



Low Back Pain

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Most of us will experience low back pain in our lifetime. Second only to the common cold, it is the most frequent cause of lost work days in adults under the age of 45. The low back has difficult functions to perform; it has to be flexible **and** stable. The flexibility allows the arms, legs and head to be in a huge variety of positions with the twisting and bending of the trunk. The stability of the trunk occurs due to strength of muscles, healthy bones, and strong ligaments. All of us have marveled at the flexibility of a gymnast in a backbend. Take that same back bent gymnast and have another gymnast climb and balance on him in a Cirque du Soleil performance. Now you have an ultimate example of combined flexibility and stability of the spine.

Any coach will work on a baseball pitch, tennis serve, or golf swing (all involve rotation of the low back) by emphasizing obtaining power from the lower back. Pain in the lower back will reduce the performance of an athlete and also reduce the quality of enjoyment of everyday life. It is the job of the coach and each athlete to prevent injuries to the back.

Prevention of low back injuries is best accomplished by:

- keeping the abdominals, psoas, low back musculature, hips, and legs strong
- keeping the hamstrings, quads, ITB, and spinal muscles flexible
- optimizing weight and fitness
- observing proper lifting techniques
- avoiding heavy or awkward lifting (use more people or machines)
- avoiding long term sitting (take breaks to change posture)
- sitting on your ischial tuberosities (sit bones) instead of slouching

The low back consists of:

- five lumbar vertebrae bones that are stacked on top of the sacrum and pelvis
- six disks which act as shock absorbers and stabilizers between each vertebrae
- the spinal cord and nerves which connect your brain to the muscles of your legs
- small joints which allow movement; and simultaneously block undesired movement
- muscles to provide stability, strength and power
- ligaments to support and stabilize desired postures; and also to restrain excessive movement

Structural causes of low back pain include:

- fractures
- protruding or ruptured discs

- spinal cord or nerve impingement
- joint injuries
- strains: Poorly conditioned muscles can be overworked and healthy muscles can be overloaded in strains
- ligaments can be injured by sudden, forceful movements especially at end range postures (fully twisted, fully bent)
- age: The natural effect of aging is for osteoporosis (decreased bone density); and decrease in strength and elasticity of muscles and ligaments. This effect can be slowed by regular exercise
- inherited factors: Poor posture can be “inherited” structurally and also learned. If all the chairs at home make you slouch, you will slump
- attitude: An erect self confident attitude really helps!

Initial treatment of low back pain:

- determine what caused the pain and avoid that activity or position
- ice and anti-inflammatory to decrease inflammation
- rest in positions of comfort and avoid all positions of pain
- be mildly active, as motion helps to reduce inflammation and keeps muscles and joints mobile

Early treatment of low back pain:

- gradual resumption of everyday activities
- avoidance of all painful postures and activities
- begin gentle and proper stretching and strengthening exercises
- resume non painful sports (swimming, walking, etc)
- may include continued medications

A normal response to low back pain is that after the first two days, each day thereafter is better. This indicates healing of the condition. A general rule is that Physical Therapy is begun if the healing process stalls. The Physical Therapists at North Boulder PT have advanced post-graduate training in manual techniques and exercise programs to resolve low back pain. If insurance is billed, then P. T. is by physician prescription. Knowing that return to work and your normal routine is important; we can see you within 24 hours. If you have questions, please call 303-413-9903 and ask to speak to one of the physical therapists.