

Training the Pre-Natal Client – Specific Considerations for Late-Term Pregnancy

As health and fitness professionals, it is an amazing time to train the prenatal client. Research has emerged over the last 15 to 20 years that has completely changed our understanding of prenatal fitness, moving us far beyond the notion that prenatal fitness is simply acceptable. It is now well established that exercise during a healthy pregnancy is recommended.

In fact, the latest guidelines issued by the American College of Obstetricians and Gynecologist (ACOG) in 2015 states that, “Women who begin their pregnancy with a healthy lifestyle (e.g., exercise, good nutrition, non-smoking) should be encouraged to maintain those healthy habits. Those who do not have healthy lifestyles should be encouraged to view the preconception period and pregnancy as opportunities to embrace healthier routines.” Additionally, “Pregnancy is an ideal time for behavior modification and for adopting a healthy lifestyle because of increased motivation and frequent access to medical supervision.”

In addition to these maternal benefits, exercise during pregnancy also offers a host of benefits to the developing baby. Dr. James F. Clapp, one of the leading researchers in the world of prenatal fitness, has confirmed the following benefits from his decades of research:

- Enhanced fetal heart rate variability
- Improved thermoregulatory system
- Increased blood volume from better placental growth

Of course, while exercise during pregnancy is unquestionably beneficial, it also requires certain precautions, particularly as a woman progresses through her trimesters. What follows is a discussion of some of the specific concerns you may encounter when training a pregnant client, including postural deviations and alterations in mindset, as well as exercise recommendations that will best support your client’s needs during her final trimester.

Training in the Third Trimester

A woman in the latter half of her pregnancy will generally require adjustments to her training program based on the unique changes she is experiencing. The third trimester of a woman’s pregnancy, in particular, brings some significant changes that can be addressed or alleviated by your attention to two specific considerations: postural deviations and mindset.

Postural Deviations

From the beginning of a woman's pregnancy, the hormone relaxin (which causes ligamentous laxity) has been flowing through her body, allowing for essential skeletal shifts that allow for the baby's growth. However, the presence of relaxin can also lead to exaggerated shifts as a woman moves through her third trimester. The increased weight she is likely carrying can cause an anterior pelvic tilt (lordosis), which may lead to prominent low-back pain. The anterior weight shift also occurs at the breasts throughout pregnancy, profoundly more so in the third trimester. This pull adds to increased kyphosis at the cervical and thoracic spine. Kyphosis pulls her out of a neutral spinal position, which may lead to neck and upper-back pain, as well as diminished power and range of motion when she is operating out of proper posture.

Mindset

As a woman transitions into the later portion of her pregnancy, her mindset often becomes less focused on her own fitness and more on her upcoming labor and delivery. "All of a sudden, she's is much larger than she wants to be, is tired of being kicked by the baby, doesn't sleep well and wonders if the baby is healthy and what labor and delivery will be like," explains Dr. Clapp. "As a result, her attention turns away from herself to prepare for the labor, the birth and the new baby."

By keeping these two main considerations in mind, you can create an effective program design for your pregnant clients. So what can/should your pregnant clients do during late-term pregnancy?

Continue exercising

While it might look differently, because she is larger and her gait is continually adjusting for her increased anterior load, most pregnant women can and should keep exercising during the third trimester (with physician approval, of course). With a naturally reduced venous return during the third trimester, it's very important for a pregnant woman to keep moving to help stave off edema (commonly found in her ankles). This focus on maintaining movement may also lead to a slightly lower birth weight. "Stopping exercise in late pregnancy tends to produce a larger baby who has more body fat," explains Dr. Clapp.

Focus on improving core strength

As previously mentioned, most women experience an anterior weight shift during the third trimester, which makes core strength essential for helping to pull the pelvis back into neutral. Focusing on strengthening your pregnant client's three-dimensional core musculature will also help to keep her lumbo-pelvic complex from making shifts, as well. These shifts can lead to pain at the sacroiliac joint and the pubic symphysis.

Re-engage the posterior muscular chain

With much of our physical world being anteriorly driven, many of us tend to be over-contracted in our anterior muscular chain. During pregnancy, especially in the third trimester when a woman is at her largest, this becomes more and more apparent. The muscles of a woman's upper back (mid/lower trapezius and rhomboids) become weakened and elongated, while the muscles of the low back (erector spinae) shorten and tighten in lordosis. Finally, the glutes tend to "shut off," which means she must rely more heavily on her quadriceps. This disengagement of the glutes also leads to unwanted shifts at the pelvis. Reengaging the posterior chain requires exercises that focus on strengthening the glutes.

Enhance pelvic floor strength (and elasticity)

Going into the third trimester, the weight of the baby in utero can drop the pelvic floor up to an inch. Kegel exercises to strengthen the pelvic floor are recommended throughout pregnancy and especially during the third trimester as the pressure is the greatest during this time. It's crucial to coach your pregnant client through the contraction and then active relaxation of these muscles.

Always listen to her body

While exercise is recommended throughout pregnancy, if something doesn't feel right, a woman must listen to her body and regress or take a break. Because her balance will be challenged a great deal during her third trimester, make sure to position your pregnant client near something she can hold onto if she feels her balance is compromised. If you are training a pregnant client who is an athlete, being able to listen to her body is even more critical, as she is likely accustomed to pushing through fatigue and pain to get to the next level of her sport. Pregnancy is not the time for that mentality—it is the time for maintenance.

Here are some specific exercise recommendations that will help your pregnant client adjust to her changing body and prepare for her upcoming labor and delivery. These exercises address the core, posterior muscular chain and pelvic floor. Recommendations for sets and reps are given for the beginning exercisers; progress according to each client's fitness level and balance concerns. Additional information and instruction regarding these exercises are provided in the video, below.

Exercise Recommendations to Support Your Clients' Needs During the Third Trimester

Core Strength

Cat/Cow (8-10 reps; 3 sets)

From a quadruped position (on all fours), your client should round her back and then slowly move into a gentle arch (move through a range of motion that feels right for her back). This exercise is a wonderful way to stretch and elongate the erector spinae, which may be tight from that lordotic curve at the low back. You can also think of this exercise as a crunch turned upside down. The spinal flexion in the “cat” portion of this movement can help enhance core strength at the rectus abdominis when the focus is on the contraction.

Wood-chop (10-15 reps; 3 sets)

Using either a dumbbell or a resistance band, have your client start in a squat with both hands down to one side of her body. As she rises up out of the squat, have her bring both arms diagonally upward across the body and above her head on the opposite side. The oblique work in the transverse plane is extremely beneficial for three-dimensional core strength. This is also a very functional movement to practice for her new role as a mom when that baby comes home. Cue the drawing in of her abdominals before she begins this movement.

Side Plank (Hold for 10-15 seconds each side to begin; 3 sets)

Instruct your client to assume a side-plank position (on either feet or knees, hands or elbows), with the hand or elbow directly beneath her shoulder joint. Coach the drawing in of her abdominals to support the spine throughout the exercise.

Hip Bridge With Heel Slides (10-12 reps; 3 sets)

Have your client lie on her back with her knees bent and feet flat on the floor. Cue her to contract her core and glutes as she rises up into a hip bridge. While maintaining core engagement, have her slide one heel away from her body and then draw it back in. Repeat on the opposite side. The key to this exercise is to maintain core contraction and level hips as she slides the heel away from her torso and back.

Postural Muscular Chain

Row (10-15 reps; 3 sets)

This exercise can be performed while standing upright or with a hip hinge. Use either dumbbells or a resistance band. Cue your client to squeeze her shoulder blades together to contract the muscles of the upper back, and remind her to relax her upper trapezius throughout the exercise.

Rear Fly (10-15 reps; 3 sets)

This exercise can be performed while standing upright or with a hip hinge. Use either dumbbells or a resistance band. Instruct your client to open her arms up and away from each other, while keeping a slight bend at the elbows and the wrists locked in neutral.

Bird dog (Hold for 10-15 seconds to start, 4 times on each side; 3 sets)

This is a great exercise to stabilize and strengthen a lot of the posterior chain. Have your client assume a quadruped (all-fours) position. Instruct her to lift the right arm in front as the left leg extends back, and then switch to the other side. For some women, the balance challenge of lifting both arm and leg may be too much in the third trimester. If this is the case, modify the exercise to lifting just the arm and then just the leg.

Pelvic Floor

Kegels (30-45 seconds periodically throughout the day)

There's no better exercise for strengthening the pelvic floor than Kegels. Dr. Clapp recommends performing "quick contractions," which involves holding the contraction for three to five seconds and then releasing, working up to 10 to 20 repetitions several times a day. Clapp also suggests longer, more isometric contractions as well. "Start with a slow increase in your muscle contraction as you count to five, then hold for five to ten seconds and release slowly to a count of five," says Dr. Clapp.

Summary

Pregnancy is such a wonderful *and challenging* time in a woman's life and body. Understanding the prenatal body and its needs throughout pregnancy will make you a more effective trainer as you are better equipped to help strengthen your pregnant clients both mentally and physically. As your clients move into their third trimesters, encourage them to keep exercising as long as they can. After all, they are training for labor and delivery and, importantly, motherhood.

NOTE: Every pregnant woman must obtain her physician's clearance before engaging in any fitness program.

According to ACOG, the warning signs to discontinue exercise while pregnant are:

- Vaginal bleeding
- Regular painful contractions
- Amniotic fluid leakage
- Dyspnea (difficult or labored breathing) before exertion
- Dizziness
- Headache
- Chest pain
- Muscle weakness affecting balance
- Calf pain or swelling

References

Clapp, J.F. and Cram, C. (2012). *Exercising Through Your Pregnancy* (2nd ed.). Omaha, Nebraska: Addicus Books.

American College of Obstetricians and Gynecologists (2015). Physical Activity and Exercise During Pregnancy and the Postpartum Period.