Pilates for Diastasis Recti post 3 pregnancies

Basi Pilates

Albohamad, Dalal
10/6/2016
Abstract

It is argued that almost every woman has a form of Diastatis Recti. Diastatis Recti is by definition the separation of the abdominal muscles, which causes complication for the internal organs.

Diastatis Recti is extremely common within pregnant woman and some common complications that are accompanied with DR is lower back pain, constipation and hernia. Further, due to this separation and weakened abdominal muscles, flexion and rotation must be avoided as these movements will increase the separation.

During the course of this paper, I have worked with a 30 year old mother of 3 who is suffering with DA and hernia after her pregnancy. This paper will discuss how Pilates can help in regaining strength in the abdominal muscles without causing further separation between the abdominal muscles and will aid in engaging the Transverse abdominal muscles.
## Contents

Abstract .............................................................................................................................................. 1  
Table of Contents ................................................................................................................................. Error! Bookmark not defined.  
Anatomical Overview .......................................................................................................................... 3  
Case Study .......................................................................................................................................... 6  
Conditioning Program ......................................................................................................................... 7  
Conclusion ......................................................................................................................................... 9  
Bibliography ..................................................................................................................................... 10
**Anatomical Overview**

![Rectus Abdominis and Abdominal Separation](image)

*Figure 1. From left, Rectus Abdominis in a Normal state, and rectus abdominis during Diastatis Recti.*

Diastasis Recti, by definition is physical separation of the rectus abdominis muscles. This is very common among pregnant woman as pregnancy applies pressure on the belly which prevents the abdominals from maintaining their shape. Diastasis, by the medical definition, means separation of the Rectus Abdominals. The exact separation occurs between the Linea Alba and Linea Semilunaris in the Abdominal Raphe, which is the midline collagenous connective tissue. (figure. 2)
As mentioned above, the main cause of this separation is pregnancy, where there is excessive intra-abdominal pressure. Having multiple pregnancies increases the risk of DR as it increases the load on the abdominals.

**Symptoms**

The physical appearance of DR is a protruding belly or belly button. Umbilical hernia is a common side effect of DR. The main symptoms of diastatis recti is primarily the instability of the abdominals along with back pain, poor posture and constipation.

Hernia, which is mainly caused due to an organ pushing through a muscle opening, is a very common side effect of DR. The main type of hernia associated with DR is inguinal hernia.

Most women who have had a baby have a diastasis recti, and this usually gets worse with each pregnancy.

---

*Figure 2. The muscles involved in DR.*
Abdominal trauma with a diastasis can cause the connective tissue to tear away from the abdominal wall causing a ventral hernia. This requires surgery to repair.

Some physical therapy practitioners have guidelines on movements that re-engage the abdominal muscles and bring them back to their normal alignment. Further a technique known as "Tupler technique" has proven to be effective in certain cases. Tupler technique involves a set of abdominal exercises which are practiced while wearing the belly split (belt) that helps in protecting the abdominal muscles together.

Surgery, is usually the final option if the above options were not efficient. Abdominoplasty is the operation conducted to correct the diastasis. The operation involves folding and sewing together the weak areas around the abdominal muscles. It is also known as “tummy tuck”. Another surgical option is medically known as laparoscopy which involves smaller cuts which decreases the possibilities of scarring.
Case Study

Shaima AlNasrallah, 30 years old, a mother of three, has been diagnosed with diastatis recti and hernia after her 2nd pregnancy. She has been exercising regularly (average of 3 times a week). Her exercise routine has been very random with no specific health goal in mind other than general fitness and wellness.

Shaima had her children in 2011, 2013 and 2015; this succession of birth and pregnancy caused great stress on her abdominal tissue and restricted the time to strengthen the abdominal muscles between the pregnancies. Furthermore, her second birth was through a C section which hindered her from doing any form of abdominal strengthening or exercise due to the surgery.

Due to this, a special fit- for- purpose pilates program has been designed with restricted flexion or rotation movements, as these movement mechanism will exacerbate the DR rather than make it better. Furthermore, the repertoire designed was aiming to re-educate her on how to engage her core muscles without harming them and how to adapt this knowledge in her daily activities and house chores.

The first 2-3 weeks of the program was mainly on the reformer and mat. As Shaima started to gain strength, mobility and familiarity, we moved into the intermediate repertoire on the Reformer, Cadillac and the Wunda chair.
Conditioning Program

This conditioning program is based on the Comprehensive BASI Block system, with the flow as follows:

- Warmup
- Footwork
- Abdominal work
- Hipwork
- Spinal Articulation
- Stretches
- Full Body integration
- Leg Work
- Lateral Flexion
- Back Extension
<table>
<thead>
<tr>
<th>Block</th>
<th>Equipment</th>
<th>Exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm up</td>
<td>Mat</td>
<td>Pelvic lift</td>
</tr>
<tr>
<td>Foot Work</td>
<td>Reformer</td>
<td>Parallel Heels Parallel Toes V position Heels Open V heels Open V toes</td>
</tr>
<tr>
<td></td>
<td>Cadillac (Intermediate / Advanced)</td>
<td>Parallel Heels Parallel Toes V position Heels Open V heels Open V toes</td>
</tr>
<tr>
<td>Abdominal Work</td>
<td>Reformer</td>
<td>Short Box Flat back with Pole Tilt</td>
</tr>
<tr>
<td>Hip Work</td>
<td>Reformer</td>
<td>Basic Supine Series Frog Circles Down / Circle Up Openings Extended Frog Extended Frog Reverse</td>
</tr>
<tr>
<td></td>
<td>Cadillac (Intermediate / Advanced)</td>
<td>Frog Basic Circles Down Circles up Walking</td>
</tr>
<tr>
<td>Spinal Articulation</td>
<td>Reformer</td>
<td>Bottom lift Bottom lift With Extension</td>
</tr>
<tr>
<td>Stretches</td>
<td>Reformer</td>
<td>Standing Hamstring stretch</td>
</tr>
<tr>
<td>Full Body Integration</td>
<td>Reformer</td>
<td>Stomach Massage Flat Back Reaching</td>
</tr>
<tr>
<td>Legwork</td>
<td>Reformer</td>
<td>Single leg Skating</td>
</tr>
<tr>
<td>Rotation / Lateral Flexion</td>
<td>Reformer (Intermediate / Advance)</td>
<td>Side Over</td>
</tr>
<tr>
<td>Back Extension</td>
<td>Reformer Ladder Barrel</td>
<td>Breaststroke prep Basic Back Extension</td>
</tr>
</tbody>
</table>
Conclusion

The results that Pilates has had on Shaima’s Diastatis recti has been a great non-surgical alternative to strengthen her core and bring awareness to her abdominal muscles. The mind and body connection which has been developed during her pilates practice allowed her to become more aware of her body and movement. Further, the results of the conditioning program proved to be effective in reducing the space between the openings in the core muscles by a few centimeters.
Bibliography

