# SPONDYLOLYSIS

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## What is it?

Spondylolysis is a stress fracture of a bone or bones within the lower back. It most commonly affects the last/fifth bone on the lower back (the "L5" bone), and usually only one side. It is a common cause of back pain in athletes who repetitively extend their lower back, such as gymnasts, divers, wrestlers, rowers, and football linemen.

## Causes/Risk Factors

- Repetitive hyperextension of the lower back
- Lack of rest between training sessions
- Training in the same sport requiring lower back extension year-round
- Training with less focus on core (abdominal) strengthening

## Symptoms

- Lower back pain that is worse with extension-type activities
- Pain in the center of the back
- Pain may radiate down the leg, especially when symptoms have been present for a long time

## Sports Medicine Evaluation

The sports medicine physician will take a thorough history and perform a complete physical exam. If there is concern for spondylolysis based on the history and physical examination, the physician will most likely order x-rays. Unless there is a "spondylolisthesis" (movement of the lower back bones due to spondylolysis on both sides of the bone), he/she may not be able to make the diagnosis. Advanced imaging with a bone scan, MRI, or CT scan may be ordered to better identify a stress fracture of the back.

If advanced imaging demonstrates a stress fracture of the lower back, a period of rest, followed by rehabilitation with a gradual return to activity, will likely be recommended. A back brace may also be recommended for a period of time.

## Injury Prevention

The best way to prevent the development of spondylolysis is to maintain good core stability through hip and buttock muscle strengthening, to support the lower back. Training schedules should be monitored, and sufficient recovery time is also beneficial.

## Return to Play

Most sports medicine physicians recommend a period of 4-6 weeks of rest, followed by 4-6 weeks of intense rehabilitation. A gradual return to sport will then begin as long as the athlete is pain-free, even as he/she returns to sports participation.

*AMSSM Member Author: Kristina Wilson MD*

**References**

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