

Importance of Core Stability for Lower Back Pain in Physical Therapy

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What is the core?

The “core” is a group of muscles that supports the spine including Lower back, hip, and back.

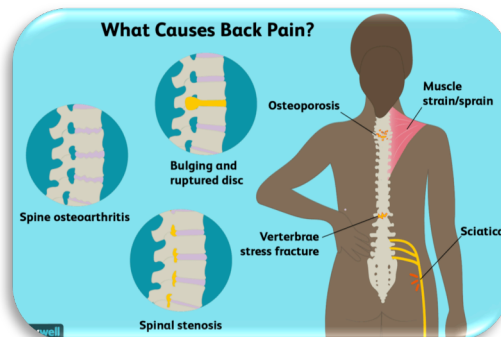
The “core” is the location of our center of gravity.



Improper function of these muscles may lead to abnormal spinal loading, muscle strain, or injury to spinal structures, all of which have been associated with increased low back pain risk (Raabe & Chaudhari, 2018).

Conditions/Diagnostics that Leads to Poor Core Stability:

- Lumbar strain/sprain
- Lumbar Fractures
- Stenosis
- Bulging/Herniated Disks
- Scoliosis
- Spondylosis
- Arthritis



Why Perform Core Stabilization Exercises?

Strengthening your core musculature reduces the strain on your back and helps relieve or prevent pain as these muscles provide stability to your trunk. Strengthening your core musculature keeps bones aligned properly so that there are no abnormal stresses on spinal joints. A strong core also allows for improved balance, which leads to decreased falls (Harvard Medical School, 2013).

Avoid back pain and improve balance by strengthening core muscles. Harvard Health Letter. 2013;38(7):1-7.
<http://search.ebscohost.com/login.aspx?direct=true&db=ccm&AN=104188480&site=eds-live>. Accessed April 7, 2020.

Raabe et al. (2018). Biomechanical consequences of running with deep core muscle weakness. *Journal of Biomechanics*, 67, 98-105.
<https://doi.org/10.1016/j.jbiomech.2017.11.037>

AQUATIC SOLUTIONS
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Water therapy allows for increased core activation due to water turbulence, which increases the strength of muscles, bones and joints of the spine.

Other benefits of water therapy for core stabilization and back pain:

- Warm water provides a soothing environment for aching joints and muscles
- Buoyancy allows for reduction of gravity on injured or aching joints and muscles, thus minimizing pain
- Improves balance and coordination