Abdominal Separation
(also called Diastasis Recti)

What is a ‘Diastasis recti’?

‘Diastasis recti’ (also known as ‘Divarication of Rectus Abdominis Muscles or DRAM) in simple terms is ‘separation of the abdominal muscles’, in particular the Rectus Abdominis or ‘six pack’ muscles. During pregnancy the connective tissue connection between the left and right side muscle bellies (also known as the linea alba) become soft and more extensible due to hormonal changes. As your pregnancy progresses the linea alba gradually stretches to make room for the growing baby and accommodate the expanding uterus, a rather clever design of the female body!

Diastasis comes in different shapes and sizes, but generally appears as a ridge running down the midline of the abdomen, or part thereof, anywhere from the xiphoid process (bottom tip of the breast bone) through the umbilicus (belly button) right down to the pubic bone. It becomes more prominent with straining and may disappear when the abdominal muscles are relaxed.

Diastasis is very common, with 27% (nearly 1 in 3 women) of pregnant women having some separation in their second trimester and up to 62% in their third trimester, over half of these women (53%) will have remaining separation immediately after birth. Fortunately for most women this gap will gradually close on its own by about 8 weeks post-partum, however for 35% of women the gap remain abnormally wide allowing the belly to literally bulge out, making it look like you have a pooch or are still pregnant a year down the line! Obviously these ladies need extra help and support to retrain and regain optimum function.

“Despite consistent workouts and a very “clean,” well-rounded diet, I still look just shy of three months pregnant on any given day. I’m literally in the best shape of my life but the nagging baby bump still hangs around, refusing to budge”
Why does it happen?

The reasons why diastasis happen are myriad, a lot of is luck of the genetic draw. However research has helped identify some risk factors for developing diastasis. These include:

1. Expecting mothers **over 34 years of age**
2. **Big babies** with birth weights over 4kg (8lbs 13oz)
3. Women **carrying multiples**, i.e. twins or triplets
4. **Multiple pregnancies**. Turns out 2 in 3 women who have two or more babies have a diastasis
5. Excessive **maternal weight gain**
6. A **narrow pelvis**
7. **Pushing in the 2nd stage of labor**
8. **Inappropriate or incorrect exercises** (i.e. excessive abdominal exercises) in pregnancy or early post-partum. So, jumping right into an exercise program after delivery isn’t ideal for everyone.
9. **Caesarean section**, as the linea alba (not the muscles itself) is cut through and only partially stitched afterwards. Pain cause inhibition of the muscles afterwards and a slower recovery.
10. **Genetics** also plays a role, particularly in women with connective tissue insufficiency or hypermobility.

Contrary to popular belief well-toned and trained abdominal muscles to do necessarily increase a woman’s risk to develop a diastasis in pregnancy. In fact, well defined and trained abdominals stretch better and recover better. Petite women on the other hand may be at increased risk of developing diastasis due to the way they carry the baby, very much like a football pointing outward, encouraging separation of the abdominal muscles to allow space for the expanding uterus.

Excessive diastasis recti is less likely to happen if separation recognized early and mom is given good advice about how to minimize the problem. Support, good posture and correct body mechanics in pregnancy and especially those early days after delivery will encourage optimum spontaneous closure of the gap by around 8 weeks.

Why is it important to treat?

A small separation can become larger if not treated, and cause problems in pregnancy and afterwards, even many years later.

It is important to understand that the gap created by separation of the abdominal muscles impacts more than just the abdominals and physical appearance (that mom pooch). It expose the internal organs and compromise the ‘inner corset’. As a result it affects

- breathing mechanics
- posture and alignment
- core stability and movement control
- continence (bladder and bowel control)

In pregnancy a diastasis can

- allow the uterus the tip further forward
- make it more difficult to push the baby out
- increase the likelihood of a Caesarean section

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**Interesting fact:** A study in 2007 has found that 52% of women who presented to their urogynaecologist were found to have a diastasis recti (Spitznagle et al 2007), 66% of these women had at least one support-related pelvic floor dysfunction, i.e. urinary incontinence, fecal incontinence and/or pelvic organ prolapse.
contribute to developing pain in the low back and pelvis.

**Can I check myself for a diastasis?**

Absolutely. A quick self-check to see if you have diastasis is described below.

**Curl up test:** Lie on your back with your knees bent and feet flat. Slowly lift your head and bring your chin to your chest.

**Check for the following:**

- Do you see any bulging or doming of the abdomen?
- Place your fingertips in the ridge or gap that is presented. Try to feel the borders of the muscles along the midline of your tummy (the rectus abdominis muscles, or the ‘six pack’ muscles). Is there a separation or gap between these muscles? Measure the gap in number of fingertips that can fit within the space (i.e. 4 finger gap). Separation consisting of a width of 2 fingertips (approximately 1½ centimeters) or more is generally accepted as the determining factor for diagnosing diastasis recti.
- You can also assess the depth of the gap. Can you feel a ‘floor’ within the gap or just push all the way through?

**What can I do to help myself?**

The good old saying ‘Prevention is better than cure’ rings very true when it comes to diastasis recti. Do whatever you can to protect the vulnerable midline, and avoid any activities that can interfere with natural healing and recovery. The following self-help instructions are relevant for pregnancy as well as after delivery, especially those first 6-8 weeks when significant spontaneous recovery occurs.

1. **Avoid activities or movements that cause unnecessary strain with bulging or protruding of the abdominal wall, and minimize twisting activities.** Avoid sit-up maneuvers, such as when getting out of bed or rising after relaxing in a bath. Instead get up by turning on your side, keeping your legs/knees together, and pushing yourself up with your elbows. Turn in bed using the ‘log rolling’ technique: bend up your legs and keep your knees together, turn with your shoulders and hips moving as one unit. Getting in and out of the car: swing both legs out together before getting out, and getting in the car you should sit down first, then swing your legs into the car.

2. **Avoid excessive abdominal workouts.** There are many popular traditional ab and core exercises that can actually make diastasis worse. Exercises like planks and crunches, many yoga positions including downward dog and triangle pose, can worsen diastasis, or at the minimum, do nothing to help. So while many women crunch and plank their lives away, trying to keep fit in pregnancy and hoping to eventually
achieve a flat stomach or at least lose some of the baby belly afterwards, you could really just be making the problem worse. ‘Sit-up’ exercises should ideally be avoided after 12-14 weeks of pregnancy.

3. **Always have good posture in everyday activities and fitness training.** Sixteen to 18 hours a day of standing, sitting and moving in lousy alignment that separates the midline all day (very much like an ‘open abdominal fly’) will only make the problem worse. If your alignment ‘keeps your fly open’ all day, then all your movements and daily exertions, like lifting little ones, will reinforce keeping it open. Same goes for fitness. Good posture and alignment on the other hand will encourage approximation if the abdomen and connective tissue to support closure of the gap.

4. **“Blow before you go”**. Exhale BEFORE the exertion begins. This kicks up the deep stabilizer muscles (pelvic floor and transversus abdominis), the abdominals come together and move in, creating a ‘closed abdominal fly’. This is a great position for a challenge of load. Your core is therefore prepared for loading BEFORE the exertion begins, and the diastasis is protected. Continuing the exhale throughout the exertion will help to maintain diastasis closure throughout the activity.

5. **Do not hold your breath on any exertion**, i.e. lifting toddlers or baby in the car seat. This added pressure from the inside ‘opens your abdominal fly’ and the added load of the exertion will further separate the opening.

6. **Do not ignore pain**. With a new baby to care for, women often ignore seemingly small things like pain. Women often think "I have to throw myself at the altar of motherhood," and “it's normal that my body doesn't work as well", but pain suggests something is wrong. Listen to your body, know your limitations, and seek medical help if pain persists.

7. **Give manual support using your hands** to approximate and support the abdominal wall during potentially strenuous activities such as rising from lying or sitting, getting in or out of the car, coughing, sneezing and/or laughing. It is also advisable to support your abdominals with pushing such as when opening your bowels and during the second stage of labor, especially if you have a wide gap. It is also advisable to give manual support in forward bending positions.

8. **Wearing supportive clothes in pregnancy and after delivery**, rather than ‘comfy and baggy’, will encourage approximation of the abdominal muscles, increase body awareness and give much needed support in the early days of recovery. There are also many options for supportive underwear as an alternative, such as the range from Belly Bandit (bellybandit.com).
Abdominal splint or not?

Most women do not need a belt or splint for recovery, however some women have found extraordinary results with abdominal binding or wearing a belly splint in addition to the core strengthening exercises. Supportive clothing or underwear can go a long way in giving adequate support during your pregnancy and the early days after delivery, however some women may indeed benefit from additional support from a belt or taping techniques. There are a myriad of options available and it is best to see your Women’s Health Physiotherapist for assessment and advice to ensure you have the correct type of support, whether it be a belt, binder or taping.

Is surgery an option?

The current recommendation is that a women should have followed at least one year of dedicated and guided rehabilitation for diastasis before considering surgery. Surgery may be considered after one year if the woman continues to have an abnormally wide gap (generally accepted as more than 2cm), the abdominal contents is easily palpated, has noticeable stretch damage of her abdominal wall associated with the diastasis, and has failed to restore pain free function and continence.

Specialist Women’s Health Physiotherapists has the knowledge and skills to assess this condition and can perform special tests to assess muscle, joint and connective tissue integrity, as well as function. They can prescribe a tailored exercise program and supervise your progress to ensure the best results.

*Remember, surgery does not come without risks and complications. You owe it to yourself to give it your best shot at recovery before pursuing surgery.*

Exercises to help close the gap

Exercises are focused on activating and strengthening the deep core muscles, particularly the pelvic floor muscles and transverse abdominis muscle group; working from the inside out and from the bottom up. The beautiful thing is, most of the exercises are gentle on the body and include small, low impact movements and stretches. Some women may find the exercises ‘tedious and boring’, wanting to skip right into those popular crunches and planks, but without an active and stable inner core you are setting yourself up for failure or continued problems in the future.

*Ask your physiotherapist for more information on pelvic floor exercises and core training for diastasis recti.*