

# DIASTASIS RECTUS ABDOMINIS A NEW ERA

## **A Guide for Health and Fitness Professionals**

*An overview of the recent advances, latest approaches, and newest concepts as we shift towards a new era in diastasis management*

# DIASTASIS RECTUS ABDOMINIS

## A NEW ERA

*Dear Reader,*

Diastasis Rectus Abdominis (DRA) is now becoming well known in the pre- and post-natal space. As you may be aware, our understanding of DRA is evolving and that is why, now more than ever, it's important to have accessible information that is educational, evidence-supported, practical and easy to follow. That was the intention behind this E-Guide for professionals.

In the following pages, you'll be presented with a summary of relevant changes to our conceptualization of DRA as well as recent advances in DRA assessment and management strategies. This context will help you make sense of all the conflicting information out there. Part of the reason behind the inconsistency in information is the fact that current ideas in DRA rehab are shifting away from previous paradigms, moving the pendulum forward. The aim of this guide is to help you understand the current landscape in postpartum core rehab. By the end of the guide, you will have a better appreciation for where we have been with regards to DRA, where we are now, and where we might be going.

If you find this guide useful, you might also be interested my other DRA E-Guide called "10 Reasons Why Your Diastasis Rectus Abdominis is Not Getting Better and What to do About It." This downloadable resource guide is designed for both patients and professionals and provides an overview of the 10 most common reasons individuals with DRA reach a plateau in their recovery efforts. It also provides clear and concise strategies to overcome those roadblocks. It is free and can be found on my website at [www.munirahudanipt.com](http://www.munirahudanipt.com).

It is my sincere hope that you enjoy the information here and find it helpful to your practice!

Best regards,

Munira Hudani, PT

# DIASTASIS RECTUS ABDOMINIS

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### An Evolving Concept

Pregnancy-related diastasis rectus abdominis is a term used to describe the process wherein the connective tissue strip down the mid-line of the abdomen, the linea alba, widens and thins to accommodate the growing baby. This natural physiological process has been reported to occur in 100% of pregnant women. Looking beyond the linea alba, however, there is also appreciable stretching of the entire abdominal wall as it contours around the expanding uterus.

After delivery, patients may report a general dissatisfaction in how their abdomen looks and feels. Some presentations may be related to the linea alba, some may be due to a relaxed abdominal wall, and some may be due to a combination of both.

As DRA research continues to evolve, so does our understanding of the condition. That being said, it can be difficult to keep up with these changes; hence, the following table serves to highlight relevant shifts in the conservative management of DRA.

### Shifting Away From:

### Shifting Towards:

#### The Definition

DRA is often described as a condition in which the rectus abdominis muscles split during pregnancy. Our original definition of DRA considers a widened linea alba as a source of postpartum core dysfunction. Although there is no consistency in research regarding the exact cut-off point to be considered DRA, the linea alba is often considered abnormal when it is wider than 2cm slightly superior to the umbilicus.



#### The Definition

There is a shift from using words such "split" or "separated" towards simply describing the physiological process of linea alba widening and thinning that occurs during pregnancy. This switch in vocabulary helps to reduce fear associated with having "split" muscles.

There is also a shift towards considering the global impact of pregnancy on the the entire abdominal wall and constituent tissues, rather than an isolated occurrence at the linea.



#### Assessment

##### Assessment Position

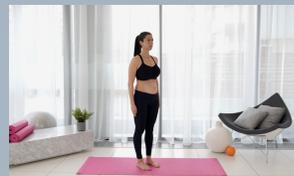
In research and clinical settings, the linea alba is most commonly assessed in the supine position.



#### Assessment

##### Assessment Position

With studies confirming the influence of assessment position on IRD, upright positions are particularly helpful in visualizing the linea alba after full slack has been taken up. Upright positions are also useful in assessing the pattern of abdominal distension, core strategies the patient may be using during activities of daily living and the ability to draw in the abdominal wall (transversus abdominis assessment) in more functional positions.



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### Shifting Away From:

#### Assessment Cont'd

##### Linea Alba Measurements

In clinical practice, DRA is typically assessed manually using finger width measurements or real-time ultrasound. Objective measurements are taken at several points along the linea alba either at rest or during a head-lift task, and then recorded.



### Shifting Towards:

#### Assessment Cont'd

##### Linea Alba Measurements

Advances in DRA research have opened the door for a more thorough core assessment that take into account characteristics of the linea alba beyond inter-recti distance (IRD). Other factors to consider are:

**Connective Tissue Integrity (Depth)** – This is an assessment of how deep ones fingers sink into the midline before being met with resistance. This information provides insight into the degree of connective tissue thinning that occurred in the linea alba.



**Connective Tissue Integrity (Passive Tension)** – With the patient at rest in supine, we can assess the quality of the linea alba at various points along its length and compare it to the least affected region, the sub-xiphoidal area. We can rate the quality of the palpated tissue from 1-5, with 1 indicating that the quality of the tissue is very different to the quality of the linea alba at the reference point, and 5 indicating the quality of the linea alba feels similar to the reference point.



**Linea Alba Tension During Deep Core Engagement (Active Tension)** – We can ask the patient to engage their transversus abdominis (TA) and hold the contraction as we assess the level of tension produced in the linea alba. A change in tension is indicated by a change in palpable firmness, where the linea alba shifts from feeling soft to touch, to feeling firm. We can use a similar 5-point scale as the passive tension assessment above, where 1 means that the firmness of the linea alba, during a deep abdominal contraction, feels significantly different to the firmness felt in the sub-xiphoidal region, and 5 means the linea alba feels very similar to the reference point.



These linea alba measurements still only provide a partial picture of the abdominal wall and the impact of pregnancy on it; hence, additional assessment measures are necessary.

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### Shifting Away From:

#### Assessment Cont'd

##### Additional Assessment Measures

**Transversus Abdominis (TA)** - Assessment of the TA has traditionally been performed in the supine position using either a pelvic floor cue or a TA-specific cue.

**Rectus Abdominis (RA) and Oblique Strength and Function** - As the name implies, assessment of diastasis rectus abdominis tends to focus on the *diastasis* of the rectus muscle with less emphasis on the strength and function of this muscle or the other superficial abdominals.

### Shifting Towards:

#### Assessment Cont'd

##### Additional Assessment Measures

**Transversus Abdominis (TA)** - Since the TA is responsible for the inwards motion of the abdominal wall, the TA contraction is better visualized in upright positions where the patient is asked to actively draw in the abdominal wall.



With this assessment format, we are able to evaluate the patient's ability to move the TA through its full range of excursion.

**Rectus Abdominis (RA) and Oblique Strength and Function** - Research has shown that women with DRA have trunk rotational and flexion deficits. One way to assess these deficits is through resisted trunk rotation as well as a sit-up task.

#### Management

**Lists:** Much of the conservative management of DRA has revolved around the idea of following generalized lists of exercises that are categorized as either "DRA-Safe" or "DRA-Unsafe." Exercises that involve global movements of the trunk or ones that produce any level of "doming" are typically avoided under this paradigm.



#### Management

**A New List:** Rather than following generalized lists of DRA-Do's and DRA-Don'ts, exercise selection is based on the patient's current strength and core status. For example, some patients with a four-finger diastasis will only be ready for gentle core activation exercises and some patients with the same degree of linea alba widening will be ready for front-facing planks. There are several helpful questions to run through to determine if your patient is ready for more:

**Can My Patient with DRA Do This Exercise? A New List**

1. Can they do the exercise without pain anywhere?
2. Can they do the exercise without leaking?
3. Can they do the exercise without feeling extra pressure in the vagina/pelvis?
4. Do they feel like they have control over their body and core when they do the exercise?
5. Can they maintain tension in the linea alba throughout the exercise?
6. Can they do this exercise without excessive doming and abdominal bulging?
7. Can they do the exercise with the appropriate core strategy?
8. Can they maintain their form and technique for the duration of the exercise?
9. Do they describe the exercise as easy?

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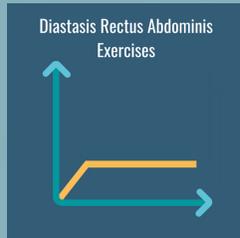
### Shifting Away From:

### Shifting Towards:

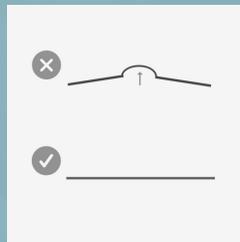
#### Management Cont'd

##### Abdominal Off-Loading:

The traditional approach to DRA typically centers around the idea of off-loading the abdominal wall in order to reduce stress and strain on the linea alba and preserve its integrity; hence, exercises are kept gentle and provide minimal challenge to the muscles in need of strengthening.



**Doming:** In order to minimize connective tissue strain, exercises are often selected based on the degree of doming present. When any amount of doming occurs, patients are typically instructed to modify their technique or are given exercises where doming doesn't occur.

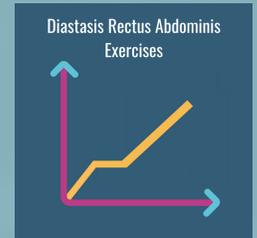


**Exercise Restriction:** After a diagnosis of DRA, any movement of the trunk is performed rather cautiously, so as to not place undue strain on the linea alba. This contributes to fear and avoidance of global movements such as trunk flexion, extension, rotation, both during exercise as well as day-to-day life.

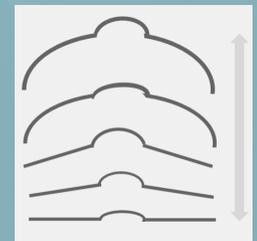


#### Management Cont'd

**Progressive Overload:** Both muscles and connective tissue need to be subjected to a force that is at least 50-70% of its maximum strength to promote growth. Hence, it is necessary to progress patients with DRA to more challenging exercises, especially if they have been avoiding them for some time. Select exercises that are appropriate for your patient's current status and then progress as soon as they are ready. Use the list of questions above to help you determine your patient's readiness for high-level exercises.

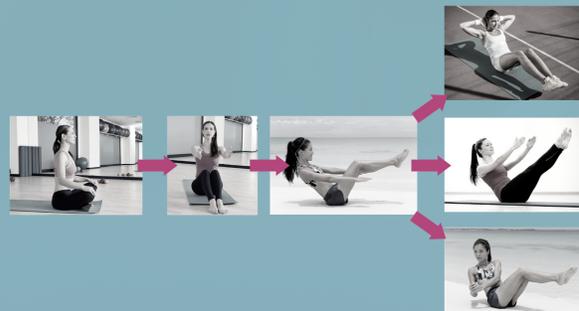


**Doming:** Understanding that doming operates within a continuum allows for a more individualized assessment of pressure management. Each patient will have their own range of doming/bulging and it is useful to assess where, in that continuum, the patient's doming exists. Since, some exercises will produce more and some will produce less, patients can try a wide range of exercises, and choose ones where doming is below their end limit.



In the cases where doming appears to be at the patient's end limit, we can modify exercise parameters such as breath, posture, core engagement, etc. to assess if their doming can come down from the extremes. This accomplishes two things: 1) It empowers the patient to explore a variety of exercises which then reduces their fear of movement, and 2) It provides a powerful self-management tool they can use as they explore what their core can handle.

**Exercise Reintegration:** Rather than limiting trunk range of motion, these movements can be thought of as goals for the rehabilitation process. Any exercise and/or movement can be used as a goal and can be broken down into its progressive components. The patient can advance through the levels allowing them to gain confidence in their abilities. All previously avoided movements can be progressively reintegrated into the rehab program.



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### Shifting Away From:

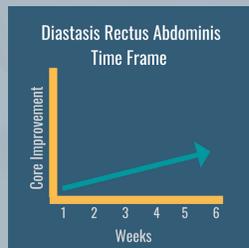
### Shifting Towards:

#### Overall Goals

**Rehab Goals:** Since our initial view of diastasis was based on the premise that the rectus abdominis separates during pregnancy, post-partum restorative efforts have been aimed at reducing the gap between the muscle bellies.

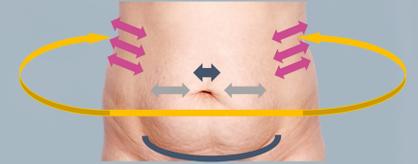


**Time Frame:** The treatment for DRA has traditionally involved gentle abdominal strengthening exercises as a means to reduce the width of the linea alba. Since strengthening is used to influence the linea alba, the time frame for improvement has been related to the time it takes to build muscle strength, which may occur over the span of 8-10 weeks.



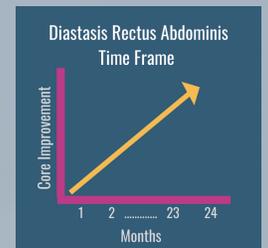
#### Overall Goals

**Rehab Goals:** There is a shift towards a more holistic approach to DRA management. Instead of singularly striving towards a smaller gap, the goals of DRA rehab can also include improving access to, and control over the TA during times of elevated abdominal pressure, improving the



tension-generating capacity of the TA on the slack linea alba, reducing abdominal circumference, improving connective tissue and linea alba stiffness, and improving the overall strength, function and integrity of the whole abdominal wall.

**Time Frame:** As research into diastasis evolves, so do our interventions for this condition. Exercises for DRA are becoming more progressive in nature, starting with connection-style exercises at the onset of rehab and progressing on to more global strengthening exercises for the large superficial muscles of the abdominal wall. However, with the inclusion of connective tissue integrity into our assessments, there is a need to update treatment time frames to account for the slower adaptive process of collagen. Whereas muscle hypertrophy can occur over a span of weeks, connective tissue remodeling and rebuilding can take up to 2 years.



### Signs of Improvement

In addition to a reduction in IRD (Diagram A), other factors may also indicate progress.

**Connective Tissue Integrity:** The quality and thickness of the linea alba can improve depending on the loads placed on it. *This can happen even as the size of the gap remains unchanged* (see Diagram B)

**Depth:** As one continues to apply load to the abdominal wall, there may be a change in the palpable depth of the linea alba. This change in depth may also be noticeable during an active TA contraction during which the TA tensions the slack linea alba, resulting in a more shallow groove. Notice in Diagram C, however, that as depth improves, the gap may in fact widen. *It is therefore important to be able to explain to our patients why an increase in gap width is sometimes a sign of progression not regression.*

**A**

**B**

**C**

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### In Summary

It is clear that things are evolving rather quickly. As we begin to understand the impact of pregnancy on the core, we start to see that pregnancy affects the whole abdominal wall rather than just the linea alba. With this broadened view, conservative management techniques are becoming more holistic and progressive. This has subsequently allowed for gradual reintegration of exercises and movements that were previously considered "unsafe." That being said, there is still much that we do not yet know. Research may answer more questions for us in the future, or it may steer us into another direction. In either case, we can simply do our best to keep up with the changes as they occur, and help our patients to our best ability with the information we have now.

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### Want to Learn More?

DRA is a vast subject with much more to learn! Munira has a comprehensive online course entitled “**Diastasis Rectus Abdominis and the Postpartum Core**” that is complete with 9 in-depth training modules and case studies. After years of frustration landing inconsistent results with her patients and the dissatisfaction in having to say “we just don’t have enough research right now”, she began to challenge the conventional method. She realized that part of the inconsistent results came down to how DRA was being conceptualized. With several tweaks to her approach, she started practicing with a different set of principles and this translated into improved patient outcomes. She has now compiled all of her knowledge and experience into a new framework that revolutionizes how we conceptualize, assess and manage DRA. Access to this cutting-edge course can be found at [www.munirahudanipt.com](http://www.munirahudanipt.com).