



WOMEN'S HEALTH ULTRASOUND ASSESSMENT

The Ultrasound should be used after palpation of the abdominal. Use the US to confirm and clarify your findings, rather than expecting the US to provide all the answers.

OBJECTIVE ASSESSMENT OF THE ABDOMINAL WALL

Position: Comfortable position. Supine, knees rested on bolster

Process:

1. Palpate Linea Alba for softness and separation
 - a. Ultrasound Assessment of LA where indicated
2. Layer palpation of the lower abdominal wall
 - a. Resting Tone EO/IO
 - b. Transversus
3. Determine current strategy and response to “core cues” for TrA by palpating TrA and feeling response to verbal cues (check both sides TrA)
 - a. Response of TrA to PF cue – note if no response and confirm on US
 - b. Response of Tra to TrA cue – note if no response and confirm on US
4. Ultrasound assessment of TrA response to Cue
 - a. Use US to train best PF cue
 - b. Use US to train best TrA cue
5. Summarize the following
 - a. Linea Alba findings: presence and width of separation, doming.
 - b. TrA findings: Ability to effectively contract
 - c. PF findings: Response to cue

Note: For US Ax of Pelvic floor the curved probe is needed to achieve the desired depth. Therefore it is recommended the entire assessment be conducted with the Curvilinear probe. The linear probe may be used for abdominal wall and back muscles if needed.



ABDOMINAL WALL

LINEA ALBA

A great summary on the relevance of Diastasis Rectus was written by Diane Lee and can be accessed in the link below. The Lineal Alba and Transversus should be considered as parts of the same system and assessed together. However, if your the palpation findings of LA are not remarkable (i.e. no sign of DRA) then imaging the LA on US is not likely to yield further useful information.

The abdominal wall assessment aims to answer the question: Can this individual effectively generate tension across the Linea Alba (i.e. the depth) to support their pelvis and trunk for effective function?

Regarding imaging the LA, depth of separation is more important than the width of the separation. A full thickness tear and/or an inability to effectively contract TrA to generate the supportive corset tension around the trunk both impact the deep system's integrity and effectiveness. Therefore, US of the LA aims to determine if the separation palpated is a true loss of passive integrity in the system (tears in the fibres) or if the separation/tearing can be effectively overcome by an active strategy (response to cue).

Readers are encouraged to read the whole article here:

[Diastasis Rectus Abdominis - Diane Lee & Associates \(dianeleeophysio.com\)](https://dianeleeophysio.com)

LINEA ALBA - PALPATION

1. Palpate Linea Alba from Xiphoid process to pubic bone
2. Palpate for depth:
 - a. Note areas of softness or separation
 - b. Determine the presence of an "end feel"
 - c. Test at rest and with slight head lift – observe & palpate for "doming"
3. Palpate for width of separation
 - a. Note and record width of separation in finger widths

ULTRASOUND

1. Areas where you could not detect an end feel and suspect full thickness tears – assess for presence of linea alba between rectus heads. Linear probe, depth 3-4 cm will provide more clarity on this
2. Use callipers to measure distance between rectus heads:
 - a. At rest vs on curl up
 - b. In response to cue: it is okay for the distance to get wider – this will likely happen if the TrA contraction is effective. Observe for tension/taughtness in the LA

physiyogastrath.com.au

P (08) 8536 8558 F (08) 8536 2183 E info@physiyogastrath.com.au
2 Sandergrove Road, Strathalbyn, SA, 5255

PHYSIOTHERAPY • YOGA • PILATES • MEDITATION



- c. You can take picture/freezeframe to send to client notes

ABDOMINAL WALL & TRANSVERSUS ABDOMINIS

PALPATION

1. Midway between umbilicus and ASIS, palpate the abdominal wall.
2. Distinguish resting tone
3. Determine response to cue:
 - a. PF cue
 - b. TrA cue
 - c. Other?

ULTRASOUND

1. Find Transversus below the 12th rib, approximately outside a line drawn from nipple to ASIS.
2. Use the probe horizontally/transversely and trace the fibres of TrA, EO & IO to their lateral insertion into the Thoracolumbar fascia
 - a. Educate the client about the deep core – where it is, what it does and how it creates a corset
 - b. Image TrA in response to
 - i. PF cue
 - ii. TrA cue
 - c. Educate the client on the “best” cue for them – adjust your cue based on the US findings (see below potential impairments)
 - i. That isolates TrA (not EO/IO)
 - ii. Careful not to use glutes, rectus and posterior hip
 - d. Check both sides



PELVIC FLOOR

Transabdominal ultrasound (Realtime Ultrasound – RTUS) is **not** a direct assessment technique for assessing the pelvic floor – palpation is the gold standard for this. However US can be useful for screening for potential issues. The process is to image the neck of the bladder in response to a verbal cue to contract the pelvic floor. The image of the bladder can be used to infer the effectiveness of the contraction of the pelvic floor and suggest potential impairments with the deep system.

Potential Impairments

- Inability to contract in response to a cue
 - Unable to connect with the feeling – try different cues
 - Overactive Pelvic floor: Pelvic floor will be more domed shape. Try relaxed breathing & relaxation cues, modifying the start position as needed to try to achieve a relaxation before contraction.
- Assymmetrically contracting Pelvic floor
 - L/R: in transverse view, one side will lift and lower more than the other
 - Ant/Post: Either the front or back of the PF will lift – aim for an even lift toward the soundhead
- Poor endurance: Inability to continue contraction with breathing or functional tasks
 - If the individual is able to contract PF effectively, aim to hold 1-2 breaths before relaxing. Determine if ‘relaxing early’
 - Maintain PF contraction during basic Pilates ex’s: Single knee float L&R, Bent Knee Lift (BKL).

RTUS OF PELVIC FLOOR

Preparation; Ideally the client should empty their bladder and drink 500ml of water in the 30minutes preceeding the imaging.

Probe Type: Curved

Start Position: Above pubic symphysis. Transverse orientation

Setup: Adjust depth: 10cm approx

Gain: Adjust brightness

Focal zone Adjust to neck of bladder

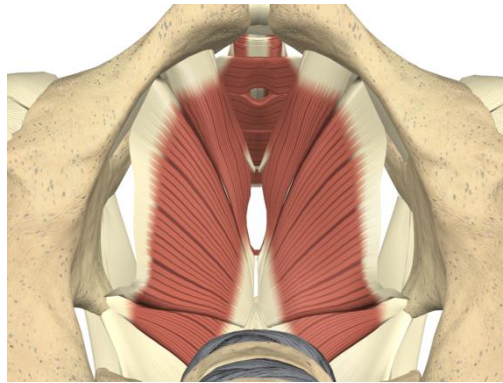
Frequency Increase to improve resolution of image – clear pixilation however not required as you’re not

physiyogastrath.com.au

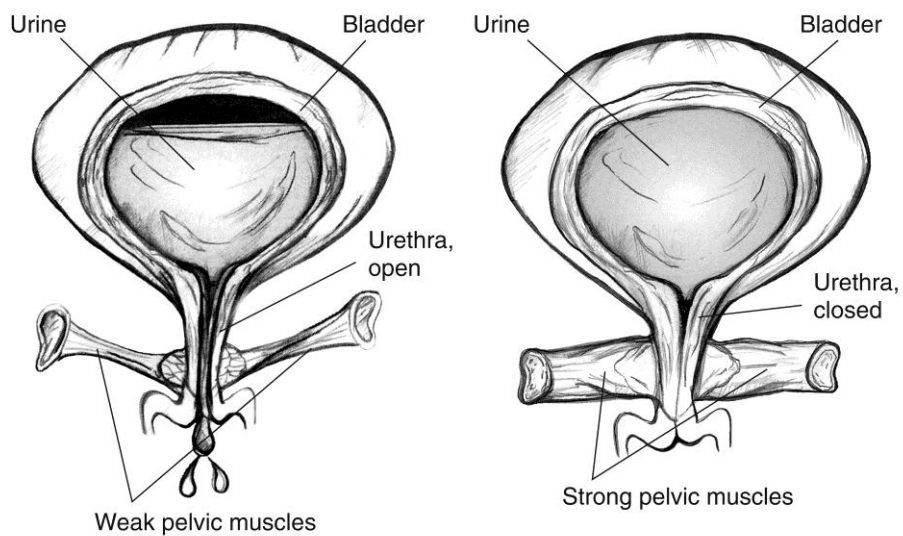
P (08) 8536 8558 F (08) 8536 2183 E info@physiyogastrath.com.au
2 Sandergrove Road, Strathalbyn, SA, 5255

PHYSIOTHERAPY • YOGA • PILATES • MEDITATION

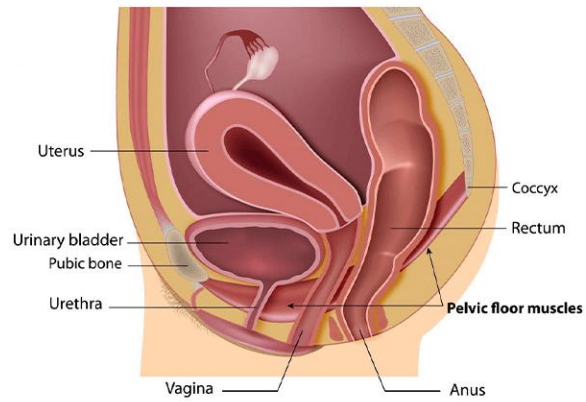
looking at muscle fibres, rather the response of the bladder.



[isc-pelvic-floor.png \(768×1024\) \(wordpress.com\)](#)



[N00673_H.JPG \(3000×1800\) \(VAGIFIRM.COM\)](#)



[Pelvic pain, painful sex? tight pelvic floor muscles explained - PFP](#)

Updated 10/02/2021