

## **Low Back Pain in Athletes**

Low back pain of various diagnoses among adolescent athletes accounts for approximately 5% to 8% of total athletic injuries. While most of these injuries are to the soft tissue structures (muscles and ligaments) of the back, occasionally injuries to the bones of the back called vertebrae occur. These injuries can result in a fracture of the back portion of the vertebrae. This type of fracture is called a spondylolysis (spon-dee-low-lie-sis). In some instances, the instability caused by this fracture will allow the vertebrae to slide forward. This fracture/slipping combination is referred to as spondylolisthesis (spon-dee-low-lies-thee-sis).

Spondylolysis and spondylolisthesis in athletes are generally the result of repetitive injury (microtrauma) to the vertebrae during training or competition rather than as the result of one specific incident. Athletes participating in sports such as gymnastics, weight lifting, football, cheerleading, and diving are at greater risk due to the high forces placed on the spine during lifting, landing, twisting, and direct contact with other players. Of particular concern are activities that require extreme extension (backward bending) of the low back as these activities place the most stress on the spine.

Spondylolysis and spondylolisthesis can be difficult to diagnose because of the gradual onset of symptoms and the fact that the injury may not initially show up on a normal X-ray. Often a bone scan must be performed to make an accurate diagnosis. Early diagnosis is important however because continued participation in sports may cause the injury to worsen resulting in longer healing times and potentially in the need for surgery to correct the problem.

The symptoms of spondylolysis and spondylolisthesis include:

- Pain across the low back that began as a dull ache but has gradually increased
- Pain radiating into the buttocks and thighs
- Increased curve of the low back
- Tight hamstring and hip flexor muscles
- Stiff legged, short stride gait referred to as the “pelvic waddle”
- Pain with extension and rotation of the spine
- Decreased pain with rest

Once diagnosed, these conditions are usually treated conservatively with activity modification, bracing, physical therapy, and anti-inflammatory medications. Depending on the severity of the injury, athletes may be able to return to competition in 3-6 months. In severe cases, the amount of slippage of the vertebrae and persistent pain makes surgery necessary. In these somewhat rare cases, a spinal fusion is performed to stabilize the slipping vertebrae.

Remember, early intervention can prevent more serious problems so if you are concerned about back pain, see your physician or athletic trainer for more information.

