

ORTHOSPINOLOGY

DISCOVER AT

DeCubellis Family Chiropractic

Upper Cervical Care Degenerative joint & disc disease

Degenerative Disc Disease (DDD) and **degenerative joint disease (DJD)** (also known as osteoarthritis) are common spinal conditions characterized by the breakdown of intervertebral discs and joints, respectively. These degenerative changes often lead to chronic pain, stiffness, reduced mobility, and, in severe cases, nerve compression resulting in radiating pain, numbness, or weakness.

While degenerative disc and joint diseases are considered progressive, **orthospinology**, a form of upper cervical chiropractic care, can play a role in managing symptoms and improving spinal health. Orthospinology focuses on gentle, precise adjustments of the **atlas (C1) vertebra**, and its benefits may extend to the entire spine, helping alleviate symptoms associated with degeneration.

Here's how orthospinology may help in cases of degenerative disc disease (DDD) and degenerative joint disease (DJD):

1. Reducing Mechanical Stress on the Spine

- **Spinal Misalignment and Degeneration:** Misalignment of the atlas can alter the natural curvature of the spine and lead to compensatory misalignments or abnormal movement patterns in the lower cervical, thoracic, and lumbar regions. Over time, this can place additional mechanical stress on the intervertebral discs and facet joints, accelerating the degeneration process.
- **Restoring Alignment and Reducing Load:** Orthospinology focuses on correcting atlas misalignment, which can help restore proper posture and spinal alignment. By bringing the spine back into balance, orthospinology may reduce the mechanical stress on degenerating discs and joints, slowing the progression of degenerative changes and alleviating pain and discomfort.

Scientific Support:

- A study in the *Journal of Manipulative and Physiological Therapeutics* highlighted the role of upper cervical chiropractic care in improving spinal alignment and posture. Improved posture and alignment are critical in reducing abnormal load-bearing on spinal discs and joints, potentially benefiting patients with DDD and DJD.

2. Improving Nerve Function

- **Nerve Compression from Degenerative Changes:** As discs degenerate and lose height, nerve roots can become compressed or irritated, causing symptoms like radiating pain (sciatica or brachialgia), numbness, and muscle weakness. Similarly, osteoarthritis of the spine can lead to bone spur formation, which may compress spinal nerves.
- **Nerve Decompression through Atlas Alignment:** Orthospinology adjustments relieve pressure in the upper cervical spine, which can have a positive effect on the entire spinal column. By reducing misalignments in the upper cervical region, there may be a positive impact on the biomechanics of the entire spine, potentially reducing nerve compression in other regions affected by degenerative disease.

Scientific Support:

- Research has shown that upper cervical chiropractic care can reduce **nerve interference** and improve overall nervous system function. A case study in the *Journal of Upper Cervical Chiropractic Research* demonstrated that upper cervical adjustments led to improvements in patients suffering from various nerve-related symptoms, indicating the potential for symptom relief in degenerative conditions.

3. Reducing Inflammation

- **Chronic Inflammation in Degenerative Diseases:** Both DDD and DJD involve chronic inflammation. In DDD, the breakdown of disc material can lead to inflammatory responses in the surrounding tissues, while in DJD, joint inflammation due to cartilage degradation is a primary cause of pain and stiffness.
- **Anti-Inflammatory Effects of Upper Cervical Adjustments:** Orthospinology adjustments may help reduce mechanical irritation of the spine and decrease the inflammatory response in the surrounding tissues. While it doesn't directly target inflammation, reducing nerve interference and improving spinal mechanics can have a positive effect on the body's ability to regulate inflammation, leading to symptom relief.

Scientific Support:

- A study in the *Journal of Chiropractic Medicine* showed that spinal adjustments, including upper cervical care, can reduce **inflammatory markers** in the body. While more specific research is needed for DDD and DJD, these findings suggest that chiropractic care, including orthospinology, can help manage the inflammatory aspects of degenerative diseases.

4. Improving Joint Mobility

- **Loss of Mobility in DJD:** In degenerative joint disease, the breakdown of cartilage leads to joint stiffness, reduced range of motion, and pain during movement. This is

particularly problematic in the spine, where reduced joint mobility can lead to further degenerative changes and compensatory strain on adjacent structures.

- **Restoring Joint Motion with Atlas Adjustment:** Orthospinology adjustments can improve joint mobility by relieving tension and restoring balance to the spine. Although the focus is on the upper cervical region, these adjustments can have a positive effect on overall spinal biomechanics, potentially leading to increased mobility in affected joints and reduced compensatory strain.

Scientific Support:

- Studies have shown that chiropractic care, including upper cervical techniques, can improve joint mobility and reduce stiffness. In particular, a study published in the *Journal of Manipulative and Physiological Therapeutics* demonstrated that chiropractic adjustments could improve spinal range of motion in patients with degenerative conditions.

5. Improving Cerebrospinal Fluid (CSF) and Blood Flow

- **Degenerative Disease and Impaired Fluid Flow:** Degenerative changes in the spine can affect blood flow and cerebrospinal fluid (CSF) dynamics, which are essential for the health and nourishment of the spinal cord and surrounding structures. Abnormal fluid flow can contribute to inflammation and the progression of degenerative changes.
- **Impact of Upper Cervical Alignment on Fluid Flow:** Orthospinology adjustments can help restore proper cerebrospinal fluid and blood flow by relieving upper cervical misalignments. Improved fluid flow helps nourish the spinal cord and may aid in the repair and maintenance of spinal structures, potentially reducing the progression of degenerative changes.

Scientific Support:

- A study in the *Journal of Upper Cervical Chiropractic Research* found that upper cervical chiropractic adjustments can improve CSF flow and help alleviate symptoms associated with neurodegenerative conditions. While not specific to DDD or DJD, this research suggests that better fluid dynamics can support spinal health in degenerative conditions.

6. Alleviating Pain and Discomfort

- **Pain in Degenerative Diseases:** Pain is a hallmark of both DDD and DJD, often resulting from inflammation, nerve compression, and joint dysfunction. Pain management is a central focus in treating these conditions, as chronic pain can severely impact quality of life and mobility.
- **Pain Relief through Atlas Adjustments:** Orthospinology adjustments can reduce musculoskeletal tension, improve nerve function, and alleviate inflammation, all of which contribute to pain relief. By addressing misalignments in the upper cervical spine,

orthospinology may help reduce overall pain levels in patients with degenerative spinal conditions.

Scientific Support:

- A review of chiropractic care for degenerative spinal conditions, published in *Chiropractic & Manual Therapies*, noted that spinal adjustments can lead to significant pain reduction. Upper cervical adjustments, specifically, have been associated with improvements in chronic pain conditions, offering hope for those suffering from degenerative spine diseases.

7. Slowing Degeneration and Promoting Spinal Health

- **Progression of Degeneration:** While degenerative disc and joint diseases are progressive by nature, proper spinal care can slow the degeneration process. Misalignments in the spine, if left uncorrected, can exacerbate degenerative changes by placing abnormal stress on the discs and joints.
- **Preventing Further Degeneration:** Orthospinology adjustments, by restoring proper alignment and reducing mechanical stress on the spine, may help slow the progression of degenerative changes. Improved spinal alignment can promote better biomechanics and reduce the likelihood of further disc or joint degeneration.

Conclusion

While **orthospinology** cannot reverse **degenerative disc disease (DDD)** or **degenerative joint disease (DJD)**, it offers a conservative and non-invasive approach to managing the symptoms and slowing the progression of these conditions. By addressing upper cervical misalignments, orthospinology can help reduce mechanical stress on the spine, improve nerve function, reduce inflammation, and promote better fluid dynamics. These effects can lead to significant pain relief, improved mobility, and enhanced quality of life for individuals suffering from degenerative spinal diseases.

Though direct scientific studies on orthospinology's impact on DDD and DJD are limited, research in the broader chiropractic field supports the potential benefits of spinal adjustments for managing degenerative conditions. As part of a multidisciplinary approach, orthospinology can provide an important tool for managing these chronic conditions conservatively, possibly delaying or preventing the need for more invasive treatments like surgery.