



Diastasis recti abdominis rehabilitation

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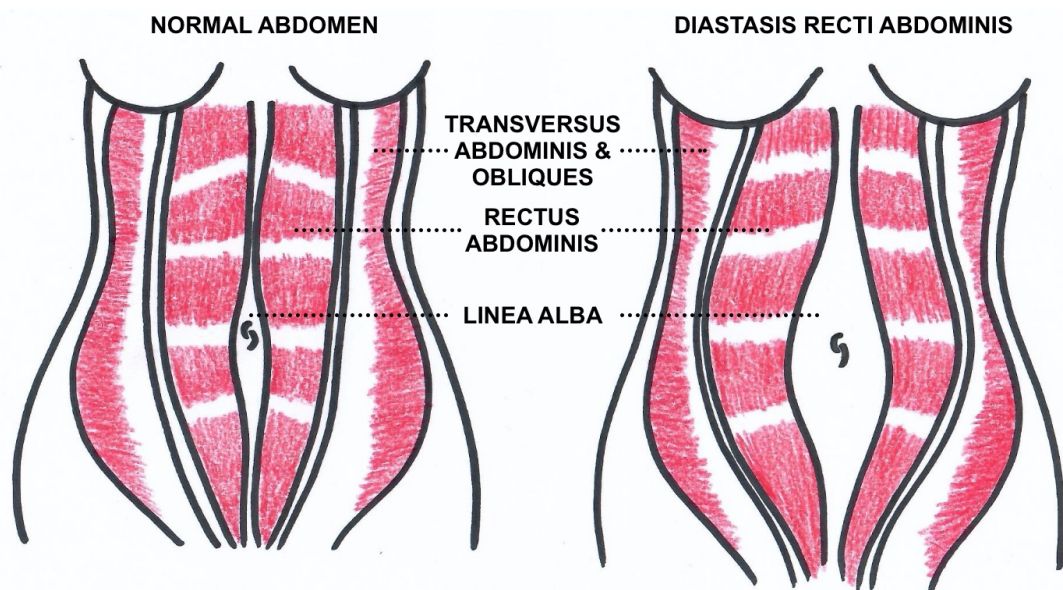


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Diastasis recti abdominis

1. Definition

Diastasis recti abdominis (DRA) is a condition where the rectus abdominis muscles separate vertically along the midline called linea alba. Abdominal wall muscles (transversus abdominis, rectus abdominis, external and internal oblique muscles) are attached to linea alba which takes part in muscular force transmission and maintaining the abdominal wall tension. Tension of the linea alba is essential part of the normal functional ability of the abdominal wall muscles. Normal width of the linea alba is approximately 2 cm between women who has never given birth, depending on the measurement spot. During pregnancy, pressure from the growing uterus pushes the abdominal wall muscles to the sides, causing the linea alba to stretch. DRA is a common event that affects all the women going through pregnancy at some level.



2. Symptoms

Common signs of DRA can be a bulging abdomen and a gap that fits multiple fingers vertically between the rectus abdominis muscle bellies. Sometimes the DRA might not show up any external signs. DRA may cause back and pelvic region pain, core muscle fatigue, changes in the posture and pelvic floor dysfunctions (e.g. urinary or fecal incontinence). Also, contracting the abdominal muscles may feel challenging and cause a sense of powerlessness. Mild DRA does not always cause remarkable symptoms.

3. What can cause DRA?

DRA is most common among women in their pregnancy and postpartum but also factors such as obesity or heavy physical effort can cause it to anyone. Other factors causing DRA can be the number of pregnancies, large size of the fetus, excessive amount of amniotic fluid, being pregnant with multiples, cesarean section or the maternal age (> 34). Also, weak tissue type and hormonal factors can be the reason behind the development of DRA.

4. What to avoid with DRA?

All the exercises loading the abdominal wall muscles that cause a ridge down the midline of the belly and increase the intra-abdominal pressure (IAP) should be avoided during pregnancy and in the early postpartum period. These exercises are abdominal crunches with and without rotation, plank, jackknife sit-ups, push-ups, scissor abs and other exercises requiring great effort and static hold. It is also important to keep in mind the ergonomics and maintaining a good posture during the activities of daily living.

5. Testing

Self-assessment can be performed to detect possible DRA: Lie down on your back. Flex your knees and keep your arms straight by your sides. Start lifting your head lightly off the floor, until the upper part of the shoulders does not touch the floor anymore. Maintain this position and start palpating the linea alba throughout its entire length (pubic bone – lower part of sternum). Situation is close to normal if tension of the linea alba is felt and maximum of two fingers can fit between the rectus abdominis muscle bellies. Flaccid linea alba (fingers “sink” between the muscle bellies) that fits multiple fingers vertically may be a sign of DRA.



6. Rehabilitation of diastasis recti abdominis

The recovery time of DRA is very individual and the stretched linea alba might not return fully back to its pre-pregnancy measures after pregnancy. The most significant natural recovery happens during the first 8 weeks after giving birth – although recovery occurs still up to 6-12 months postpartum. DRA is not a reason to stop regular exercise and it is important to try to be physically active within your own capability. The amount of exercise during and after pregnancy is also individual, and highly related to your pre-pregnancy physical activity level. Regular exercise during pregnancy has also been considered to have a positive impact on the postpartum recovery.

6.1. Exercises

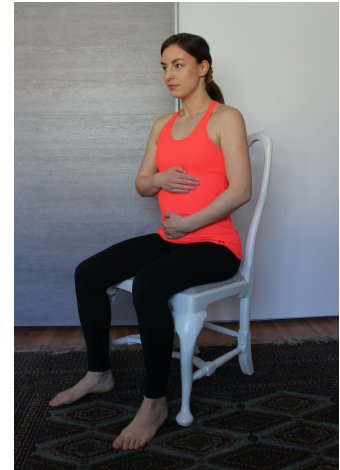
Mostly used exercises for rehabilitation of DRA concentrate on the transversus abdominis muscle activation. Exercises chosen for this guide are aimed on the early postpartum rehabilitation of DRA. First exercise (6.1.1.) is safe to start promptly after giving birth or when you feel comfortable to do so. Rest of the exercises (6.1.2. – 6.1.4.) are recommended to start after the first 8 postpartum weeks have passed, listening to your own body. During all of the guide's exercises is important to pay attention to proper breathing technique – holding your breath will increase the intra-abdominal pressure. Suitable amount of repetitions can be found by trying. As an example, you can start each exercise with five repetitions and increase the number repetitions little by little. The key is to perform the exercises with a correct form.

6.1.1. Diaphragmatic breathing and pelvic floor activation

Diaphragm, core and pelvic floor muscles create an important together functioning structure. Diaphragmatic breathing improves the chest and back mobility as well as maintains the flexibility in the muscles. Diaphragmatic breathing activates the diaphragm and also the deep core muscles such as the transversus abdominis muscle. Diaphragmatic breathing is also known as “belly breathing” since the breathing emphasizes the abdominal movement and the breathing frequency is slower than during upper chest breathing. Contraction of the pelvic floor muscles during diaphragmatic breathing intensifies the activation of the transversus abdominis muscle. Pelvic floor muscle activation may feel challenging at first. Visualizing to stop the flow of urine could be one way to help to find the correct muscle activation. Try to relax the muscles of your abdomen, thighs and buttocks during pelvic floor muscle contraction since it is a gentle movement.

Diaphragmatic breathing:

1. Sit* comfortably on a chair in a good posture and place your hand(s) on your abdominal area.
2. Feel the abdominal movement during inhalation (breathing in) and exhalation (breathing out).
3. Relax the abdominal area and direct the breathing towards the abdomen.
4. During inhalation, feel the abdomen is rising with your hand.
5. Abdomen goes back down during exhalation.

**Pelvic floor muscle activation together with diaphragmatic breathing:**

1. Follow the diaphragmatic breathing instructions above.
2. Perform pelvic floor muscle contraction during exhalation (visualize stopping the flow of urine / suck the muscles upwards inside pelvis)
3. Maintain the pelvic floor contraction throughout the exhalation.

* Alternative position is to lie down on the floor or bed.

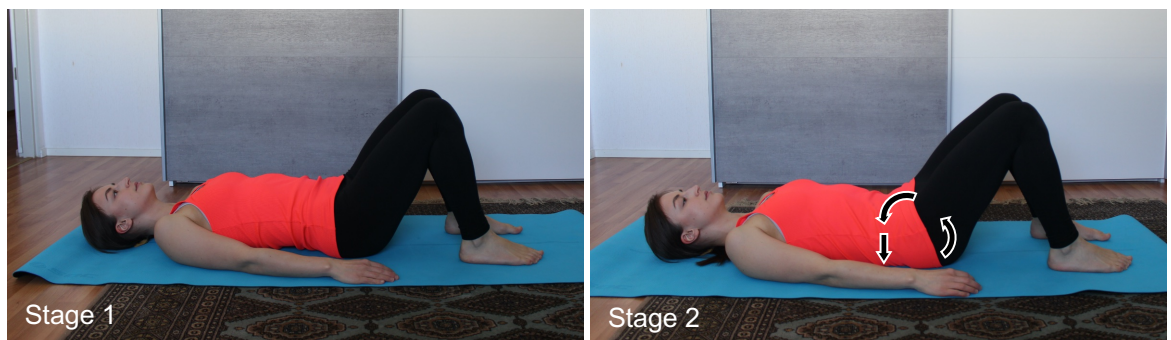
When the first 8 weeks after giving birth have passed, you can start the exercises from here on.

6.1.2. Drawing-in exercise

1. Lie down on your back and flex your knees lightly.
2. Place your hands on your lower abdomen above the pubic area.
3. Maintain the natural curve of the low back throughout the exercise (do not straighten the lower back against the floor).
4. Inhale and exhale normally.
5. During exhalation, tighten the lower abdomen by pulling the belly button lightly towards the floor.
6. Relax the abdomen during inhalation.



6.1.3. Pelvic tilt



1. Lie down on your back and flex your knees lightly, arms resting on your sides.
2. Starting position: Keep your back in its natural position (stage 1).
3. Inhale and exhale normally.
4. During exhalation, start tilting your pelvis backwards so that your lower back presses against the floor (stage 2).
5. Return calmly to the starting position during inhalation.
6. In order to make the exercise more effective, activate the pelvic floor muscles during exhalation.

6.1.4. Head lift with abdominal support

Notice, that his movement is very minimal compared to a normal abdominal crunch.



1. Lie down on your back and flex your knees.
2. Wrap your arms around the abdominal area or use a towel/sheet (pictures above). This provides extra support and protects the separation of the abdominal muscles.
3. Inhale and exhale normally.
4. Lift your head calmly off the floor during exhalation while bringing the abdominal muscles closer together with your hands or with the help of a towel/sheet.
5. Activate also the transversus abdominis muscle (drawing-in exercise) during exhalation by tightening the lower abdomen and pulling the belly button towards the floor.
6. Bring your head calmly back on the floor during inhalation and relax.

Please do not hesitate to contact your maternity clinic, if any questions occur.