

Identifying Early Risks for Chronic Back Conditions

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Are you at risk? Some patients, who suffer back pain, may be at risk for developing a chronic back condition. Chronic pain most commonly affects middle age adults and our senior populations. Chronic pain may result from injury, however it commonly occurs in part to the aging degeneration process and (as with other chronic diseases) as a result of **poor diet, weight gain, stress and sedentary life styles**. The risk of experiencing chronic pain increases with age.

Identifying Chronic Pain: Are you experiencing any of the following?

- Persistent back pain, shoulder or knee pain?
- Burning pain in buttocks
- Pain in one leg or both legs
- Numbness or tingling in buttocks or legs or toes
- Weakness in the legs or "foot drop."
- More pain with standing and walking
- Less pain with leaning forward or sitting
- Depression and/or Anxiety
- Difficulty in Normal Activities of Daily Living

Key Messages for Potential Chronic Pain Sufferers

1. Chronic joint and back pain is a disease associated with risk factors, comorbidities, prevention and a natural history, which can be managed and controlled.

2. Most back and joint pain is associated with impairment in strength and mobility; a side effect of having a sedentary lifestyle. In these cases it is best managed by temporarily reducing pain in order to increase function, strength and flexibility.

3. Your back pain may not indicate serious damage even though it may be very painful, recur and, and in some cases, become chronic.

4. An MRI will show many structural alterations in the spine or joints that are related to common anatomical changes from aging, which may not be causing your chronic pain. This is why information from an MRI may not always help manage your recovery.

5. Not all patients have the same triggers to their back, shoulder or knee pain. It is important that you understand the best activities and exercises for your recovery.

Chronic Back Pain

As people age and as we continue to adopt a more sedentary lifestyle, bone strength and muscle and connective tissue elasticity and tone tend to decrease. One common cause of chronic low back pain in seniors is spinal stenosis.

A) Scoliosis (Postural Disorders): Children and Teens

When thinking about your spine, a certain amount of curvature is necessary for us to properly balance, move and walk. The normal curves in your spine are referred to as (i) lordosis in the lumbar and cervical spine and (ii) kyphosis in the thoracic spine. Even though a person's spine can somewhat naturally curve, 3 people out of 100 have "scoliosis". Scoliosis is a condition that causes the spine to abnormally curve from side-to-side into a "C" or an "S" shape. People of all ages can have scoliosis including children and teens. In fact, the worldwide prevalence of scoliosis, including all forms of the disease, is only about 1%.

In most cases of scoliosis, no one is sure about the underlying cause; however it has been theorized that there may be a hormonal link in early adolescence. If the curve is severe, it can be visible and cause discomfort. However, where the curve gets very severe, it can cause pain and lung and heart function can be compromised as well as joints. More specifically, as the spine curves abnormally, the involved vertebrae are forced to rotate and vertebral turning impacts the rib cage.

According to the 2011 SSORT Guidelines:

- under 10° of scoliosis, a diagnosis of scoliosis should not be made;
- over 30° of scoliosis, the risk of progression in adulthood increases, as well as the risk of health problems and reduction of quality of life; and
- over 50° of scoliosis, there is a consensus that it is almost certain that scoliosis is going to progress in adulthood and cause health problems and reduction of quality of life.

Fortunately, in most cases, scoliosis is mild enough such that no medical treatment is required and it does not negatively impact a child's life. In complex cases, a child with scoliosis may wear a back brace or undergo surgery when their curve or "Cobb's angle" is assessed to be over 30 degrees or at risk for adult progression.

In general, scoliosis in young children or "infantile scoliosis" is rare; however, in some cases it can be complex. In terms of age, infantile scoliosis typically occurs before age 3 and is seen more frequently in boys. Some cases may progress to severe deformity but many resolve spontaneously without negative neurological symptoms. On the other hand, between the ages of 3 and 10, "juvenile scoliosis" is found more frequently in girls. In this sub-population, spinal curves are at a higher risk for progression and may require surgery. Finally, adolescent "idiopathic scoliosis" (scoliosis of unknown cause) is the most common type of scoliosis and typically occurs after the age of 10 (after the onset of puberty or during a teen growth spurt) to skeletal maturity. Overall, girls are more likely than boys to have this type of scoliosis and may require surgical treatment if non-surgical treatments do not stop the progression of spinal curvature.

Often, scoliosis tends to run in families and is congenital, meaning that it was caused

by a vertebral defect discovered at birth. As a result, a child who has a parent, brother, or sister with idiopathic scoliosis should be checked regularly by their doctor. You may ask your child's doctor if they routinely check for scoliosis during regular physicals - especially before puberty - if you believe suspect scoliosis may be an issue. Alternatively, your child can be assessed by your chiropractic doctor.

For the most part, it is girls that are a higher risk to developing scoliosis; however, the aetiology evens out between the genders with more severe cases of spinal curvature. In most cases (i.e. 80% of cases), the cause of the most common form of scoliosis is unknown (i.e. "idiopathic scoliosis"). When it comes to diagnosis, scoliosis tends to develop very gradually over time. As a result, in many cases, a confirming diagnosis cannot be made until a child is between 10 to 14 years of age. However, before making a diagnosis of idiopathic scoliosis, a chiropractor will screen for other possible underlying causes such as infection or spinal injury

B) Lumbar Spinal Stenosis and Degenerative Disc Disease: Adults and Seniors



Recent research suggests that spinal stenosis is caused as a result of micro instability at the joint surfaces surrounding the spinal canal. These changes are silent until they result in progressive loss of strength in joint capsule, leading to arthritic degeneration. The cartilaginous spinal discs begin to lose fluid and flexibility, which decreases their ability to cushion the vertebrae and thus begin to degenerate. Compression of neurological and micro-vasculature in the nerve roots lead to reduced blood supply to the lower extremities, most notable when walking. Obesity, smoking, weight gain, stress, poor physical condition, posture inappropriate for the activity being performed, and poor sleeping position also may contribute to the pain of spinal stenosis. Additionally, scar tissue created when the injured back heals itself does not have the strength or flexibility of normal tissue. Build up of scar tissue from repeated injuries eventually weakens the back and can lead to more injury and pain.

Spinal stenosis may cause more serious problems including loss of bowel or bladder control, severe pain when coughing and progressive weakness in the legs. People with diabetes may have pain radiating down the leg related to neuropathy which tends to complicate a stenosis condition. People with these symptoms should seek attention immediately to help prevent permanent damage.

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