

Frequently Asked Questions About Spondylolisthesis

What is a spondylolisthesis?

This is the forward movement of one vertebrae on another, typically secondary to a bilateral (both sides) fracture in the back of the spine. In older individuals, it can also be due to degenerative changes. It is most common in the low back.

What causes spondylolisthesis?

Think of a chicken wish bone. Too much stress in one or two specific areas. The rapid growth, repetitive activity, overloading of the young spine and biomechanical imbalances are the usual cause. Proper testing and treatment, when back pain begins, are necessary to hope for the most rapid recovery possible. Once the injury is healed, it is imperative for the patient to get a thorough biomechanical exam to make structural corrections and improve body weight distribution.

Is a spondylolisthesis dangerous?

The primary danger, or concern, is during the period immediately after the fracture occurring. It is only during this period that inflammation and pain will appear as a direct response to the injury. It is only during this stage a bone can move forward on the other vertebrae. Once the injury has healed, any pain or inflammation will be due to other spinal matters, not the spondylo, and the bone will not move further forward.

Is it spondylolisthesis painful?

When this injury occurs, it can be very painful. If the condition is diagnosed and treated appropriately, pain can be managed very well. Unfortunately, many physicians, physical therapists and chiropractors do not manage this condition properly, prolonging the pain and injury. The appropriate testing is delayed if the only goal is to just reduce the pain.

How do you know if you have a spondylolisthesis?

The first sign and symptom will be low back pain. The first test that should be done is a 2-view low back x-ray study, standing and barefoot. This will provide information for immediate use and also information to be used once the injury heals. On the side view x-ray (lateral), a spondylolisthesis will show one vertebrae forward of the others, which indicates a fracture in the back of the spine. If there is no forward movement of a vertebrae, this DOES NOT mean there is no injury.

What other tests should be done?

Very early on, a lumbar MRI with sagittal STIR image should be ordered. Many orthopedists request a CT scan, but this is the wrong test. A CT scan is a significant amount of radiation and only shows if there is a fracture. A fracture does not provide enough information to know the severity of the injury. And, a fracture, by itself, is not of major concern. An MRI, that has zero negative effect, will show whether there is a fracture, but more importantly, will show if there is inflammation (bone marrow edema) in the bone. If there is, this makes the condition serious and proper steps must be taken. If there is no fracture and no bme, then the injury is likely a strain/sprain, or possible a disc injury, which would also be seen on the MRI. The CT Scan would also not show the disc injury.

What is a spondylolysis?

This is a fracture, the same as a spondylolisthesis, however, there is no forward movement of one vertebrae on another. Typically, this is due to the fracture only occurring on one side.

When does this condition become serious?

Specific steps must be taken when there is bone marrow edema found on the MRI. A spondylolisthesis by itself in the absence of bme is not nearly as serious as when bme is present. If there is no bme, the fracture happened at some point in the past and the fracture is fully healed. In fact, it's been said by some authorities, the bone is stronger after it has healed from a spondylo than it was prior to being fractured.

What are the different types of spondylos?

There is a **spondylolisthesis** and a **spondylolysis**, which were defined above. There is an **active spondylolisthesis**, which is a spondylo with bme on MRI. There is an **inactive spondylo** which is a spondylo without bme on MRI. There is a **pending spondylo**, which is a bone with no fracture, but bme on the MRI, which makes this a stress reaction (no fracture yet).

How does a spondylo occur?

No one has ever been born with a spondylo. These injuries typically occur during one of 2 stages; during the toddler stage, when the pain is not perceived, and the child cannot inform anyone of the pain. The injury will heal and unless an x-ray is done at some point in their lifetime, no one might ever know they have a spondylo. The second stage it can occur is during adolescence. During teen years, there is much stress on a growing spine and points of increased stress can oftentimes end up as a spondylo. When back pain occurs during this stage, appropriate testing and treatment is critically important.

What will the adolescent feel?

There will certainly be back pain, usually worse on extension. This is when standing x-rays and the MRI should be considered. Many Drs. and therapists attempt symptomatic treatments, such as meds, physical therapy or chiropractic adjustments, prior to ordering an MRI, but I want to know immediately if there is bme so we can get the patient into the proper treatment program asap and an MRI is the only way this can be determined.

Is there a difference in treatment for an active spondylo or a pending spondylo?

The only difference with these 2 injuries is that in a pending spondylo, the bone has not yet fractured. The inflammation appears in both injuries and the 2 injuries must be treated exactly the same for total healing. With a pending spondylo, the inflamed bone is weakened and has an increased vulnerability to fracturing.

What is the best treatment?

The initial treatment is a Boston Overlap Brace, ordered by a physician or chiropractor and made by an orthotist. This is a custom brace and needs to be worn 23 out of 24 hours per day for 12 to 16 weeks. The patient needs to refrain from all physical activity or sport during this time.

Are there any other treatments that will also help?

I recommend cold laser therapy 3-5 times per week as laser helps to eliminate inflammation quicker than the natural healing process. Amino acid supplements can also be supportive.

How will you know when the injury is healed?

First, the pain will be dramatically reduced. However, I prefer to order the STIR image portion of an MRI to ensure total healing. This is a 5-minute screening that will show if there is bone marrow edema still present. Once there is no bme, the injury is fully healed. The patient can now begin to return to normal activity.

What can be done once the injury is healed?

A biomechanical exam (**Structural Fingerprint® Exam**) must be done to determine the biomechanical faults that predisposed this patient to the spondylo. This will include a physical exam, a digital laser foot scan and 2 standing x-rays of the low back as well as 2 standing x-rays of the neck with no shoes on. Once this is done, custom orthotics need to be ordered, inserted in the shoes and the A-P low back x-ray needs to be re-taken with the shoes on (**The Maggs Leg Length Test™**). Appropriate recommendations then need to be made.

In addition, that patient should be put on a return to conditioning program, since they have not been normally active for the past 3-4 months.

What are the long-term effects of a spondylolisthesis?

The long-term effects generally have to do with disc injuries just below the spondylo. Degeneration and disc bulging/herniation are most common injuries over time with this condition. These effects can be minimized if proper biomechanical testing is done and improvements are made in body weight distribution and improved centers of gravity. Custom orthotics are always helpful in normalizing the biomechanics of the body. In addition, regular chiropractic adjustments help to maintain mobility in these joints which helps to reduce the disc injuries listed above. Spinal decompression is also very helpful if done on a consistent frequency. And, finally, conditioning is always helpful.