

PILATES FOR LOW BACK PAIN

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Learning Objectives

- Describe the fundamentals of Pilates
- Describe Pilates-based PT
- Explain how Pilates can benefit patients with low back pain
- Perform some classical mat Pilates exercises that they can use for their patients with low back pain
- Know how to become more formally trained in Pilates

"I must be right. Never an aspirin. Never injured a day in my life. The whole country, the whole world, should be doing my exercises. They'd be happier." - Joseph Hubertus Pilates, in 1965, age 86.¹

SO WHAT IS PILATES?!

What is Pilates?

- Pilates is a method of low-impact exercise and physical movement designed to:¹
 - Stretch
 - Strengthen
 - Balance the body



What is Pilates Continued

- **Talking Points From In-Class Presentation:**

Pilates is a method of exercise and physical movement designed to promote flexibility, strength, motor control, agility and balance the entire body.¹ With systematic practice of specific exercises coupled with focused breathing patterns, Pilates has proven itself invaluable not only as a fitness endeavor, but also as an important adjunct to professional sports training and physical rehabilitation of all kinds.¹ It is a whole body workout that is designed to uniformly develop the body, and it is based on the principle that “every muscle helps strengthen every other muscle.”⁸

As you can see from the pictures from the previous slide, there is mat-based Pilates and also equipment-based Pilates. The equipment is great because it can facilitate neuromuscular learning by providing support and stabilization, which also increases the patient’s confidence and comfort.

What is Pilates-based PT

- Approach to healing grounded in moving the body
- Utilizes the Pilates system with traditional PT methods
- Large emphasis on the mind-body connection



What types of patients can benefit?

- “Pilates is for everyone and everyone benefits from doing the Pilates exercises and movements.”⁸
- Patient examples:
 - Those with:¹⁴
 - Lower back pain
 - Shoulder pain
 - Chronic pain
 - Sciatica
 - Overuse injuries
 - Tendonitis
 - Foot and ankle pain
 - Postural issues
 - Pelvic and spinal instability
 - Orthopedic injuries
 - Neurological and balance disorders

Quick History of Pilates

- Created by Joseph Hubertus Pilates⁶
- During WWI he was interned at a camp for enemy aliens in England, and this is where he began devising his system of original exercises that later became “Crontrology.”⁶
- In 1926 him and his wife, Clara, moved to NYC and opened a fitness studio, sharing an address with the New York City Ballet.⁷ This close proximity made Pilates such an intrinsic part of many dancers training and rehab work.⁶
- By the 1980s, Pilates had gained popularity because of celebrity clients, and the workout entered the fitness mainstream.⁷
- Pilates felt his work was “50 years ahead of (his) time,” and he was right!⁶

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FUNDAMENTALS OF PILATES

Help to achieve true health: “the attainment and maintenance of of a uniformly developed body with a well-balanced “holy trinity” of body, mind, and spirit.”⁸

The Fundamentals⁸

- Concentration and Awareness
- Visualization
- Using your powerhouse – the “core”
 - Area of the torso between the lower ribs and hips
- Precise control
- Flowing Natural Movement
- Oppositional Energy
- Proper Breathing

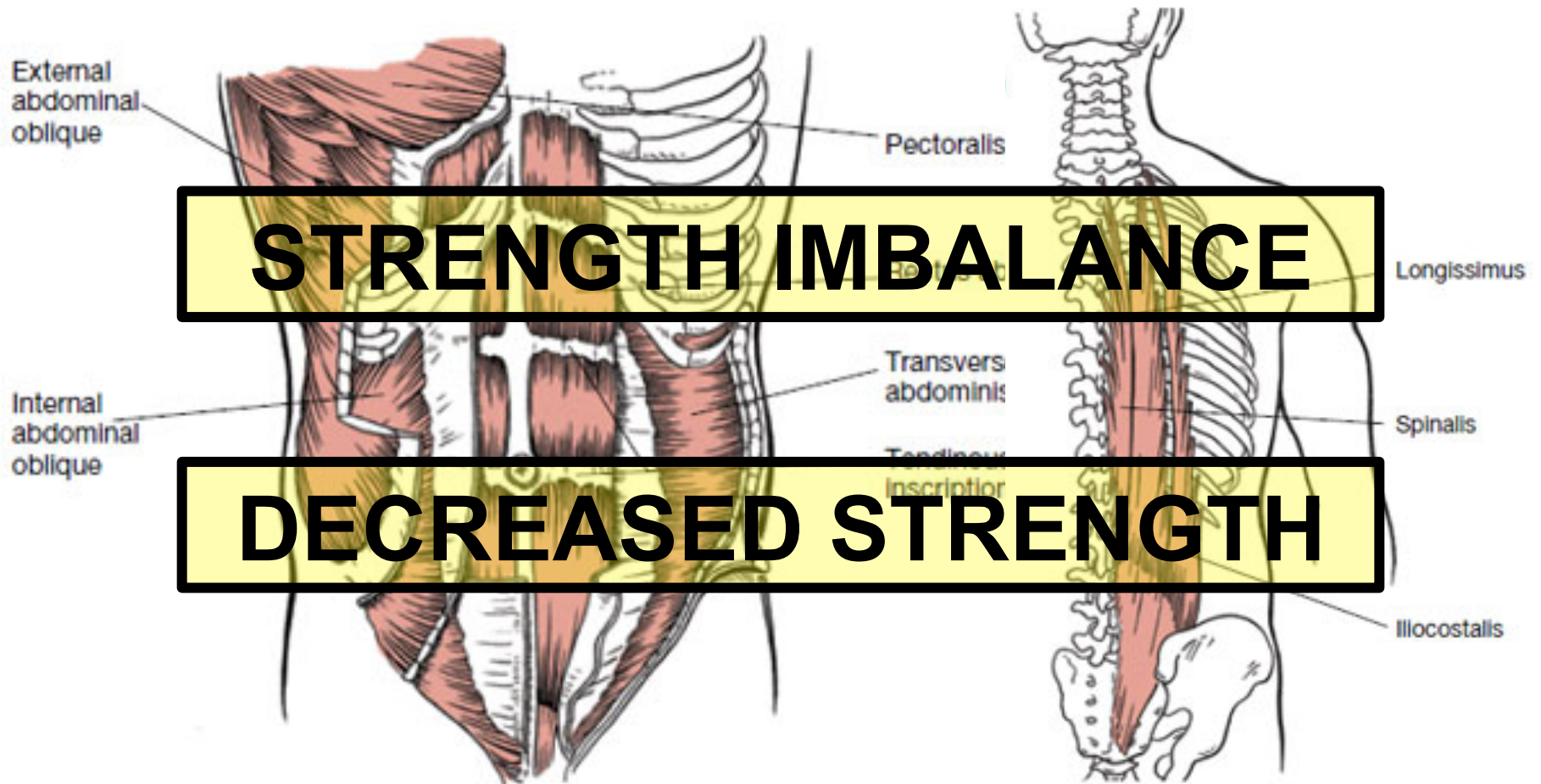
Pilates Breathing...Let's Practice

“Above all, learn how to breath correctly”⁸
- Joseph Pilates

PILATES AND NON-SPECIFIC LOW BACK PAIN



Ouch!



STRENGTH IMBALANCE

DECREASED STRENGTH

When treating patients with non-specific low back pain, many factors can affect the mechanical balance of the lumbar region leading to instability that can trigger low back pain.¹² Some factors are: motor control impairment of the trunk muscles, strength imbalance of the trunk muscles and/or overall decrease of the trunk muscle strength.

Research



Manual Therapy

Volume 16, Issue 2, April 2011, Pages 183–189



Original article

Effect of pilates mat exercises and conventional exercise programmes on transversus abdominis and obliquus internus abdominis activity: Pilot randomised trial

Duncan J. Critchley^a,  , Zoe Pierson^b, Gemma Battersby^a

Info From This Study: Measured Transversus abdominis (TrA) and Obliquus internus (OI) after Pilates program 2x/week for 8 weeks. TrA and OI measured with ultrasound pre and post training. Control group performed strength training 2x/week for 8 weeks. There were no changes in muscle thickness at rest or during functional exercises, but Pilates did appear to increase TrA thickness, but only when performing Pilates exercises.

Research

Article



Pilates improves pain, function and quality of life in patients with chronic low back pain: a randomized controlled trial

**Jamil Natour, Luciana de Araujo Cazotti,
Luiza Helena Ribeiro, Andréia Salvador Baptista
and Anamaria Jones**

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Per this recent study by Natour, the Pilates subjects compared to the minimal intervention control subjects had a significant improvement in their pain score on the VAS. Which the study attributed to the increase of strength of the core muscles provided by the Pilates exercise training.¹⁴

In addition to improvement of pain, Pilates has also shown to improve function and quality of life.

Research Bottom Line

- Pilates is safe and effective in reducing chronic, non-specific low back pain.¹⁵
- One of the most current systematic reviews and RCTs suggest that Pilates is more effective in reducing chronic, non-specific low back pain in comparison with minimal intervention.¹⁵
- The systematic review meta-analysis found no statistically significant benefits of Pilates over general exercise.¹⁵
- Decision to use Pilates for chronic non-specific low back should be based on your patient's preferences and costs.¹⁵
- Between the 2 types of Pilates, mat-based and equipment-based, 1 RCT found no statistically significant benefit of one type over the other in terms of reducing chronic, non-specific pain.¹⁵
- There is a need for more high quality and large sample sized studies to be conducted in order to research the effects of Pilates on chronic, nonspecific low back pain.¹⁵

TIME TO MOVE

Pilates mini-exercises that incorporate the Pilates fundamental movement skills. These exercises will help you build uniform strength, flexibility, and stability, and will develop your awareness and control of your body.⁸

Pilates Mini-Exercises⁸

- Pilates breath
- Pilates Scoop
- Pelvic Rocking
- Knee Folds
- Knee Sways
- Ribcage Arms
- Upper Body Curl

“Conscientiously, faithfully, and without deviation...keep your mind wholly concentrated on the purpose of the exercises as you perform them.”⁸

- Joseph Pilates

HOW TO GET PILATES CERTIFIED



LOCAL TRAINING STUDIOS

- CARY
 - Power Pilates (studioVIBE)
- CHARLOTTE
 - Absolute Pilates (Pilates Academy International)
- DURHAM
 - The Pilates Center (Insideout Body Therapies)

QUESTIONS

Thank you for your time!

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