

## WHY WE NEED TO EXERCISE OUR BACK AND JOINTS

**80%** of the population suffers from one or more episodes of back pain in their lifetime. Each day we subject our body, particularly our back and joints, to static and dynamic stress. This means that while we are sitting, standing, or moving we engage some form of our spine and other joints, which could result in an injury if they are not conditioned properly.

What this means is that we need to properly **balance our spine and joints** with effective strengthening and stretching exercises.

## WHAT IS THE CORE?

Let's get to the core first, of balancing our bodies.

The core or the "**powerhouse**" of the body is the trunk, stemming from below the chest to the pubic bone or pelvic region in the front, and the lumbar region in the back.

It is referred to as the powerhouse because it is like our central engine, which means all movement and control of our body comes from this central engine.

The core of ourselves needs to be working and conditioned properly before we can function without limitations.

## WHY DON'T COMMON LOWER BACK EXERCISES WORK?

Lower back exercises are widely used but fail to isolate the pelvis (in effect they allow it to rotate) so spinal flexion and extension are minimized during the exercise. This incorrect training allows the gluteal muscles and hamstrings to strengthen, but not the erector spinae muscles in the spine, which is our goal.

**So...**we end up with tight hamstrings and big strong glute muscles with a weak back.

Most people train the stabilizing muscles (core area) incorrectly or perform advanced exercises without first mastering the fundamentals.

Once you can properly isolate your **Transversus Abdominus** muscles (I will refer to them as the **TVA** - these are the deeply embedded abdominal muscles that surround and strengthen your spine), then you can begin a spinal stabilization and strengthening program.

## FOLLOW THESE PRINCIPLES:

- 2. Head Float** - Whenever you lift your head for an exercise, the work comes from your abdominal muscles to support the head in this position. "Float" your head, nodding your chin about a fist length from your chest, folding just under the chest to support it.



- 3. Breathing** - Inhale deeply through your nose, feeling your ribcage expand out to the sides. Feel like you are breathing into your upper back. Then exhale through your mouth, scooping out your lower abdominal muscles. Breathing is the key to making your Pilates movements fluid and efficient.



## Exercise 1: Neutral Spine/Abdominal Bracing

**Why:** To learn how to develop your Transversus Abdominal muscles to support and stabilize your spine in neutral, protecting it from everyday stressors.

**Position:** Lie on your back with knees bent and feet flat. Your arms are at your sides.

**Action:** Allow your tailbone to drop into the floor. Notice that this creates a small arch in your back; it is natural to have a slight lumbar curve. Now bring your focus up to your ribcage (thoracic spine area) and gently pull your middle ribs down so they are in contact with the mat.

Sometimes this action will cause your chin to tilt up. Correct this by pulling your chin toward your chest gently and lengthening through the back of your neck and out through the crown of your head.

**Breathing:** Inhale, and feel your ribcage expand as you fill up with air. Exhale without changing your spine position and expel all the air out, drawing your navel to your spine. Imagine you are a balloon expanding as you inhale, filling up with air. The balloon deflates as you exhale, expelling all of the air out.



**Notes:** Feel your tailbone on the mat, the natural curve in your lumbar spine (lower back), and your ribcage pulled down. Your chin is pulled down (you may need a pillow for your head to maintain this position). Feel the natural curve in your cervical spine area, with length in the back of your neck. The back of your head is touching the mat.

Your back should not be flattened or “imprinted” to the mat.

## Exercise 2: Articulating Bridge

**Why:** To improve pelvic stability by strengthening the deeper muscles in your buttocks. Helps to mobilize your spine by opening up the vertebrae and allowing cerebral spinal fluid to flow through and nourish your spinal canal. **It's energizing!**

**Position:** Lie on your back with your knees bent and feet hip width apart on the floor. Arms are relaxed at your side with palms face down.

**Action:** As you exhale, scoop out your abdominals, curling your tailbone and pressing your lower back into the floor. Slowly articulate or peel one vertebra at a time off the floor from your tailbone until your weight is supported evenly in your feet and shoulder blades.

Inhale at the top, then exhale as you peel your spine back down onto the mat. Lower or roll down one vertebrae at a time from the ribcage, then lumbar spine, then lengthen out through your tailbone, arching your back slightly as you release your tailbone down.



**Notes:** Imagine opening up the spaces between your vertebrae, stretching them as you articulate your spine up and down. Imagine your spine like a strand of pearls peeling up off the floor, and then visualize laying the pearls back down one by one.

**Caution:** If you have osteoporosis, you should bridge up only with a neutral spine. Use your abdominal muscles to lift your hips and lower your ribcage all at once.

### Intermediate Level Hundreds:

**Position:** Lie on a mat with your feet off the floor and knees bent at a 90-degree angle in tabletop.

Keep your arms long and about one inch off the floor. Your head and shoulders should be curled off the floor, using your abdominal muscles to support your head. Feel a fold just under your chest and flatten your tummy.

Make sure to keep your spine in a flat or neutral position, meaning your mid-ribcage stays connected to the mat.

**Movement:** Pulse your arms up and down at your side energetically, keeping time to the 5-count breath in and the 5-count breath out.



### Advanced Level Hundreds:

**Position:** Lie on a mat with both legs extended out somewhere between a 90-degree and a 45-degree angle to the floor. Curl your head and shoulders off the mat with your arms long and lifted.

**Caution:** The farther you lower your legs, the harder your abs have to work to keep your spine in neutral. If your ribs pull off the mat, you have come out of neutral and you will have a pain in your back!

If you feel a pull in your back and cannot keep your ribs connected, raise your legs higher to the ceiling.

**Movement:** Pulse your arms up and down at your side energetically, keeping time to the 5-count breath in and the 5-count breath out.



This is a preview of the bonus exercises at the end of the ebook. They provide an outline for each of the 3 levels for you to carry with you and perform anywhere.

**Advanced Level continued-**

5. Arrow with head lifted



6. Cobra



7. Swimming



8. Shell Stretch



9. Cat Stretch



10. Kneeling Arm and Leg Extension



13. Side Kicks/Heel Clicks



14. Arm Opener

