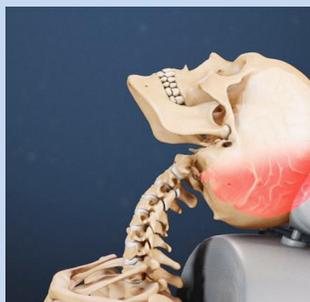


Pain Diagnostics and  
Interventional Care

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In this issue we discuss  
the causes, diagnosis,  
and treatments for  
cervical whiplash injuries.



Pictured below is Dr.  
Provenzano teaching at  
the 46th Annual Regional  
Anesthesiology and Acute  
Pain Medicine Meeting in  
Orlando Florida. He  
lectured on the  
development of new  
guidelines to reduce the  
risk of infection.



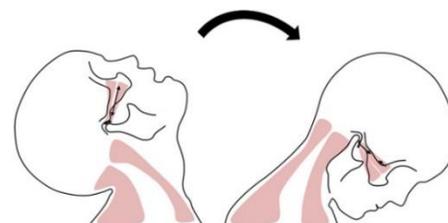
**Pain Diagnostics**  
& *Interventional Care*

# Cervical Whiplash Associated Disorder

## Background

Whiplash associated disorder (WAD) involves an injury to the neck. It is characterized by a collection of symptoms that occur following a sudden extension and flexion injury. The injury commonly occurs as the result of an automobile accident and may involve the intervertebral joints, discs, ligaments, cervical muscles, and nerve roots.

Symptoms such as neck pain, shoulder pain, arm pain, and headache may be present directly after the injury or may be delayed for several days. Other symptoms may include neck stiffness, muscle (myofascial) pain, dizziness, and abnormal sensations such as burning or tingling in the arms.

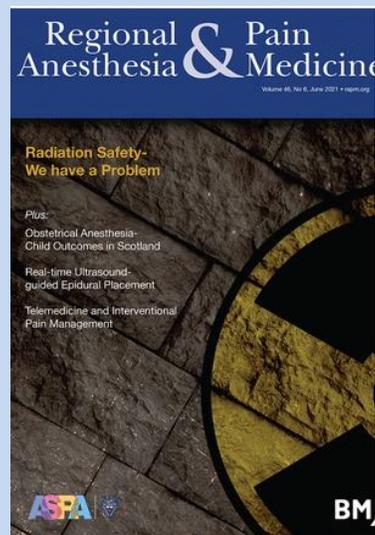


## Diagnosis

Generally, physicians will employ a physical exam including a neurological exam, along with a patient's history, to make a WAD diagnosis. Clinical signs of whiplash include spasms, tenderness, and limited range of motion of the neck.

Additional testing, (e.g., X-rays, MRI, and EMG/NCS) may be warranted in the diagnosis of a WAD; especially, if the patient presents with significant neurological signs.

## Recent Publication



Dr. Provenzano and Samuel Florentino, former CRC, recently had an article published in Regional Anesthesia and Pain Medicine Journal. Their article focused on the examination of radiation safety and knowledge among interventional pain physicians.

### Mission Statement

To professionally and passionately provide evidence-based medical care for patients with various pain states and to advance the science of pain medicine through research and education.

### Vision Statement

To be recognized and celebrated as the gold standard for pain medicine in the greater Pittsburgh region.

## Prognosis

Generally, the prognosis for a WAD is favorable. The neck and head pain often clears within a few days or weeks. Most patients, 85%, recover within 6 months after the injury, however, some may continue to have residual neck pain, neurological symptoms, and headaches.

Unfortunately, a small subset of people, 15-30%, continue to have pain for several months or years after the injury.

WAD progress through the following stages:

- Acute WAD: < 3 weeks
- Subacute WAD: ≥ 3 weeks to 3 months
- Chronic WAD: > 3 months

## Treatments

At Pain Diagnostics and Interventional Care, we take a multimodal approach to treating WAD which may include physical therapy/chiropractic care, nonopioid medication management and minimally invasive interventions.

Treatment depends on the severity of the symptoms. If the symptoms are mild to moderate rest, ice/heat, and over-the-counter medications are often effective. If patients do not improve with conservative management strategies, then minimally invasive interventions

may be employed such as cervical epidural steroid injections to help reduce nerve and tissue inflammation, cervical facet procedures (injections and radiofrequency ablation) to provide joint pain relief, and trigger point injections to help irritated muscles. Facet joints may be injured in WAD. In patients that have symptoms for greater than 6 months with confirmed facet pain, radiofrequency ablation maybe considered.

## Interested in Clinical Research?

Pain Diagnostics and Interventional Care's Clinical Research Department is driven to further the science of Pain Medicine to bring our patients the most up to date and effective treatment options. We are currently enrolling patients for studies regarding low back pain. If you are interested in learning more, let us know!