

**Neutral Series: For Lumbar Spine and SI Joint Stabilization
Transversus Abdominis (TVA) & Multifidi strength
Personal Best Pilates Instructor Academy
www.pilatesinstructoracademy.com**

<p>Begin</p>		<p>Lie supine in neutral, hip bones and pubic bone on the exact same plane.</p> <p>Find TVA by contracting abs by the hip bones.</p> <p>Relax rib cage (don't knit).</p>
<p>Level 1: Alternating single leg lifts</p>		<p>Lift one leg up and then put it down before lifting second leg.</p> <p>Pelvis must stay stable during weight transfer.</p> <p>Alternating is important because it mimics the movement we do when walking.</p>
<p>Level 2: Up up down down</p>		<p>Pelvis and spine must not move as 2nd leg comes up.</p> <p>Relax ribcage Alternate lead leg</p>
<p>Level 2 ½: Single leg out and in</p>		<p>One leg extends to a 45-degree angle and then returns.</p> <p>Do not allow abs to dome or ribs to contract</p>
<p>Level 3: Single leg out down up and in</p>		<p>One leg extends to a 45-degree angle and then lowers towards floor, comes up and returns to table top.</p> <p>Lower leg to floor slowly in stages as strength develops</p>

Move Review

The Neutral Series:

The neutral series is a fundamental exercise which can be used by the Pilates Instructor for two purposes:

As an assessment:

When used as an assessment the series is designed to test and score a client's ability to stabilize the lumbar spine and pelvis in neutral. The assessment is graded on a scale that ranges from 0-5.

- 0- The client can not stabilize the lumbar spine and pelvis while legs are moving.
- 1- Alternating Leg Lifts- the client is able to stabilize the lumbar spine and pelvis while alternating lifting and lowering one leg at a time.
- 2- Up, Up, Down Down- the client is able to stabilize the lumbar spine and pelvis while lifting one leg and then the other. The client does not dome or press out abdominals at all.

The rest of the assessment is completed from a table top position if the client passes level 2

- 2 ½ This is an intermediary level when the client is not able to do level 3. The client is able to stabilize the lumbar spine and pelvis while one leg is extended from a table top position. The client does not dome or press out abdominals at all.
- 3 Out, Down, Up and Return- The client is able to stabilize the lumbar spine and pelvis while extending one leg out to a 45-degree angle, lowering the leg towards the floor, bringing the leg back up to 45 and the returning to table top. The client does not dome or press out abdominals at all.

Levels 3 ½ through 5 are reserved for athletes and instructors

- 3 1/2 Double Leg Out and In- This is an intermediary level when the client is not able to do level 4. The client is able to stabilize the lumbar spine and pelvis while both legs are extended from a table top position. The client does not dome or press out abdominals at all.
- 4 Double Leg Out and Down- The client is able to stabilize the lumbar spine and pelvis while extending both legs out to a 45-degree angle, lowering the legs towards the floor, bringing the legs back up to 45 and the returning to table top. The client does not dome or press out abdominals at all.
- 5 Double Leg Up- The client is able to stabilize the lumbar spine and pelvis while lifting both legs from the floor to a 45-degree angle and then lowering back to the floor. The client does not dome or press out abdominals at all.

Using this assessment in the Intro appointment will help the Pilates Instructor grade the client's ability in stabilizing the lumbar spine. Once the Instructor knows the grade of the client, she can make better choices for exercises, for example if a client is only level one, the Instructor should choose only neutral exercises with the feet down for the client. Once the client progresses to level 2, the Instructor can introduce tilts and neutral spinal flexion (ex. Ab prep) or neutral exercises in table top (ex. Arm Circle Series). Once the client is at level 3 all Pilates exercises can be taught.

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As and Exercise:

The second way that the Neutral Series can be used by the Pilates Instructor is as an exercise for the Transversus Abdominus and Multifidus. Once the Instructor has a grade for the client, she can then use all Neutral Series exercises to that level to strengthen the clients TVA. For example, if the client presents at level 2 during the Intro session, the Instructor can use level 1 and 2 as warm-up exercises in the next few sessions. As the Client continues to progress through the levels during the next few sessions, she will be developing a stronger TVA and Multifidus and able to move to level 2 ½ and then 3.

When using the Neutral Series as a warm-up in a Pilates session, a few important steps need to be followed:

1. Do not allow the client to “cheat”. If the client is moving side to side or sliding on the mat, or if the client is doming **at all**, they will not strengthen the TVA. Instead they will develop faulty biomechanical habits and strengthen the Obliques and Rectus Abdominus incorrectly.
2. Follow the steps exactly. The Neutral Series was developed by medical professionals such as physical therapists and orthopedists to identify proper muscle recruitment and biomechanical action. As with any testing procedure, skipping steps or modifying the procedure renders the test invalid.
3. Do not cue the client to “knit” the ribcage. The Neutral Series is designed to recruit and strengthen the TVA. If the ribs are knitted the Obliques are firing and the TVA will not respond properly. If the TVA is not responding, the Multifidus is not responding. These muscles working together stabilize the lumbar spine in forward and backward movement (Sagittal Plane). This concept is paramount in Pilates!

Instead, cue the client to relax the ribs and breathe laterally while firing the TVA. This will train the client to recruit the TVA on inhalation or exhalation and will strengthen the TVA without the Obliques taking over. (If a client is not able to achieve level 1, the description in this paragraph can be used).

4. Whether a client presents with no low back issues or reports low back pain (diagnosed or not), the Pilates Instructor should begin with the Neutral Series to “grade” the clients ability to recruit the TVA and Multifidus and the strength of the recruitment. This will give the Instructor a great deal of information about the exercises that will help the client progress in Pilates.

Don't get Frustrated! If the client is only Level 1, there are still many Pilates exercises that can be taught! You will do your client a disservice by trying to progress her without proper muscle recruitment. The body only knows one way- teach it right!

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