

# **Post-Natal Pilates: Common Deviations**

A BASI Pilates Program for Post-Partum Clients with Kyphosis and  
Diastasis Recti

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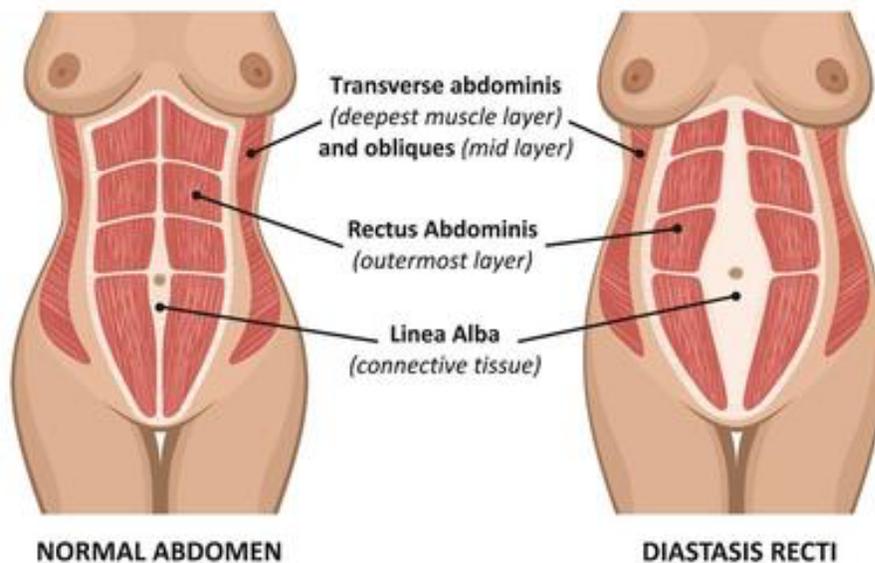
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## **Abstract**

Pregnancy is a special time in a woman's life but it can also be demanding on the mind and body. One key point that is worth noting for all new mothers is that pregnancy changes the body to accommodate the needs of a baby. The uterus expands, the stomach muscles stretch and become weakened, weight gain changes how one carries herself and compensates for that weight, and because of these changes, shifts in posture take place and sometimes make women feel like they don't even know or understand their new bodies, once they give birth. Pilates, which strives to marry the mind and body through movement and breath, can help a woman become re-acquainted with her body by regaining strength and re-patterning new habits. Pilates is the perfect way to stay in shape and get one's body ready for delivery and then back in shape post-partum, and it can alleviate pain and stress.

## Anatomical Description

### DIASTASIS RECTI



\*Image courtesy of Tupler Technique Treatment for Diastasis Recti

The engagement of the pelvic floor is necessary in pushing through labor, so recruiting the muscles that support that engagement is helpful in preparing the mind and body for delivery. However, no matter how “prepared” one’s body is, every woman is at risk for diastasis recti, which is the vertical separation of the rectus abdominis and thinning or stretching of the linea alba (connective tissue), which reduces the support of the internal organs and overall trunk stability. The uterus stretches as the baby grows, and each pregnancy puts a woman at greater risk. Many women live with this condition for the rest of their lives, and the extent of its severity ranges, but it is something that can be corrected and Pilates is one of the best ways to do so. To check for diastasis recti in a client, one should do the following:

1. Lie on her back with knees bent

2. Place hands on the abdomen with fingertips extending two inches above and below the naval
3. Exhale and lift head
4. If one feels a separation that is greater than two fingers wide, the client is considered to have diastasis recti and a doctor should be consulted prior to beginning an exercise program.

Because the pelvic floor and transverses abdominals are often weakened after labor and delivery, another common post-natal deviation is often postural, usually forcing the hips forward to compensate for weaker transverses abdominal muscles and pelvic floor. Nursing and bottle-feeding mothers tend to develop kyphosis (often referred to as “mom posture,” and refers to the forward rolling of the shoulders). No matter how much abdominal strengthening one does, if postural deviations force misalignment in the body, efficient and correct recruitment of those muscles becomes increasingly difficult, so it is important to address these issues concurrently.



\*Image courtesy of Broussard Clinic

## Case Study

Amelia is 37 years old, and is a working mother of two young daughters (ages 1 and 4). She is a teacher, so is on her feet for much of the day, and is active, and wishes to continue to be so. She has noticed her abdominal muscles feel weaker following her second delivery, and she hasn't quite "bounced back" the way she did after delivering her older daughter a few years earlier. She complains of pain in her lower back which seems to be a symptom of carrying her youngest in her baby carrier at the front of her body; the additional weight seems to force her to push her pelvis and hips forward, thereby opening up her ribs and misaligning her body. I notice kyphosis in her posture, which is likely a result from nursing, and lastly, she has slight diastasis recti (less than 2 fingers wide) right around her navel. She is considering becoming pregnant again, but is fearful that her weakened abdominal muscles, pelvic floor and diastasis will worsen the third time around, and will result in a less positive pre-natal and post-natal experience.

The pelvic floor and transverse abdominal muscles are the areas of focus, along with the upper back, gluteal muscles and surrounding muscles to restore postural balance. To address her kyphosis, we focus on spinal extension. Movements to avoid are: forward flexion of the upper torso, upper body rotation with reaching, extreme back extension/arching and upper body flexion with rotation.

## **Action Plan: BASI Block System Program**

- 1) Roll down
- 2) Mat warm up:
  - Pelvic curl
  - Spine twist
  - Supine leg lifts
  - Leg changes

\*To avoid forward flexion, replace chest lifts and chest lifts with rotation with leg lifts and changes. Modify the spine twist supine by keeping knees bent and feet on the mat.
- 3) Foot Work on the Wunda Chair:
  - Parallel heels
  - Parallel toes
  - V position toes
  - Open V heels
  - Open V toes
  - Calf raises
  - Prances
  - Single leg heels
  - Single leg toes

\*Selection of the Wunda Chair is so that client would support her upper body by adducting her shoulders and utilizing her external rotators, since hands are placed behind her trunk and on the sides of the chair.
- 4) Abdominals on the Wunda Chair:
  - Standing Pike

\*Use extra light weight to make this exercise safe. Emphasize the drawing in of the abdominals and scapular stabilization.
- 5) Hip Work on the Reformer:
  - Frog
  - Circles down and up
  - Openings
- 6) Spinal Articulation on the Reformer:
  - Bottom lift
  - Bottom lift with Extension

\*Cue spinal articulation while challenging the abdominals, hamstrings and hip flexors.

7) Stretches on the Reformer and Ladder Barrel:

Standing lunge

\*This stretches hamstrings and hip flexors without any strain on the abdominals.

Shoulder Stretch

\*This area is tight after pregnancy and during and after breast or bottle feeding.

8) Full Body Integration 1 on the Reformer:

Scooter

\*Emphasize trunk and shoulder stabilization, as well as the drawing in of the abdominals.

9) Arm Work on the Reformer:

Arms sitting series

Biceps

Chest Expansion

Hug a Tree

Rhomboids

Salute

\*Focus in on arm and upper body strength, which are important with the demands of carrying a baby and toddler. Strengthening the upper back muscles helps improve posture which is compromised due to baby feeding demands.

10) Full Body Integration 2 on the Cadillac:

Saw

\*This is a good hamstring stretch and work for the back extensors, which help with posture and tension.

11) Leg Work on the Cadillac:

Squats

\*Cue lifting the pelvic floor to regain stability in pelvis and strengthen the core.

12) Lateral Flexion/Rotation on the Cadillac:

Push Through Series

Side Lift

\*This exercise addresses the client's kyphosis and pelvic and lumbar instability.

13) Back Extension on the Cadillac:

Push Through Series

Prone 1

\*This intermediate exercise is not meant for clients with diastasis recti measuring two fingers or more.

14) Roll Down

## **Conclusion**

I have worked with Amelia once a week for a year and she has shown tremendous progress through the program I've designed. Specific improvements I've seen are the following:

1. she is able to find and maintain neutral pelvis throughout the exercises
2. she can breathe diaphragmatically, engaging her pelvic floor without firing up her obliques
3. she can engage her transversus abdominals and stabilize through her core
4. she has tightened her linea alba, preparing herself for her next pregnancy, and putting her at less risk for increased diastasis and herniation with future pregnancies
5. her posture has improved and she no longer complain of pain in her lower back

Now that Amelia's body feels more like it was before she had her second child, she has a renewed sense of confidence in her ability to have another safe pregnancy and delivery. She has a new-found awareness regarding her pelvic floor and postural compensations she makes to accommodate her lifestyle as an active mother, and while she will likely continue to carry her baby in a carrier and cradle her daughter when she feeds her a bottle, she will continue to try to apply what she's learned and implement better habits. The stronger she gets, the more we can continue to progress with more advanced exercises.

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