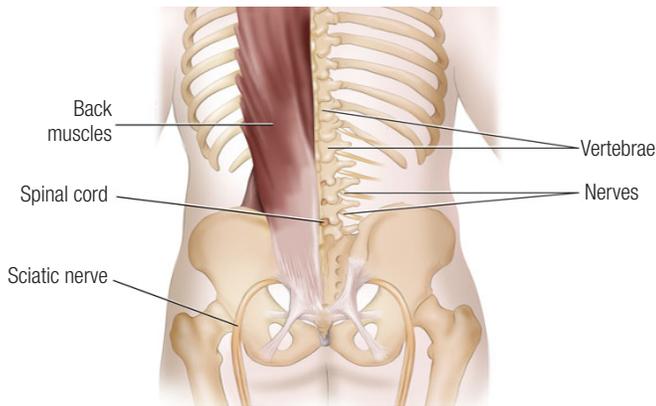




## INFORMATION GUIDE

# Lower Back Pain



## WHAT YOU MAY EXPERIENCE

- Pain in the low back, possibly radiating into the buttocks or down the leg.
- General aching in low back.
- Restricted range of motion.
- Pain can be felt with prolonged sitting, prolonged standing, or when going from sitting to standing.

## POSSIBLE SOURCES

- **PIRIFORMIS SYNDROME:** A spasm or tightness of the piriformis muscle in the buttocks that can irritate or impinge the sciatic nerve. Poor mechanics of the foot and lower extremity can cause a rotation in the pelvis causing the spasm to occur.
- **DISC PROBLEMS:** Discs are found between each of the vertebrae of the spine from C2 to S1. Discs can be compressed, ruptured, herniated, develop a mild bulge or degenerate. Any of the above conditions may occur from poor posture in sitting or standing. Also, with standing, walking or running, poor support of the foot can lead to mechanical changes in the back.
- **LEG LENGTH DISCREPANCIES:** A difference in the length of the leg from the pelvis to the ankle. This may be due to a fracture of the bone in the lower leg or thigh. Could also be caused by poor mechanics of the lower extremity due to lack of good support beginning at the foot.
- **ARTHRITIS:** A degenerative condition where the joints become abnormal due to damage of the cartilage.

## CONTRIBUTING FACTORS

- Poor flexibility & muscle imbalances.
- Leg length discrepancies.
- Flattened pronated feet.
- Poor support of shoes you wear and/or the support inside the shoes can add to the stress on the foot and lower extremity.
- Biomechanical changes in the foot can allow increases in pronation.

## EXCESSIVE PRONATION

- Pronation is a normal movement of the foot allowing the arch to flatten to a degree, which helps the body to absorb shock and adapt to different ground surfaces.
- If the foot is weak or tired and/or the footwear is not supportive, then the arch can flatten more than normal, which is excessive pronation.
- Flattening of the arch (excessive pronation) increase stresses on the foot, which can further contribute to ankle, knee, hip and low back problems (a chain reaction).

## QUICK FIX

The **3 S's - Stretching, Strengthening, and Supporting**, along with ICE and REST have been found to be the simplest and most effective for these injuries:

1. **Stretching** of the hamstring and piriformis muscle can help to decrease and eliminate many of the problems (*see reverse side*).
2. **Strengthening** of the muscles of the abdomen, quad and hip can assist in avoiding problems (*see reverse side*).
3. **Supporting** the foot with proper shoes and insoles can prevent or help to eliminate the vast majority of lower extremity problems due to faulty biomechanics. You may consult with your Sports Medicine Physician or Sports Medicine Physical Therapist for guidelines about this. They can guide you to an appropriate local running store.

*continued on the back*

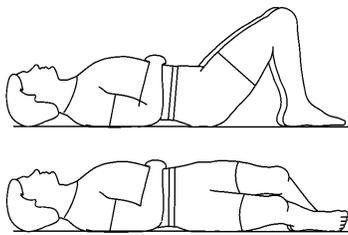
## FOLLOW-UP

If these quick fixes do not help resolve your problem:

1. Consult with your medical practitioner: Primary Care or Sports Medicine Physician.
2. Referral to Physical Therapist where a combination of manual therapy & specific exercises may help resolve your problem.
3. If damage is significant, you may be referred to an Orthopedic Surgeon.

# Back Stabilization Exercises

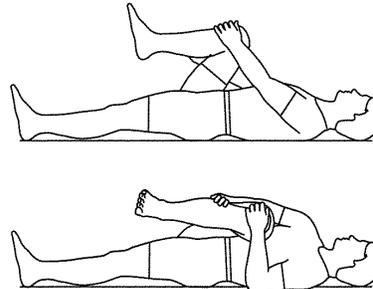
## 1. BACK ROTATIONS



With feet on floor, slowly rock knees from side to side in small, pain-free range of motion. Allow lower back to rotate slightly.

Repeat for 1-2 minutes. Do 1-2 sessions per day.

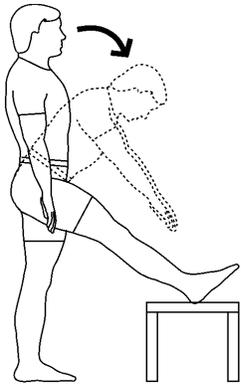
## 2. PIRIFORMIS STRETCH



Pull knee toward opposite shoulder. Hold 30 seconds. Relax.

Repeat 3 times on each side. Do 1-2 sessions per day.

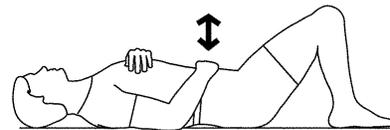
## 3. HAMSTRING STRETCH



Place foot on stool (hold on to the back of a chair if needed). Slowly lean forward keeping back straight, until stretch is felt in back of thigh. Not necessary to touch toes. Hold 30 seconds. Relax.

Repeat 3 times on each side. Do 1-2 sessions a day.

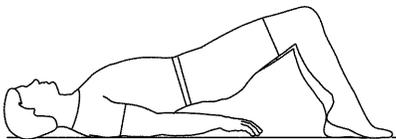
## 4. PELVIC TILT



Flatten back by tightening stomach muscles and buttocks. (Pull belly button to the floor). Hold 10 seconds. Relax.

Repeat 10 times. Do 1-2 sessions per day.

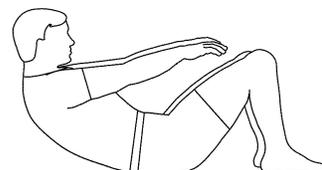
## 5. BRIDGING



Start with pelvic tilt. Slowly raise buttocks 1-4 inches from floor (working within pain limits), keeping stomach tight. Hold 10 seconds. Relax.

Repeat 10 times. Do 1-2 sessions per day.

## 6. ABDOMINAL TRUNK CURLS



With arms at sides, tilt pelvis to flatten back. Raise head and shoulders from floor. Look at ceiling to avoid straining neck. Use arms to support trunk if necessary. Hold 10 seconds. Relax.

Repeat 10 times. Do 1-2 sessions per day.

Sports Medicine is available for questions. Please call 616.252.7778 to speak with a member of our care team or to schedule an appointment.