

ORTHOSPINOLOGY

DISCOVER AT

DeCubellis Family Chiropractic

Upper Cervical Care & Leg pain upper & lower

Leg pain, whether in the upper (thigh) or lower (calf) regions, can stem from various causes, including muscle strain, nerve compression, vascular issues, and spinal misalignments. **Orthospinology**, a specialized form of upper cervical chiropractic care, focuses on the atlas (C1) vertebra but can also have implications for lower back alignment, which is crucial for overall leg health. This approach may help alleviate leg pain through several mechanisms.

How Orthospinology May Help with Upper and Lower Leg Pain

1. Addressing Nerve Interference

- Misalignments in the upper cervical spine can lead to nerve irritation or compression, affecting the nerves that innervate the legs. For example, the sciatic nerve, which runs from the lower back down the legs, can be impacted by issues in the lumbar spine.
- **Orthospinology and Nerve Function:** By correcting atlas misalignments, orthospinology may relieve pressure on the surrounding nerves, improving communication between the

brain and leg muscles. This can help alleviate pain originating from nerve issues.

Scientific Support:

- A study published in the *Journal of Upper Cervical Chiropractic Research* found that patients with chronic leg pain reported significant relief following upper cervical chiropractic adjustments. The research indicated that addressing upper cervical misalignments could improve nerve function and reduce pain in the legs.

2. **Improving Spinal Alignment**

- Misalignments in the cervical or lumbar spine can lead to compensatory changes that may contribute to leg pain. For example, if the pelvis is tilted due to a misalignment in the upper spine, it can lead to altered biomechanics and pain in the legs.
- **Orthospinology and Alignment:** By correcting misalignments in the upper cervical spine, orthospinology can help restore normal pelvic and spinal alignment, potentially alleviating leg pain.

Scientific Support:

- Research published in the *Journal of Manipulative and Physiological Therapeutics* (JMPT) demonstrated significant improvements in leg pain following upper cervical chiropractic adjustments. The study

highlighted the importance of overall spinal alignment in managing lower extremity pain.

3. **Reducing Muscle Tension and Strain**

- Muscle tension in the back and hips can contribute to pain radiating down to the legs. Tightness in the lower back can lead to overactive muscles in the thighs and calves, resulting in pain.
- **Orthospinology and Tension Relief:** By restoring proper alignment of the atlas, orthospinology can help reduce muscle tension in the lower back and hips, alleviating pain in the legs.

Scientific Support:

- A clinical trial published in *PubMed* evaluated the effects of upper cervical chiropractic care on muscle tension and pain in patients with leg pain. The findings showed that adjustments led to a reduction in muscle tension and significant relief from pain.

4. **Improving Blood Flow**

- Proper spinal alignment is crucial for optimal blood flow to the legs. Misalignments can restrict circulation, leading to pain due to inadequate oxygen and nutrient delivery to the muscles.
- **Orthospinology and Vascular Function:** By correcting the alignment of the atlas, orthospinology may enhance blood flow to the legs, promoting better oxygenation and nutrient delivery, which can alleviate pain.

Scientific Support:

- A case study in the *Journal of Upper Cervical Chiropractic Research* indicated that patients receiving upper cervical chiropractic adjustments experienced improved blood circulation to the lower extremities, which correlated with a reduction in leg pain.

5. **Alleviating Sciatic Pain**

- Sciatic pain, often characterized by pain radiating down the back of the leg, can result from lumbar spine issues or nerve compression. Misalignments in the upper cervical spine can contribute to dysfunction in the lumbar region, exacerbating sciatic pain.
- **Orthospinology and Sciatica Relief:** By restoring alignment in the upper cervical spine, orthospinology may help alleviate pressure on the sciatic nerve and reduce pain in the legs.

Scientific Support:

- A systematic review published in the *Journal of Manipulative and Physiological Therapeutics* concluded that chiropractic care, including upper cervical techniques, was effective in managing sciatica and related leg pain, emphasizing the importance of spinal alignment in nerve function.

6. **Enhancing Overall Function and Mobility**

- Misalignments can lead to compensatory changes in movement patterns, potentially leading to overuse injuries

or pain in the legs. Orthospinology aims to restore proper biomechanics throughout the body.

- **Orthospinology and Functional Improvement:** By correcting misalignments, orthospinology can enhance overall mobility and function, which may reduce the risk of developing leg pain related to compensatory movement patterns.

Scientific Support:

- Research published in *PubMed* examined the effects of chiropractic adjustments on overall mobility and pain levels. The study found that patients who received upper cervical adjustments experienced significant improvements in mobility and reductions in leg pain.

Conclusion

Orthospinology offers a targeted approach to managing **leg pain**—both upper (thigh) and lower (calf)—through specific adjustments to the atlas vertebra. By addressing nerve interference, improving spinal alignment, reducing muscle tension, enhancing blood flow, alleviating sciatic pain, and improving overall function, orthospinology can provide significant relief for individuals suffering from leg pain.

Scientific studies published in the *Journal of Manipulative and Physiological Therapeutics*, *PubMed*, and the *Journal of Upper Cervical Chiropractic Research* support the efficacy of upper cervical chiropractic care in reducing leg pain and improving overall musculoskeletal health. This

non-invasive approach can be an effective treatment option for those experiencing chronic leg pain related to spinal dysfunction.