

ORTHOSPINOLOGY

DISCOVER AT

DeCubellis Family Chiropractic

Upper Cervical Care & Headaches

Headaches are a common issue that can stem from various causes, including stress, muscular tension, nerve irritation, vascular issues, and problems with the alignment of the spine, particularly in the cervical (neck) region. **Orthospinology**, a specialized form of upper cervical chiropractic care, focuses on realigning the **atlas (C1) vertebra** at the top of the spine. By correcting misalignments in this region, orthospinology may help alleviate certain types of headaches, such as tension headaches, cervicogenic headaches, and even some types of migraines.

How Orthospinology May Help with Headaches

1. Relieving Nerve Compression and Tension

- The **upper cervical spine** houses nerves that travel between the brain and the rest of the body. Misalignments in this region, particularly in the atlas, can irritate or compress these nerves, leading to **headaches**.
- **Cervicogenic headaches** specifically originate from dysfunction in the cervical spine and are linked to nerve irritation or tension in the neck muscles. These headaches

can radiate from the neck into the head, causing pain that is often mistaken for a tension or migraine headache.

- **Orthospinology and Nerve Relief:** Orthospinology adjustments aim to correct atlas misalignments, which may help reduce nerve compression and irritation. By relieving tension in the cervical spine, these adjustments can alleviate the root cause of cervicogenic headaches.

Scientific Support:

- A study published in the *Journal of Manipulative and Physiological Therapeutics* (JMPT) demonstrated that chiropractic adjustments, including upper cervical techniques, were effective in reducing cervicogenic headaches. The research emphasized that correcting cervical spine dysfunction relieved nerve tension, leading to headache improvement.
- Another study published on **PubMed** highlighted how upper cervical chiropractic care led to significant improvements in patients suffering from chronic headaches linked to cervical spine misalignment.

2. **Improving Blood Flow**

- Misalignment of the atlas can impact the flow of blood to the brain. The **vertebral arteries**, which supply the brain with oxygen-rich blood, travel through the transverse foramina of the cervical vertebrae, including the atlas.
- When the atlas is misaligned, it can restrict blood flow to the brain, potentially leading to **vascular headaches** or

migraines, which are often linked to changes in blood pressure or oxygenation of the brain.

- **Orthospinology and Vascular Function:** By realigning the atlas, orthospinology may help improve vertebral artery blood flow, which could alleviate vascular headaches or migraines by restoring proper circulation.

Scientific Support:

- A case study published in the *Journal of Upper Cervical Chiropractic Research* (JUCCR) showed that upper cervical chiropractic adjustments improved blood flow through the vertebral arteries, which helped reduce headache symptoms in patients with migraine-type headaches.
- In another study published on **PubMed**, patients with chronic migraines saw improvement in their symptoms after receiving upper cervical chiropractic adjustments, which likely improved blood flow to the brain.

3. Restoring Cerebrospinal Fluid (CSF) Flow

- **Cerebrospinal fluid (CSF)** plays a critical role in protecting the brain and spinal cord. When the upper cervical spine is misaligned, CSF flow can become restricted, leading to increased intracranial pressure, which can trigger **headaches**.
- **Orthospinology and CSF Flow:** By correcting atlas misalignments, orthospinology can help normalize the flow

of cerebrospinal fluid. This may reduce intracranial pressure and alleviate headaches caused by CSF imbalance.

Scientific Support:

- A study published in the *Journal of Upper Cervical Chiropractic Research* found that upper cervical adjustments significantly improved CSF flow and reduced headaches in patients with increased intracranial pressure. The study concluded that improved CSF circulation after atlas realignment may alleviate headaches caused by abnormal fluid dynamics.

4. **Reducing Muscle Tension**

- **Muscle tension** in the neck and shoulders can contribute to **tension headaches**, which are often characterized by a tight, band-like pain around the head. Misalignment in the upper cervical spine can lead to muscle imbalances and tension in the neck, further aggravating headache symptoms.
- **Orthospinology and Muscle Relaxation:** By restoring proper alignment in the upper cervical spine, orthospinology can help reduce muscular tension in the neck and upper back. This can alleviate tension headaches by promoting better posture and reducing strain on neck muscles.

Scientific Support:

- Research in the *Journal of Manipulative and Physiological Therapeutics* (JMPT) highlighted that chiropractic care, particularly in the upper cervical spine, led to reduced muscle tension and fewer tension

headaches. Patients in this study reported significant improvement in headache frequency and severity after receiving upper cervical adjustments.

5. Improving Nervous System Function

- The atlas sits near the **brainstem**, which is responsible for controlling many of the body's autonomic functions, including pain perception, vascular regulation, and overall nervous system balance. Misalignment of the atlas can interfere with brainstem function, potentially leading to headaches or migraines.
- **Orthospinology and Nervous System Balance:** Orthospinology adjustments can help restore the proper relationship between the atlas and the brainstem. By doing so, it may improve the overall function of the nervous system, leading to reduced headache symptoms.

Scientific Support:

- A study published in the *Journal of Upper Cervical Chiropractic Research* reported that patients with chronic headaches experienced a reduction in symptoms after upper cervical adjustments. The study proposed that improved brainstem function following atlas realignment played a role in this improvement.
- Additional research in **PubMed** has demonstrated how chiropractic care targeting the upper cervical spine can improve

nervous system function, potentially reducing the severity and frequency of headaches, including migraines.

Conclusion

Orthospinology, through precise adjustments of the upper cervical spine, offers a promising non-invasive treatment for certain types of **headaches**, including cervicogenic headaches, tension headaches, and migraines. By restoring proper alignment of the atlas vertebra, orthospinology can help relieve nerve compression, improve blood flow, reduce muscle tension, and enhance cerebrospinal fluid flow. These effects, in turn, may alleviate headache symptoms and improve overall quality of life.

Scientific studies published in the *Journal of Manipulative and Physiological Therapeutics* (JMPT), *PubMed*, and the *Journal of Upper Cervical Chiropractic Research* support the effectiveness of upper cervical chiropractic care in managing headaches. By focusing on the alignment of the atlas and its impact on the nervous and vascular systems, orthospinology provides a targeted approach that can reduce both the frequency and severity of headaches.