



'Helping You Fulfill Your Body's Potential'

Modified Pilates for Pregnancy

Is it safe to exercise during pregnancy?

Medical and fitness professionals agree that any exercise including Pilates is safe during pregnancy if a mum-to-be has no medical complications or pre-existing conditions such as a history of miscarriages.

The best advice for anyone who is planning a pregnancy is to commence some form of exercise regime prior to becoming pregnant. The predominant aim is to maintain pre-pregnancy fitness levels rather than improve them.

If pregnancy is suspected, all exercise should be ceased until the pregnancy has been confirmed. Medical clearance must be obtained if you wish to continue or commence an exercise programme once you know you are pregnant. If pregnancy is because of IVF treatment, it may not be advisable to continue with or start an exercise programme. You should seek medical advice about this.

If you are used to exercising and have a good level of fitness, you may continue to exercise throughout your pregnancy, but you will have to consider making some changes including performing lower-level intensities.

If you have a more sedentary lifestyle and are not used to exercising, you may start an exercise programme, but it should be an appropriate level for your current fitness level.

Avoid activities such as running, lifting heavy weights, or standing for long periods of time.

Be careful when stretching and limit range of movement. The hormone relaxin affects ligaments and joints making mums-to-be feel that they have a greater range of joint movement. Over-stretching may cause long-term joint damage affecting other parts of the body such as the pelvis. A debilitating condition called pubic symphysis syndrome may occur because the joint stabilizing ligaments around the pelvic bones become too stretchy and relaxed. This causes joints such as the sacroiliac joint to widen which results in inflammation and pain especially when walking or climbing stairs. In extreme cases, the only cure is immobilisation and bed rest.

Warning signs during pregnancy

Stop exercising immediately and contact your GP if you experience any of the following:

- Vaginal bleeding or excessive discharge from vagina
- Abdominal or chest pain; heart palpitations or shortness of breath
- Sudden swelling of hands, feet, or face
- Severe, persistent headaches, dizziness, feeling faint or excessive fatigue

- Raised blood pressure, severe anaemia
- Severe pain in pubic area or hips
- Severe nausea or vomiting, high temperature (over 100°F or 38°C)
- Placenta Praevia (placenta too low or too close to cervix)
- Uterine contractions or breaking of waters, baby small for date

Things to consider before starting Modified Pilates during pregnancy

Your posture will change during pregnancy causing muscular imbalance which can result in joint and/or back pain. Whilst Modified Pilates is the ideal form of exercise to address such issues, it involves a lengthy process of learning the principles of the technique and exercise movements. It requires mindfulness which doesn't come easily to all at first because of the busy world we live in. The slow, purposeful movements do not suit everyone especially those who are used to a faster pace of exercising. Certainly, you won't gain any benefit unless you commit to regular class attendance.

Whilst you may feel that you can commit to Pilates, during pregnancy there are additional things to consider. During the early stages of pregnancy, you will experience hormone changes that may cause nausea, lethargy, tiredness or even exhaustion that hinders regular class participation. As the pregnancy progresses and baby grows, there will be restrictions and you will have to be prepared to adapt the way you perform certain movements.

Depending upon the stage of pregnancy you are at, it may not be worth starting Pilates until after the baby is born. During the 2nd and 3rd trimesters, contraindications arise that limit the movements you can perform and if your baby is big or you are having a multiple birth, you may have to stop Pilates earlier than anticipated. You'll most likely have to stop at some stage during the 3rd trimester as the baby grows in these latter weeks.

After the birth attending classes might become problematic if there were complications when giving birth. Other issues that might arise include struggling to establish a regular routine for you and your baby and/or childcare provision.

Members of our studio who have done Pilates for several years and who have become pregnant have had no problems whatsoever continuing class participation right through to the 3rd trimester, and some right up to the birth of their baby. Their knowledge and understanding of the Modified Pilates technique enabled them to adapt movements as they progressed through their pregnancy. After the birth, most resumed Pilates but there are always some who find it difficult to get back to regular class attendance until they have established a routine after returning home with their baby.

For those for whom Pilates is not a way of life prior to pregnancy, maintaining regular class attendance has not always been easy and some have often given up within just a matter of weeks. That said, there are others who have started Pilates during pregnancy and continued after giving birth with Pilates becoming a way of life for them too.

Our classes

We don't offer specific classes for mums-to-be because Modified Pilates is appropriate for all health conditions including pregnancy. Posture and muscular imbalance affect everyone; the elderly; anyone who is sedentary; those who are fitter or extremely fit but have neglected other aspects of fitness. The very essence of Modified Pilates is that it is inclusive and anyone, irrespective of age, gender, posture type, fitness, injury, or health condition including pregnancy, can exercise together in the same class. Each person modifying movements according to their individual need.

Starting Pilates is ideal preparation for pregnancy but if you haven't started Pilates prior to pregnancy, we recommend starting no later than the 1st trimester and joining either one of our fundamental or mixed level (low intensity) classes. Members of the studio who become pregnant may remain in the same class even if they attend mixed level (medium or high intensity).

- Our fundamental level is ideal for anyone who hasn't done Pilates before and whose lifestyle has been quite sedentary prior to pregnancy. It is also an ideal level to transfer to during the 3rd trimester (27-40 weeks) for anyone who has participated in mixed level classes during the 1st trimester (0-13 weeks) and 2nd trimester (16-26 weeks).
- Our mixed level (low intensity) is ideal for those who haven't done Pilates before but are fitter, or for anyone, irrespective of fitness, who has prior Pilates experience.
- Our mixed level (medium or high intensity) is appropriate for members of our studio who already exercise at this level. However, as mentioned above, towards the end of pregnancy (3rd trimester) they should consider transferring to a lower-level class due to the limited movements and restrictions imposed by the growing baby. However, if they prefer to remain at either of these levels, they must modify movements appropriately for the safety of both them and their baby.

Our classes include both mat and reformer disciplines. Our reformers are raised from the ground, and they convert to mat beds for mat classes. You won't be exercising on the floor and the height of the beds are perfect for seated exercises. We can adapt positions on the reformer making it feel more comfortable and there are certain reformer and mat exercises that we would discourage you from doing whilst pregnant. However, there is always a movement you can do instead that will be beneficial for both you and your baby.

Our private lessons are for members only and after joining the studio we recommend having some private lessons alongside your regular group lessons to aid the learning process and gain more experience whether you are pregnant or not.

Before starting Pilates at our studio, you must attend a reformer introduction session. This provides a taster session so you can see how you get on using the machine and an assessment so that we can identify any possible issues that might arise. A Physical Activity Readiness Questionnaire (PARQ), including one relating specifically to pregnancy must be completed. You must have medical clearance.

The benefits of Modified Pilates during pregnancy

Improving posture and restoring muscular balance

Addressing posture changes and muscular balance that occur during pregnancy. Post-pregnancy you may find that your posture returns to its former state quite quickly, and you may even find that your posture is better than it was prior to pregnancy.

- **Neck**

Changes in the thoracic spine will affect neck alignment and ultimately your head position will be held in a more forward position. This creates tension and headaches. Modified Pilates' movements include stretches for the back of the neck which, in turn, strengthens the front of the neck and improves head alignment.

- **Upper back**

The most common reason for issues affecting the thoracic spine is poor posture and not moving around enough. The thoracic spine should be highly mobile, but we lose mobility by staying in sedentary positions for a long time especially if your arms are stretched forward such as the position when working on a laptop or computer. This can be exacerbated during pregnancy as the breasts enlarge.

When the thoracic spine becomes stiff and immobile the muscles and soft tissues often become inflamed. The joints become compressed, and discs harden. Modified Pilates' movements include thoracic extension and rotation to improve thoracic mobility; discs are imbibed which improves their condition.

- **Shoulder girdle**

Modified Pilates' exercise focuses on strengthening shoulders, arms, and wrists and provides ideal preparation for after your baby is born. You will need strong arms and shoulders to hold your baby, to carry your baby in a car seat, and getting a buggy in and out of a car. Arm actions keeping wrists straight and hands flat will address muscle imbalance that causes wrists to become weak and may even reduce the likelihood of carpal tunnel syndrome that may occur during pregnancy.

- **Low back & pelvic girdle**

The most significant change in posture during pregnancy affects the lumbar spine and pelvis. As the foetus grows inside the uterus causing the abdominal muscles to weaken, the pelvis tilts forwards and the lumbar curve increases causing the low back muscles to tighten which often leads to back ache. Modified Pilates will teach you how to tilt the pelvis forwards and backwards to improve pelvic mobility, reduce low back muscle tightness, and develop stronger abdominal muscles, especially the deep abdominals responsible for ideal spine alignment and posture. You'll be encouraged to perform pelvic tilting post-pregnancy, so Modified Pilates will teach you how to do it effectively. Pelvic tilting is performed in many different positions, sitting, lying down face up, or kneeling on hands and knees and the position may have to be modified as the pregnancy progresses.

Increased weight gain and the change in pelvic alignment may affect the hip, knee, and/or ankle joints. Modified Pilates focuses on correct alignment of these joints whilst you perform leg movements in both mat and reformer Pilates. Leg movements on the reformer provide the best way to stretch tight muscles safely and effectively improving

hip mobility and there are also footwork exercises to ensure feet remain mobile and healthy.

More efficient breathing and blood circulation

The diaphragm is the biggest and most important muscle when it comes to breathing. During pregnancy, it moves upwards to accommodate the growing foetus which limits its downward movement making it more difficult to fill your lungs with air. To compensate for the lack of downward movement of the diaphragm, muscles in the top part of the chest are engaged instead and sometimes even the neck and shoulders become involved. Overuse of the upper chest muscles leads to an imbalance in normal breathing mechanics and can create shortness of breath.

Impaired breathing leads to a lack of oxygen in the blood circulating around the body known as hypoxia which contributes towards dizziness and even confusion. Better breathing will improve blood circulation which can also reduce the likelihood of swollen legs and ankles, leg cramps, varicose veins and/or haemorrhoids.

Modified Pilates focuses on breathing. You will learn a specific breathing technique when performing movements and you may also be introduced to other breathing techniques that aid relaxation. Becoming aware of how you breathe and developing good breathing patterns promotes more efficient breathing and better lung capacity.

Better balance and body awareness

As your posture changes during pregnancy, so does your centre of gravity which may affect balance. One of the principles of Pilates is centring which aids balance. Whilst Modified Pilates may include exercises to improve balance, such exercises must be performed with caution during pregnancy. Therefore, performing exercises with a centred spine alignment is crucial.

Stronger pelvic floor muscles

Modified Pilates' exercise will strengthen the pelvic floor muscles. Strong pelvic floor muscles will contract strongly and quickly which may aid childbirth. Weak pelvic floor muscles that are overstretched may not return to normal length afterwards, increasing the likelihood of pro-lapse and continence issues later. Activating pelvic floor muscles whilst performing Pilates exercises during pregnancy should be encouraged as an alternative to activating the transversus abdominis (TA) muscle. This is especially helpful if the linea alba ligament does separate as the TA muscle will be inhibited until the ligament repairs itself. See below for issues that may arise during pregnancy affecting the linea alba ligament.

Improving poor sleep patterns

Modified Pilates' exercise and breathing techniques aid relaxation and can improve sleep resulting in more energy. Good sleep patterns can also speed up postnatal recovery.

Enhanced mental health

Modified Pilates provides physical exercise for the body but the mindful approach to Pilates also aids mental health. Both physical training and mental health are ideal preparation for labour and aid postnatal recovery.

Stronger abdominal muscles

Improving abdominal strength is helpful during labour and after childbirth. Sometimes the abdominal muscles may appear taut and toned as the abdomen enlarges to take the weight of the uterus, but this impression can be false. Stronger abdominals also help in reducing the likelihood of diastasis recti (separation of the linea alba ligament). The linea alba ligament runs down the length of the abdominal muscles and forms the navel. During pregnancy, it is at risk of separation. If it stretches more than 3cm a condition known as diastasis recti occurs. Separation is more likely to happen if the abdominal muscles are weak; if excess weight is gained during the pregnancy; if pregnancies occur close together; if the baby is large; in the case of multiple births.

Pilates modifications during pregnancy

- No head lifting whilst lying down face up. With the head down, you can focus on lengthening the back of the neck which is ideal during pregnancy when posture changes cause the upper back to round and the back of the neck to shorten.
- Lying down face up towards the end of pregnancy can be uncomfortable and undesirable. After week 16 (2nd trimester), lying down face up is discouraged as this position can impair venous return. As pregnancy progresses, the heart increases in size to cope with the extra volume of blood and impaired venous return reduces the amount of oxygen to the baby. Exercises that would ordinarily be performed lying down are performed seated instead either using a chair or stability ball or may even be performed kneeling on hands and knees (if carpal tunnel syndrome is not present) or in a side-lying position (with bottom leg bent for balance).
- Because of the hormone relaxin (see above), avoid sitting with legs wider than hip-width apart. Anyone who was extremely flexible before pregnancy should limit stretching to the same range that they performed before becoming pregnant.
- Leg circles are modified to a bent-leg version which is safer but still effective.
- Arm movements are restricted to one arm at a time towards the latter end of pregnancy (3rd trimester).
- Rolling actions are limited to pelvic tilting towards the end of pregnancy and also for anyone who has the following conditions: disc damage, arthritis, osteopaenia or osteoporosis. During pregnancy, rolling actions should be performed with caution to reduce the risk of diastasis recti occurring (see below) and to reduce the risk of cramp being felt if the enlarged uterus shifts suddenly (sharp stabbing pain in the lower and outer quadrant of the abdomen either on the right or the left). The ability to roll during pregnancy becomes more challenging as the baby grows, so towards the end of pregnancy most mums-to-be can only perform pelvic tilting (backwards and forwards). Backwards pelvic tilting stretches the tightness out of the low back which shortens as the baby grows. When tilting the pelvis forwards, care should be taken not to tilt the pelvis too far forwards to reduce the risk of a dull pain in the sacrum area due to ligament issues.

Guidance when using a stability ball

Using a stability ball may be encouraged during pregnancy. Balancing on a suitably inflated stability ball is extremely challenging and is advisable only for those who already possess a high level of core strength and balance. Those who do not possess sufficient core strength or balance would be advised to use a chair or stool initially as this will facilitate an upright spine alignment and a more stable surface, both essential when strengthening the core muscles. Choose a stability ball that is the correct size for your height and ensures that your hips are slightly higher than your knees when it is inflated to its maximum (for most women 50cm is about right). A soft stability ball offers little challenge and may result in poor spine and/or hip/knee alignment.

Post Pregnancy

Irrespective of whether they attended Pilates or not during pregnancy, anyone may participate in Pilates' exercise if they have attended the 6-week check-up (8-10 weeks for Caesarean Section) and obtained medical clearance to return to exercise. This timescale allows time for the abdominal muscles to close and re-align. A Physical Activity Readiness Questionnaire (PARQ) relating to post-pregnancy should be completed.

Those who participate in Pilates after pregnancy should attend a fundamental level class or a mixed level (low intensity) class initially and progression to higher lesson levels should not be rushed.

Waiting until the 6-week check-up (8-10 weeks C-Section) does not mean you cannot exercise at all.

- Daily walking complimented by posture education at this stage is an excellent form of exercise. When buying a pram make sure that the handle height allows the mother to walk with correct alignment.
- Pelvic floor exercise can be started as soon as the mother is ready and within days of childbirth.
- Breathing techniques should be considered especially lateral thoracic breathing if you have exercised with us during pregnancy and wish to resume afterwards.
- Gentle pelvic tilting can be introduced 3-4 days after childbirth and may be performed standing, lying, or kneeling on hands and knees.
- Advice should be sought from a doctor or midwife before starting swimming as there is a chance of infection.
- During this time clients should limit their range of movement considerably when stretching and movements that were restricted after the 1st trimester will remain restricted post pregnancy especially if there has been a separation of the linea alba ligament (refer above to diastasis recti). After giving birth and if not breastfeeding, limit stretching for at least 3-5 months. If breastfeeding, limit stretching for at least 12 months after the day you finish breastfeeding.