



# ARIEL'S CLINICAL INSTRUCTOR ACADEMY GUIDE TO LOW BACK PAIN

*Knowledge that has helped clients heal from lumbar spine  
conditions and injuries at Pilates Santé for 18 years*

**BY ARIEL LEHAITRE, MSPT**

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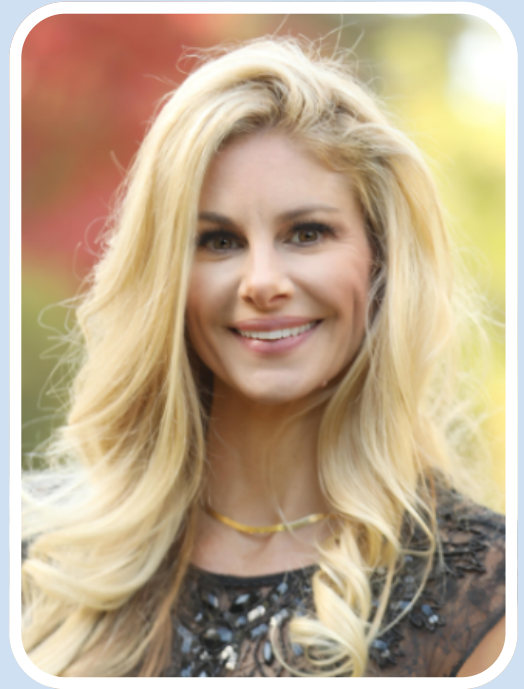
# About Ariel Lehaitre, MSPT

Ariel is the founder and owner of Pilates Santé, a rehabilitative Pilates and physical therapy studio in Los Gatos, California. She is a highly skilled Physical Therapist and a Polestar Certified Rehabilitation Specialist in Pilates-based Exercise, for 20 years. She received an M.S. in physical therapy from Boston University in 2002.

Ariel trained as a pre-professional classical ballet dancer at the School of American Ballet, San Francisco Ballet, and Pacific Northwest Ballet. Numerous dance injuries led her to Pilates for rehabilitation and conditioning. Injuries sidelined a ballet career but opened up a path to professional salsa dancing. Ariel instructed and competed in numerous countries, including Mexico, Italy, Spain, Singapore, and Columbia.

Ariel's dance career and injury recovery journey inspired faith in the healing power of Pilates. After practicing in a traditional outpatient orthopedic physical therapy clinic for six years, she became aware of limitations in therapeutic outcomes.

The desire to implement Pilates as the foundation of treatment led her to create Pilates Santé – Pilates for "health" in 2008. Her philosophy is that by improving a client's functional ability, they can return to their desired lifestyles and regain their health.



Ariel focuses on correcting muscle imbalances and poor movement patterns, and improving motor control, strength, and functional mobility for clients.

She is passionate about teaching Pilates teachers how to work with various injuries and conditions of the body. Ariel started a teacher training program, which includes specialized workshops and individual mentorships. Prior to this, she worked as a Polestar Pilates Mentor for their Teacher Training Program from 2011 to 2016. She has completed additional specializations: CoreAlign, Pilates for Osteoporosis, Pilates for the Oov, and Pilates Adaptations for Scoliosis.

*A note from the author*

## THE GAP:

### WHY I'M WRITING THIS RESOURCE MATERIAL

As common as a cold, low back pain (LBP) impacts countless individuals. Those experiencing LBP rarely receive optimal care, so **their pain episodes continue to persist and worsen in severity.**

Most Pilates instructors don't receive proper education on how to work with lumbar conditions safely, but are receiving an influx of clients with these varying complex conditions. **I'm passionate about educating Pilates instructors on how to work appropriately with LBP clients.**

I'm deeply hopeful this book will educate Pilates instructors about the various reasons their clients have LBP, and **which Pilates exercises are indicated or contraindicated for different types and stages of lumbar spine conditions.**

Together, we will help people heal through the power of rehabilitative Pilates.

*~ Ariel Lechaitre, MSPT*

# THE LUMBAR SPINE

The lumbar spine, or lower back, plays a critical role in the human musculoskeletal system. It is comprised of the five lowest vertebrae, denoted as L1 through L5.

These vertebrae are among the largest in the body and bear more weight than those in other regions of the spine. These vertebrae support the upper body's weight and facilitate a range of movements including flexion, extension, lateral flexion, and rotation.

During activities such as lifting, the lumbar spine undergoes complex loading patterns. Proper alignment and muscle activation are essential for distributing these forces efficiently. If the spine is improperly aligned, or if the muscles do not function correctly, the distribution of force can become uneven, leading to increased stress on the lumbar spine.

Understanding the biomechanics, potential injuries, and preventive care of this spinal region is vital for maintaining its health and functionality throughout an individual's life.

# UNDERSTANDING LUMBAR SPINE STABILITY

Lumbar spine stability refers to the ability of the lumbar spine to maintain its structural integrity and functional alignment during static positions and dynamic movements. It involves a balance between active, passive, and neural control systems to prevent excessive movement that could lead to pain, injury, or dysfunction (Panjabi, 1992).

## COMPONENTS OF LUMBAR SPINE STABILITY

**Active System:** refers to the muscles surrounding the lumbar spine that generate force to stabilize the area, including:

- **Deep core muscles:** Transversus abdominis, multifidus, pelvic floor, and diaphragm.
- **Global muscles:** Erector spinae, rectus abdominis, and obliques.

These muscles work together to control movement and resist external forces.

**Passive System:** includes the bony architecture (vertebrae), intervertebral discs, ligaments, and joint capsules that provide structural support.

- These passive components contribute to spinal stability by resisting shear forces and maintaining alignment.

**Neural Control System:** refers to the central and peripheral nervous systems' role in coordinating and activating muscles around the spine.

- Proprioceptive feedback ensures appropriate timing and intensity of muscle activation to maintain stability (Panjabi, 1992).



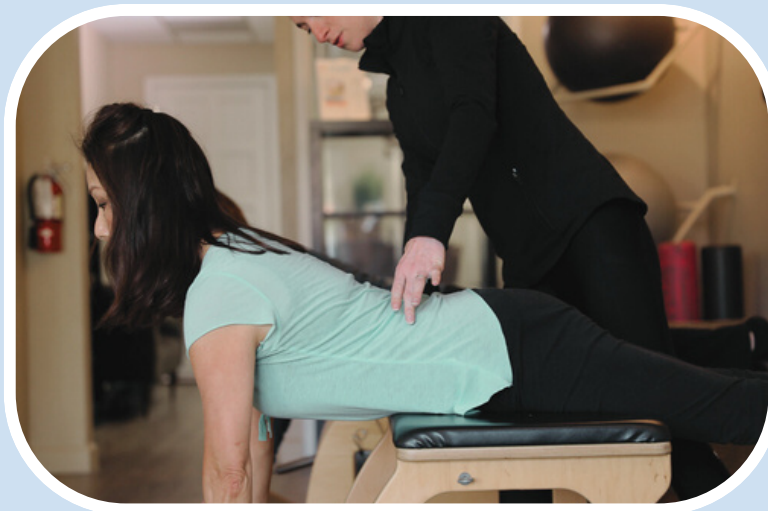
When the stabilizing systems fail to control movement adequately, leading to excessive motion at one or more spinal segments, potentially causing pain or injury (e.g., spondylolisthesis, disc degeneration), leading to pathological instability.

## ASSESSMENT AND TREATMENT

**Assessment:** Evaluating lumbar spine stability often involves tests for core strength, endurance, and motor control, such as the prone instability test, dynamic stability tests, or imaging (in cases of suspected structural instability).

**Treatment:** Enhancing lumbar spine stability focuses on strengthening the deep core musculature, improving proprioception, and addressing any biomechanical deficits through targeted physical therapy or rehabilitation programs.

Empirical research underscores the efficacy of Pilates in the rehabilitation of lumbar spine conditions. Studies indicate that Pilates exercises, by strengthening the deep trunk muscles, particularly the transversus abdominis and multifidus, contribute to a more stable lumbar-pelvic region, thereby alleviating stress on the lumbar spine itself (Phrompaet *et al.*, 2011).



**LUMBAR SPINE STABILITY IS A CORNERSTONE IN PREVENTING AND MANAGING LOWER BACK PAIN AND ENSURING OPTIMAL FUNCTION DURING DAILY ACTIVITIES AND HIGH-LOAD TASKS.**

# IMPLEMENTING EFFECTIVE LOAD MANAGEMENT FOR ALL DISC PATHOLOGIES

**Exercise and Therapeutic Pilates:** Monitoring and adjusting the rehabilitation program based on progress, pain levels, and functionality is essential. This also means modifying exercise as the condition improves, from less to more gradual spine load appropriately.

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# TRACTION AND UNLOADING PROTOCOL



**Traction or Unloading** is the separating of the vertebral segments to decrease load or pressure on the intersegmental discs and associated structures. This therapeutic technique can be applied to all stages of disc pathology when performed carefully.

Traction can be used for symptom management during exercise sessions,

at the end of exercise sessions, or throughout daily activities. This method enables quicker healing and rehabilitation of disc pathology.

Pilates teachers can safely assist clients with lumbar spine loading techniques, and teach their clients therapeutic methods to unload their spine independently at home.



# IDENTIFYING STRESSES TO LOWER BACK

The five stressors that can occur on the lower back are:

1. Flexion or rounding stress
2. Extension or arching stress
3. Rotation or twisting stress
4. Side bending stress
5. Vertical compression stress

These five stresses are unavoidable during daily activities, so it is important to understand what type of stress is being applied to the back, in order to better manage them.

Try performing some of the activities below and see if you can feel the position that the lower back wants to move into. **Does that cause symptoms?**



# INFLAMMATION MANAGEMENT

**When dealing with chronic conditions or pain, there are occasionally flare ups.**

There may be a mechanical reason for increased pain, such as prolonged sitting for low back pain or sleeping in a poor position for cervical pain. Other times, the flare up may not appear to be a specific reason, which can be frustrating.

**Either way, there are steps you can take to feel empowered to control pain.**

**1. Ice it:** This is not only indicated when an initial injury occurs. In fact, intermittent icing can be helpful managing chronic inflammation. 10-15 minutes a few times per day during a flare up can be effective.

**2. Anti-inflammatories:** Oral medications and/or supplements can hasten the body's natural healing of inflammation.

**a) Oral medications such as:** Advil or ibuprofen

**b) Designs For Health Supplements:** Inflammation, Curcumin-Evail and fish oil

**c) DYNAPURE CBD:** Soothing Roller and Sports Cream



# INFLAMMATION MANAGEMENT

**1. Movement:** In the initial 24 hours of an acute injury, rest may be indicated. However, research now demonstrates that corrective movement and therapeutic exercise is most effective for managing pain and symptoms. This would include the Pilates home exercises provided by an instructor, walking, or gentle cardiovascular exercise.

**2. Diet and hydration:** Stay well hydrated (drink at least half your body weight in ounces/day) and avoid excessive caffeine and alcohol. Avoid processed foods, shelf stable/hydrogenated fats, sugar, gluten (including white flour) and low quality dairy. Emphasize foods and herbs that are anti-inflammatory such as turmeric, ginger, cinnamon, leafy greens, blueberries, dark cherries, and celery.

Eat healthy fats with every meal such as salmon, nuts, seeds, coconut oil/milk, and avocados. Support gut health with a quality probiotic (Designs for Health ProbioMed 50 or ProbioMed 100 can also be ordered from our e-store) and fermented foods such as raw sauerkraut or kimchi.

**3. Stress management:** Studies show that stress and increased cortisol levels increase inflammation in the body. Techniques such as breathing and meditation can be very helpful for this. [See our website for our Stress Management blog](#), which includes specific meditation videos.

**A note from Ariel on other Rx options:** *Oftentimes, I refer our patients and clients to other practitioners for treatment to work as a team in pain management. Our community consists of chiropractors, acupuncturists, and massage therapists. If you are interested in specific recommendations for you, please do let us know.*

# MINDFULNESS & LUMBAR SPINE REHABILITATION

Pilates is a mind-body intervention, that offers a unique blend of strength training, flexibility enhancement, and neuromuscular reeducation and is uniquely helpful in addressing the multifactorial nature of lumbar spine pathologies.

Mindful movement encourages patients to engage in a more conscious participation in their movements. Together, this enhances body awareness and fosters the mind-body connection that is often neglected in traditional therapeutic models. In addition to physical healing, this mind-body connection helps reduce anxiety and stress-related tension in the body, which facilitates a more positive healing environment.

The focus on breathing techniques within Pilates aids in pain management and emotional regulation, further contributing to holistic healing of lumbar spine issues.

In professional practice, incorporating Pilates into rehabilitation programs for the lumbar spine not only aligns with current evidence-based practice, but also meets the growing patient demand for non-pharmacological and non-surgical interventions.





# HOW TO DOWNLOAD THE FULL EBOOK

I hope you enjoyed this free resource! There is a lot more where this came from: you can download our Lumbar Spine e-book [here](#) to gain access to 75+ pages of programming, exercises, and insights to help your clients manage low back pain.

Whether you are a Pilates professional, or struggle with LBP yourself, this book will help you heal.

Be sure to check out the Pilates Santé YouTube channel for additional free resources, including at-home work-out programs for specific pathologies, Pilates tips, and advice on pain management.

*~ Ariel Lehaitre, MSPT*

# RESOURCES & REFERENCE MATERIAL

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