A Guidebook for Diastasis Recti

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INTRODUCTION

Hi, I'm Veronica Kirigo

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I am a licensed physiotherapist under the Physiotherapy Council of Kenya, deeply committed to helping individuals move, heal, and thrive through evidence-based physiotherapy. My passion lies in women's health, particularly in raising awareness and providing practical, science-backed solutions for conditions like diastasis recti, pelvic floor dysfunction, and postpartum rehabilitation.

With a background in clinical practice, education, and advocacy, I believe that knowledge is power—and that every woman deserves access to accurate, professional guidance about her body. I have seen firsthand how conditions like diastasis recti and pelvic dysfunction can impact confidence, daily function, and overall well-being, often due to misinformation or lack of awareness. That's why I am dedicated to bridging the gap between research, healthcare, and the everyday experiences of women by translating complex medical concepts into clear, actionable advice.

My approach to physiotherapy is holistic and patient-centered. I combine my clinical expertise, hands-on experience, and continuous professional development to provide care that is not only effective but also empowering. Whether through one-on-one consultations, educational workshops, online content, or advocacy, my mission is to equip women with the tools they need to take control of their health—without fear or confusion.

Beyond my clinical work, I am actively involved in health education and awareness initiatives, working to create conversations around women's health that are open, informed, and free from stigma. By integrating evidence-based practice, clinical experience, and a passion for education, I strive to be a trusted voice in women's health, ensuring that every woman has the support and knowledge she needs to feel strong, capable, and confident in her body

CHAPTER ONE

Introduction to diastasis recti

Diastasis Recti (DR) is a condition characterized by the separation of the rectus abdominis muscles, commonly referred to as the 'six-pack' muscles. This separation occurs due to the stretching of the linea alba, a band of connective tissue that connects the left and right sides of the abdominal muscles. The linea alba plays a crucial role in maintaining core stability, and when weakened, it can lead to reduced support for the spine and pelvic structures.

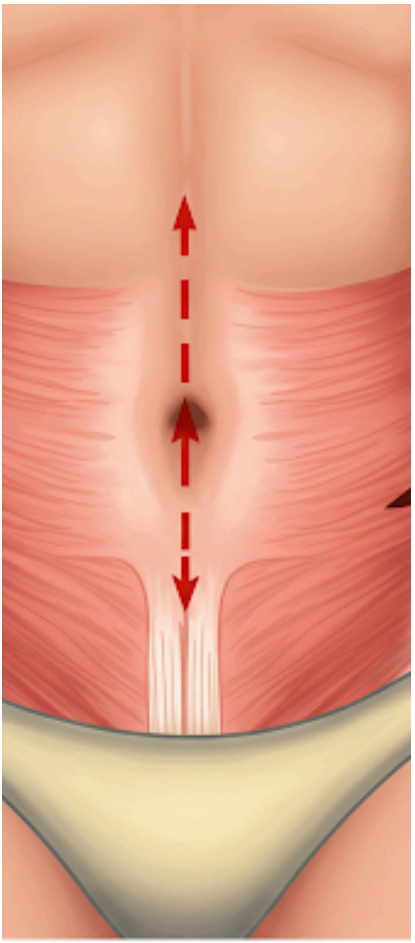
Although DR is most commonly associated with pregnancy due to the natural expansion of the abdomen, it can also occur in other populations. Men who engage in improper weightlifting techniques, individuals with obesity, and those who experience frequent abdominal strain due to chronic coughing, constipation, or heavy lifting may also develop this condition. Athletes, particularly those involved in high-impact sports or excessive abdominal training without proper core activation, are at risk as well.

Understanding DR and its implications is essential for anyone looking to enhance their core strength, prevent complications, and restore functional movement. Left untreated, DR can contribute to poor posture, lower back pain, hernias, and inefficient core engagement. This guide, written from a physiotherapist's perspective, aims to educate you on DR by covering its causes, symptoms, treatment approaches, and evidence-based recovery strategies.

Through proper education, assessment, and individualized rehabilitation plans, individuals can take proactive steps to regain core function and overall well-being. The information in this book is designed to provide clear, actionable strategies to help readers take control of their recovery and promote optimal core health.

Anatomy of the Abdominal Wall

The abdominal wall is composed of multiple muscle groups that work together to support posture, breathing, and movement. The rectus abdominis runs vertically from the rib cage to the pelvis and is divided by the linea alba. The integrity of the linea alba is essential for abdominal strength and function. When this connective tissue becomes overstretched, the muscles lose their ability to provide proper support to the core, resulting in Diastasis Recti.



Beneath the rectus abdominis lies the transverse abdominis (TrA), a deep core muscle that acts like a natural corset, providing stability to the spine and pelvis. The TrA works in coordination with the internal and external oblique muscles, which contribute to rotational and lateral movements. Additionally, the pelvic floor muscles play an essential role in supporting the abdominal wall and maintaining intra-abdominal pressure.

The abdominal wall is not just about muscles; it also contains fascia, nerves, and blood vessels that contribute to overall function. The fascia surrounding the core muscles helps transmit forces across the body, ensuring efficient movement and stability. If these connective tissues become overly stretched or weakened, as seen in DR, they can compromise movement mechanics and lead to compensatory patterns that may result in further dysfunction.

By understanding the anatomy of the abdominal wall, you can appreciate why certain rehabilitation exercises focus on deep core activation rather than traditional abdominal workouts like sit-ups. Strengthening the transverse abdominis and pelvic floor muscles is a key component of recovering from DR and preventing its recurrence.

Causes and Risk Factors of diastasis recti

Pregnancy and Hormonal Changes

During pregnancy, the growing uterus stretches the abdominal muscles and connective tissue, often leading to DR. The body produces hormones like relaxin and progesterone, which help loosen ligaments and connective tissues in preparation for childbirth. While these hormones are essential for pregnancy, they also contribute to the weakening of the linea alba, increasing the risk of DR. Many women experience some degree of DR by the third trimester, though its severity varies. Factors that may increase the likelihood of developing DR during pregnancy include multiple pregnancies, carrying large babies, excessive weight gain, and poor core strength before or during pregnancy. Women with a shorter torso may also be at higher risk since the abdominal wall has less space to expand.

Improper Core Exercises

Exercises that place excessive pressure on the abdominal wall, such as traditional crunches, sit-ups, and heavy lifting without proper technique, can exacerbate or cause DR. When the deep core muscles are not engaged correctly, intra-abdominal pressure increases, straining the linea alba and potentially worsening the separation.
Athletes, fitness enthusiasts, and postpartum individuals attempting to regain core strength may unknowingly perform exercises that aggravate DR. It is crucial to learn safe, core-friendly exercises that promote proper muscle activation and minimize excessive stress on the midline.

Chronic Straining

Chronic straining from heavy lifting, persistent coughing, or constipation can place repetitive pressure on the abdominal wall, increasing the risk of DR. Conditions such as obesity and frequent bloating can also contribute to excessive abdominal pressure, weakening the linea alba over time.
Poor posture and improper breathing mechanics can further exacerbate the problem. When individuals fail to engage their deep core muscles during everyday activities, they create movement compensations that put unnecessary strain on the abdominal wall, potentially leading to or worsening DR.

Signs and Symptoms of Diastasis Recti (DR)

Diastasis recti is not always painful or immediately obvious, especially in the early stages. However, there are key signs and symptoms that can alert someone to the presence of this condition. Understanding these can help individuals seek proper assessment and intervention early on.

1. Visible Bulge or "Doming" of the Abdomen
One of the most noticeable signs of DR is a visible bulge or a raised ridge running vertically down the midline of the abdomen, particularly noticeable during movements that engage the core—such as sitting up from a lying position, coughing, or lifting something heavy. This bulge, often referred to as "doming" or "coning," is caused by the separation of the rectus abdominis muscles and the thinning of the connective tissue (linea alba) between them. This weakened midline lacks the tension needed to hold the abdominal contents in place, allowing them to push outward.

Note: This symptom is often most visible when lying flat and attempting to lift the head or shoulders without proper core activation.

2. Lower Back Pain
The abdominal muscles, especially the deep core muscles, play a critical role in stabilizing the spine. When the rectus abdominis is separated and the core is weakened, this stability is compromised. The lower back muscles may overcompensate for the lack of support, leading to discomfort, tightness, or even chronic pain in the lumbar region. Poor spinal support also increases the risk of strain during everyday movements like lifting a child, bending, or even standing for long periods.

Think of your core as a canister—if one side is weak or compromised, pressure and support become unbalanced, putting strain on other areas like your back.

3. Poor Posture and Spinal Misalignment

DR can significantly affect posture. As the core muscles weaken and the midline loses integrity, it becomes harder to maintain an upright, aligned position. This may result in an anterior pelvic tilt (where the pelvis tilts forward), increased lumbar lordosis (excessive inward curve of the lower back), or a forward head posture. Over time, poor posture can lead to muscle imbalances, joint pain, and reduced efficiency in body mechanics.

Postural changes due to DR may not always be obvious at first, but they can gradually contribute to feelings of fatigue, imbalance, and discomfort.

4. Core Weakness and Functional Limitations

A hallmark symptom of DR is general core weakness. Individuals may notice difficulty with tasks that previously felt easy—such as standing from a low chair, lifting groceries, or carrying a child. This is because the separation compromises the synergy between abdominal muscles, reducing intra-abdominal pressure and affecting the body's ability to generate strength and stability. Common complaints include:

- Difficulty bracing or "engaging" the core
- Trouble maintaining balance, especially during dynamic movements
- Early fatigue during physical activity
- Reduced control during exercises like planks or leg lifts

This weakness isn't just physical—it often leads to a lack of confidence in movement, which may cause people to avoid activity and lose further strength.

5. A Feeling of "Looseness" or Gap in the Abdominal Wall
Many individuals with DR describe a sensation of looseness or "emptiness" in the abdominal area. This may be felt when pressing on the belly—particularly along the linea alba between the belly button and the pubic bone. In more advanced cases, there may be a noticeable gap between the two halves of the rectus abdominis muscles (often measured in finger widths by a trained professional). This lack of tension not only affects physical strength but can create an unsettling sense of instability, especially when moving quickly or shifting directions.

This physical gap can vary in width and depth depending on posture, muscle engagement, and time since onset (e.g., postpartum period).

Additional Symptoms That May Be Present:

- Pelvic floor dysfunction (e.g., incontinence, pelvic heaviness) due to core-pelvic floor imbalance
- Bloating or digestive discomfort—some individuals report abdominal distension after meals or throughout the day
- Hernias in severe cases, where abdominal contents push through the weakened midline
- Emotional impact, including body image concerns or frustration over limited progress with traditional core workouts

Why These Signs Matter
These signs and symptoms are not just cosmetic or inconvenient—they reflect a deeper imbalance in the body's functional system. Without proper rehabilitation, DR can continue to impact quality of life, posture, movement patterns, and overall physical confidence. Early recognition, proper education, and guided physiotherapy interventions are key to restoring strength, function, and body awareness.

Signs and Symptoms of Diastasis Recti



Visible Bulge or "Doming" of the Abdomen



Lower Back Pain



Poor Posture and Spinal Misalignment



Weakness in the Core and Functional Limitations

CHAPTER TWO

Understanding Postpartum Abdominal Changes

The Postpartum Body: A Natural Transition

Pregnancy initiates one of the most transformative processes in a woman's body, requiring immense structural and functional adaptations to accommodate the growing baby. After childbirth, many women experience abdominal changes, leading to concerns about persistent belly bulge, core weakness, or even discomfort.

Despite the cultural pressure to "snap back" after pregnancy, see Amber Ray after birthing Africanah, postpartum recovery is a gradual process that varies from woman to woman. Some may find their stomach returning to near pre-pregnancy form within a few months, while others may struggle with lingering abdominal separation, skin laxity, or core instability for longer.

This chapter explains the physiological mechanisms behind these postpartum abdominal changes, the role of muscles, connective tissues, and hormonal influences, and why some women experience more persistent abdominal concerns than others.

The Role of the Uterus and Abdominal Muscles
During pregnancy, the uterus expands up to 500 times its original size, pushing other organs out of the way and stretching the abdominal wall. This pressure and expansion cause significant stretching of the abdominal muscles and skin.

After delivery:
- The uterus gradually shrinks back to its original size over 6-8 weeks through a process called involution.
- The abdominal muscles, which were stretched for months, may take much longer to regain their strength and tone.
- The connective tissue (linea alba) between the abdominal muscles may remain stretched, causing a condition called diastasis recti (abdominal separation).

The extent of these changes depends on various factors, including:
- Number of pregnancies – Women with multiple pregnancies may experience more pronounced changes.
- Baby size – Carrying larger babies or twins increases abdominal muscle strain.
- Genetics – Some women naturally have more elastic connective tissue, allowing for better recovery.
- Activity level – Engaging in core-strengthening exercises before and during pregnancy can help prevent severe muscle separation.

1. The Role of Muscles in Core Support
The core is more than just your "abs." It's a dynamic system made up of deep and superficial muscle layers that work together to stabilize the spine, pelvis, and internal organs. These include:
- Rectus Abdominis: Commonly known as the "six-pack" muscle, it stretches vertically from the rib cage to the pubic bone. During pregnancy, it naturally separates to accommodate the growing uterus.
- Transverse Abdominis (TrA): This is the deepest abdominal muscle, wrapping around the torso like a corset. It plays a major role in stabilizing the spine and pelvis and maintaining internal pressure. Its function is crucial during pregnancy and recovery.
- Obliques (Internal and External): These muscles help with rotation, side bending, and postural support. They also contribute to breathing and trunk stability.
- Pelvic Floor Muscles: These form the base of the core and help manage intra-abdominal pressure while supporting pelvic organs. During vaginal delivery, these muscles may stretch or tear, further altering core stability.

Together, these muscles work like a supportive cylinder. When any part weakens—especially the TrA and pelvic floor—the entire system struggles to function well.

2. **Connective Tissue: The Linea Alba and Fascia**

- Linea Alba: A fibrous band of connective tissue that runs from the sternum to the pubic bone. It connects the left and right sides of the rectus abdominis. During pregnancy, hormonal and mechanical factors cause it to stretch and thin.
- Fascia: This connective tissue surrounds and links all abdominal muscles. It's responsible for transmitting force across the core, maintaining posture, and coordinating movement.

After childbirth, the quality of this tissue plays a large role in recovery. Some women may have a linea alba that regains tension, while others experience lingering laxity and separation.

Think of the fascia like elastic—some stretches bounce back easily, while others remain overstretched and need guided rehab to regain tension.

3. **Hormonal Influences on Core Tissues**

- Relaxin: This hormone increases during pregnancy to soften ligaments and connective tissues, allowing the pelvis and abdomen to expand. However, it can also make tissues more prone to overstretching.
- Estrogen & Progesterone: These also affect connective tissue and fluid retention. Their levels drop sharply postpartum, which may influence tissue healing.
- Oxytocin & Prolactin: While essential for bonding and breastfeeding, these can also impact fatigue and energy availability for recovery, especially when sleep-deprived.

Every woman's hormonal profile is different. This partially explains why some bounce back quickly and others require longer, more structured rehab.

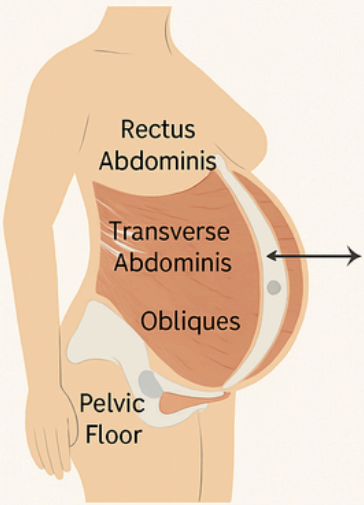
4. Why Some Women Experience More Persistent Issues

Recovery after childbirth is not one-size-fits-all. Several factors influence the severity and persistence of abdominal concerns like DR:

- Genetics: Some women naturally have more elastic connective tissue or smaller abdominal separation.
- Pregnancy Factors: Carrying multiples, large babies, or having closely spaced pregnancies increases abdominal strain.
- Delivery Type: Vaginal delivery, C-section, or assisted birth each impact different muscles and tissues.
- Lifestyle & Movement Patterns: Lifting toddlers, returning to exercise too quickly, or poor posture can delay healing.
- Core Activation Strategies: Lack of awareness on how to properly engage the TrA or over-reliance on superficial muscles can hinder recovery.

Education is key—understanding your body empowers you to take the right steps toward healing.

Anatomy of the Core –
What Changes Postpartum and Why?



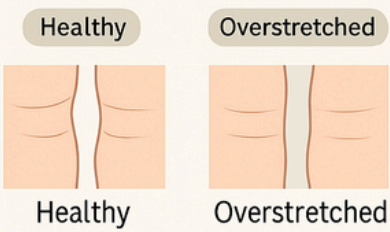
Abdomen expands during pregnancy

Hormonal Changes

- Relaxin loosens connective tissues
- Estrogen & progesterome decrease postpartum

Muscles and Abdomen Expansion

- Linea alba as abarıd tissue between Rectus Abdominis muscles
- Fascia transmits forces across the core



Hormonal Changes

- Relaxin loosens connective tissues
- Estrogen & progesterone decrease postparfum
- Hormones vary between women

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Diastasis Recti in pregnancy:

What Causes Diastasis Recti?

- Hormonal Changes:
  - During pregnancy, the hormone relaxin is released to loosen ligaments and connective tissues in preparation for birth. This makes the linea alba more vulnerable to excessive stretching.
- Excessive Pressure on the Abdominal Wall:
  - As the baby grows, constant outward pressure stretches the connective tissue, especially in women with a weaker core before pregnancy.
- Repetitive Incorrect Movements:
  - Poor posture, improper core exercises, or straining (e.g., incorrect lifting techniques) during or after pregnancy can worsen separation.
- Multiple Pregnancies or Close Pregnancies:
  - Repeated stretching of the abdominal wall without sufficient recovery time can weaken the linea alba over time.
- C-sections and Surgical Trauma:
  - While diastasis recti occurs whether a woman has a vaginal or cesarean delivery, surgical incisions can further weaken abdominal function and impact healing.
- Pre-existing Core Weakness:
  - Women who have weak core muscles before pregnancy are more likely to experience severe separation.

CHAPTER THREE

Assessment and Diagnosis of Diastasis Recti

Early and accurate identification of Diastasis Recti (DR) is key to creating a tailored recovery plan. This chapter explains how individuals can check for signs on their own and why professional evaluation by a physiotherapist offers deeper insight into core function and healing needs.

1. Self-Check Method

A quick, safe way to assess yourself at home:

Step-by-step self-assessment:

1. Lie on your back with knees bent, feet flat on the floor.
2. Place one hand behind your head and the other hand on your abdomen, fingers pointing downward at the midline (above the belly button).
3. Gently lift your head and shoulders slightly off the ground as if doing a small crunch—just enough to engage the abdominals.
4. Press your fingers down into your midline:
    - Start just above the belly button, then below it.
    - Check for any gap or softness where your fingers sink in.
    - Count how many fingers fit in the gap.

Interpreting your findings:

- A gap of 1-2 finger widths may be considered normal in postpartum individuals and can resolve naturally.
- A gap of 2.5 fingers or more, especially with doming, softness, or discomfort, may indicate Diastasis Recti.
- If the tissue feels very soft or squishy, that may point to weakened fascia, needing attention.

Note: A self-check gives you a general idea, but should not replace professional evaluation

2. Professional Physiotherapy Evaluation

Seeing a trained physiotherapist ensures a comprehensive assessment that looks beyond the surface:

Detailed Gap Measurement:

- Physiotherapists use palpation or tools like calipers or ultrasound to measure:
  - Inter-rectus distance (the horizontal gap between muscles)
  - Depth of the separation, indicating how compromised the connective tissue is

Core Muscle Function Test:

- Assesses how well deep core muscles (like the transverse abdominis and pelvic floor) activate
- Tests for coordination between breathing and core engagement
- Identifies compensatory patterns (e.g., holding breath, gripping with superficial muscles)

Functional Movement Screening:

- Looks at how your core behaves during daily movements:
  - Getting up from bed
  - Lifting objects
  - Sitting or standing posture
  - Breathing and abdominal bracing
- Identifies risk for pelvic floor issues, low back pain, or poor movement mechanics

Screening for Associated Issues:

- Pelvic floor dysfunction (incontinence, heaviness)
- Pelvic girdle or SI joint instability
- Low back pain or hip tightness
- Posture-related tension in the thoracic spine, rib cage, or diaphragm

The goal is not just to measure a gap, but to understand how your core is functioning as a whole.

3. When to Seek Professional Help

You should consider seeing a physiotherapist if:

- You notice a gap larger than two fingers months after delivery
- You experience doming/bulging of your tummy during movement
- You have persistent back pain, pelvic pain, or heaviness
- You plan to return to exercise after pregnancy
- You've had more than one pregnancy or a C-section
- You want a safe, guided core recovery plan

OTHER ASSESSMENTS AND KEY POINTS

Ultrasound Imaging

For greater precision, musculoskeletal ultrasound can be used to visualize the separation and thickness of the linea alba. It offers:

- Objective measurement
- Visualization of muscle activation and healing over time
- Better assessment of subtle cases or deeper separations

Tailoring the Recovery Plan

An accurate assessment lays the foundation for an individualized recovery journey. Based on findings, the physiotherapist can:

- Design Core-Safe Exercises: Programs start with deep core and pelvic floor activation exercises before progressing to more dynamic movements.
- Address Breathing Mechanics: Proper breathing supports intra-abdominal pressure regulation, crucial for healing.
- Correct Movement Patterns: Teaching strategies like log-rolling to get out of bed or modifying lifting techniques to prevent excessive intra-abdominal pressure.
- Monitor Progress: Regular reassessments ensure that exercises are appropriately challenging without compromising healing.
- Educate on Daily Activities: Helping clients understand how posture, baby-carrying, or workout routines impact their core health.

Red Flags During Assessment

Sometimes, assessments reveal signs that require special attention or referral, such as:

- Hernias (a visible bulge that doesn't reduce)
- Severe pelvic floor dysfunction
- Significant pain or dysfunction not improving with early intervention

In such cases, a multidisciplinary approach involving physicians, surgeons, or specialized pelvic health physiotherapists may be necessary.

Key Takeaway:

Early and accurate identification of Diastasis Recti enables clinicians to intervene before significant complications arise. A thoughtful, individualized treatment plan—rooted in careful assessment—sets the stage for safe recovery, improved core function, and long-term well-being.

CHAPTER FOUR

Treating diastasis recti

Early and accurate identification of Diastasis Recti (DR) is key to creating a tailored recovery plan. This chapter explains how

UGC Creation Tools Comparison Table

Tool Name	Features	Pros	Cons	Monthly Cost
Borcelle	Advanced editing capabilities	Intuitive user interface	Limited customer support	$19.99
Ingoude Company	Built-in templates and customisable themes	Robust community for collaboration	Steeper learning curve for beginners	$29.99
Hanover and Tyke	Seamless integration with platforms	Extensive library of stock assets	Relatively higher subscription cost	$49.99
Studio Shodwe	Video enhancement tools	Real-time collaboration with team members	Limited export options	$14.99
Larana Inc.	Mobile-friendly interface	Cloud-based storage and accessibility	Occasional performance issues	$9.99

Time Management

While exploring new tools and products can be exciting, be mindful of the time you allocate to researching them. Set boundaries and allocate specific time slots for research and evaluation to avoid getting overwhelmed or sacrificing your content creation and client acquisition efforts. Strive for a balance that allows you to stay updated on emerging trends without compromising your core responsibilities as a UGC Creator.

CONCLUSION

Embrace Your Journey

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- OLIVIA WILSON