, including exercises which can be incorporated in childbirth education classes, see Bonura (2014).

Qi Gong

A growing number of people in the west are becoming interested in the practice of Qi Gong. This mindfulness practice, developed in China for maintaining health, consists of gentle flowing low impact exercises which are well suited for even a pregnant beginner. Some of the benefits of engaging in Qi Gong prenatally include a reduction in anxiety among first time mothers (Jeong & Lee, 2006), a reduction in prenatal depression (Lee, Kim & Ahn, 2006; Ji & Han, 2010), decreased physical discomfort during pregnancy as well as a stronger postpartum maternal-infant interaction (Ji & Han, 2010).

As some Qi Gong practices are held in parks or out of doors it is important for the prenatal practitioner to avoid overheating when the weather is warm. The National Qigong Association provides training and certification to teachers and can be a good source for classes in your area.

Tai Chi

Tai Chi is a Chinese martial art without the swift high-impact movements typical of most martial arts. It is practiced as series of upright, slow, graceful, and fluid movements carefully focused upon posture and joint alignment. Tai Chi is very gentle and can be safely started at any stage of pregnancy. As Tai Chi requires neither special clothing nor a mat, and the practice of a series of movements can take as little as five minutes, the practice can be maintained throughout pregnancy and continued by a new parent with limited time for exercise.

Due to hormonal changes during pregnancy, postural stability declines and does not return until as much as two months post-partum (Butler, Colón, Druzin, & Rose 2006). The main focus of Tai Chi is to develop stability while moving, and there is much evidence that the practice of Tai Chi reduces falls (Voukelatos, Cumming, Lord, & Rissel, 2007). Tai Chi can be a helpful exercise modality to improve balance and reduce the incidence of falls during pregnancy.

Considered a form of moving meditation, Tai Chi has been shown to significantly decrease depressive symptoms, including low-mood and sleep disturbance in pregnant

women who had a diagnosis of depression (Field, Diego, Delgado, & Medina, 2013). During the physical and emotional challenges of pregnancy, post-partum and lactation, when medications can only be used to a limited extent, the practice of Tai Chi can be a natural mood stabilizer.

Martial Arts

The martial arts include a variety of practices from the East, most commonly Karate (from Okinawa), Tae Kwon Do (from Korea), and Kung Fu (from China). Generally speaking, the martial arts are training programs designed to train the individual in self-defense, and may include a variety of strategies such as kicking, striking (with hands or feet), grappling, redirection of the opponent's energy, and use of weapons. Technically, Tai Chi is a martial art form practiced as part of combat training; in many current practices, Tai Chi is primarily practiced as an exercise program focused on meditation and individual training, and extensive research has documented the positive effects of Tai Chi on health outcomes.

To our collective knowledge, there are no published articles which investigate the use of other martial arts modalities during pregnancy. Based on the guidelines from the ACSM and ACOG, we offer the following suggestions for prenatal exercise. Martial arts training in its more strenuous forms (such as Karate, Tae Kwon Do, and Kung Fu) is not appropriate during pregnancy for women who do not have prior experience in these activities. However, both the ACSM and ACOG indicate that women who are already fit and regularly engage in activity should be able to continue their current level of physical fitness and exertion during pregnancy, as long as they have a low-risk pregnancy and no contraindications to physical activity. Women who have experience with the martial arts should consult with their obstetrician or midwife to determine whether continued practice is appropriate during pregnancy, and work individually with their instructor to modify and adapt their practice throughout pregnancy and during postnatal recovery. These adaptations would involve being more careful to stretch before and after exercise, possibly wearing a light weight maternity girdle to reduce back strain due to stretching of the round pelvic ligaments, and avoidance of becoming overheated. As well, pregnant women should not spar with other individuals during pregnancy, to avoid risk of trauma to the belly. These recommendations are aligned with ACOG guidance that pregnant women should avoid sports such as ball-sports, horseback riding, and cycling, which may lead to trauma of the belly due to impact or falling. Pregnant women who wish to continue martial arts training during pregnancy should focus on low-impact, individually practiced exercises, such

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as practicing kata or forms (generally, a flowing sequence of moves or body positioning). Future research is needed to better understand both the safety and effects of martial arts training during pregnancy.

Mindful Exercise during Pregnancy: Appropriateness Based on the Individual Woman

The appropriateness of an exercise modality during pregnancy must be determined based on the current health and fitness of the individual woman, as well as prior experience with the exercise modality and any potential contraindications. Experienced practitioners may continue a higher level of activity throughout their pregnancy. New practitioners and women who have not previously engaged in regular exercise should focus on gentle, instructor-guided, low-strain forms of exercise to avoid risk of injury. Mindfulness and meditation training is always appropriate, but breath-holding forms of meditative practice should be avoided during pregnancy. For safety, consider any contraindications to exercise during pregnancy.

Ask your clients to follow the following safety guidelines:

- Review the ACOG patient recommendations at: <http://www.acog.org/Patients/FAQs/Exercise-During-Pregnancy>
- Review the ACSM current comment at: <http://www.acsm.org/docs/current-comments/exerciseduringpregnancy.pdf?sfvrsn=4>.
- Follow standard practice for exercise during pregnancy, such as avoiding any postures where you lie flat on the back in the second and third trimester.
- Hot forms of exercise (for instance, yoga in a heated room, or martial arts training outside during the summer) are contraindicated due to potential risk of overheating, stress on cardiovascular function, etc.
- Avoid undue strain on the joints caused by jumping into positions or placing excessive pressure on joints through extreme range-of-motion or weight bearing.
- Allow time for rest between stretching activities. The hormone relaxin increases flexibility during pregnancy, which may increase the risk for straining or tearing muscles.
- Avoid contact with others and do not engage in activities which may lead to trauma to the belly. For instance, in the martial arts, do not practice sparring during pregnancy.
- Pain and strain are not appropriate. If discomfort continues, the individual should stop and consult with her doctor or midwife prior to further exercise activity.

Gentle practice forms such as tai chi, qi gong, and some forms of yoga are appropriate for pregnant women of all fitness levels.

Summary and Recommendations

Exercise during pregnancy is a key component of supporting both physical and psychological health for the pregnant woman. Less than one-fourth of pregnant women meet minimum exercise recommendations from the ACOG and the ACSM. Offering additional options for pregnant women to engage in regular exercise through mindfulness fitness practices may support more women in remaining active during pregnancy. Childbirth educators can work with mindfulness fitness instructors in their area who have both training and experience with pregnant clients. Future research is needed to better understand the unique benefits of mindfulness fitness during pregnancy and better support childbirth educators in effectively recommending mindful fitness modalities to their students.

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