

PATIENT EDUCATION

# WHIPLASH

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## 1

## WHAT IS WHIPLASH?

Injuries to the neck caused by sudden movement of the head, backward, forward, or sideways, are referred to as "whiplash". Whether from a car accident, sports, or an accident at work, whiplash injuries warrant a thorough checkup. The greatest danger with whiplash injuries is that the symptoms may persist for years, particularly if not treated appropriately as outlined below. Amongst whiplash victims, 45% report they still suffer symptoms two years later, thus the importance of aggressive treatment. It is imperative that you follow through with your treatment protocol from your IPW providers to prevent your symptoms from becoming chronic.

In the past a typical whiplash injury, where no bones were broken, was hard to document. Soft tissue injuries did not show up on normal x-rays and insurance companies would deny coverage for treatment. New imaging modalities (CAT scans, MRI's, ultrasound, etc.) now show soft tissue injury and insurance companies and personal injury cases now cover treatment for most whiplash injuries, allowing you to have appropriate, standard of care treatment with Innovative Pain and Wellness.

It is a common misconception that there needs to be a broken bone or a head impact for an injury to become symptomatic. However, 62% to 98% of whiplash patients complain of neck pain. The onset of pain typically starts two hours up to three days after the accident. Therefore, do not be surprised if you initially do not have much pain. It is often the result of tightened muscles that react to either small tears, excessive movement of joints from ligament damage, or from direct damage to the joints themselves. The main joints in the spine that are affected, are called facet joints. The muscles around the joints tighten in an effort to splint and support the head, limiting excessive movement.

In addition, 66% to 70% of those suffering from whiplash complain of headache. The pain may be on one side or both, intermittent or constant, in one spot or more general. These headaches, like the neck pain, are often the result of tightened, tense muscles trying to keep the head stable and, like tension headaches, they are often felt in the back of the head and behind the eyes. Shoulder pain, often described as pain radiating down the back of the neck into the shoulder blade area, may also be the result of tensed muscles. Muscle tears are often described as burning pain, prickling or tingling. More severe disc damage may cause sharp pain with certain movements, with or without pain radiation into the arms, hands, and fingers.

## 2

## COMMON WHIPLASH SYMPTOMS

**92%** NECK PAIN

**39%** SLEEP DISTURBANCE

**15%** DIZZINESS

**57%** HEADACHE

**30%** UPPER LIMB PARESTHESIA

**15%** FORGETFULNESS

**56%** FATIGUE

**29%** PHONOPHOBIA

**12%** UPPER LIMB PAIN

**49%** SHOULDER PAIN

**26%** IMPAIRED CONCENTRATION

**6%** UPPER LIMB WEAKNESS

**44%** ANXIETY

**21%** BLURRED VISION

**4%** TINNITUS

**42%** INTERSCAPULAR PAIN

**21%** IRRITABILITY

**4%** JAW/FACIAL PAIN

**39%** LOW BACK PAIN

**16%** DYSPHAGIA

### 3

## HOW DOES WHIPLASH HAPPEN?

Whiplash is most commonly received from riding in a car that is struck from behind, or collides with another vehicle. When the head is suddenly jerked back and forth beyond its normal limits, the muscles and ligaments supporting the spine can be over stretched or torn. In a rear end collision for example, the victim's car is first pushed or accelerated forward and then, because their foot is on the brake, or their car hits the vehicle in front, their car is rapidly slowed down, or decelerated. As the vehicle accelerates forward it pushes the body forward too, but the head remains behind momentarily, rocking up and back, until damage occurs to some of the muscles, ligaments, and joints. Too often, the injury occurs before the head rebounds off the headrest (providing there is one). If there is no headrest, or it is improperly positioned, the injuries are often greater. This violent "jolting" of the head/neck backward and then forward, results in tearing of the muscles and ligaments, as well as "jamming" and "swelling" of the joints. The soft pulpy discs between the vertebrae may also be damaged, resulting in a tear, protrusion, or rupture. Vertebrae can be forced out of their normal position, reducing range of motion. The spinal cord and nerve roots may be stretched, irritated, and choked. If the victim is not properly restrained their head may strike the steering wheel or windshield, possibly resulting in concussion.

### 4

## COMPLICATING FACTORS OF WHIPLASH INJURIES

- 1) LACK OF PREPAREDNESS FOR THE IMPACT
- 2) REAR END IMPACTS
- 3) HEAD ROTATION OR INCLINATION
- 4) DRIVING IN SMALLER VEHICLE
- 5) HEADREST POSITION TOO LOW
- 6) OLDER AGE
- 7) PRE-EXISTING HEALTH PROBLEMS
- 8) PRIOR WHIPLASH INJURIES

### 5

## THE STAGES AND HEALING OF WHIPLASH INJURIES

The first stage involves simply the immediate effects of injury, including bleeding, blood clotting, and cellular breakdown. The inflammatory response is the primary means that the body uses to respond to the injury.

### 1) INFLAMMATORY STAGE

The purpose of the inflammatory stage is to surround the area of injury in an attempt to protect it. The extent of this response is usually proportional to the amount of injury sustained. This phase typically lasts from 24 to 72 hours. At this time the doctor may discuss with you the importance of utilizing ice packs, and anti-inflammatory medications as this is very important in reducing swelling and controlling pain. Ice packs should be utilized 20 minutes per hour for 3-5 hours per day during this stage. Other therapies that will aid in the healing process include electrical stimulation and ultrasound which may be recommended by your physician or therapist at Innovative Pain and Wellness.

### 2) REPAIR STAGE

The repair stage is the process following the inflammatory stage and is dictated by the severity of the injury. It is important to limit the amount of inflammation as much as possible, as the degree of inflammation has a direct correlation with the amount of scar tissue, which may develop. As the fluid from the swelling diminishes, there is a residue left over which begins to "stick" or "adhere" to surrounding tissues. This results in scarring/adhesions that



attach to nearby muscles, ligaments, joints, and nerves. A good analogy is leaving a bowl of cereal out. As the milk evaporates (fluid from the swelling is reduced), the remaining cereal begins to "stick" and "harden" to the bowl (the left over residue from the inflammation does this as well). The best course of action is to rinse the bowl out as soon as possible. Likewise, the quicker treatment can address the injury, the better. The repair stage can last from 2 days to 6 weeks, again depending on the severity of the injury. In this stage of healing the doctor may recommend such things as alternating heat and ice to create a "flushing" effect in the injured regions. Heating pads (or hot moist towels from hot water or being heated in the microwave) should be applied for 5 minutes, immediately followed by 5 minutes of ice, immediately followed again by 5 minutes of heat, and finishing with 5 minutes of ice. This alternating heat and ice regimen will take about 20 minutes. Alternating heat and ice should be utilized 20 minutes per hour for 1-3 hours per day during this stage. Other treatments, such as chiropractic adjustments may also be performed in an effort to reduce joint pressure and break the scar tissue adhesions. Your doctor may also begin you on a physical therapy program. In addition, your physician may recommend other modalities such as soft tissue massage, anti-inflammatory or muscle relaxant medications, chiropractic, and cryotherapy. If the symptoms are significant, your physician at Innovative Pain and Wellness may recommend facet joint blocks and radiofrequency. Note that it is extremely rare that narcotic therapy is warranted, as over time they have been proven to exacerbate symptoms. The goals of these treatments is to relieve nerve irritation and pressure, relieve pain and spasm, restore normal motion of your neck, and increase its strength and stability.

3) REMODELING STAGE

The body`s response to stress constitutes the remodeling stage. This occurs when the residual scar tissue undergoes reorganization and reorientation along the lines of stress. Adherence to treatment in this stage is important for your outcome. The importance of continuing with the prescribed exercises and continuing to use moist heat on tight and sore muscles is necessary. In this stage it is imperative that we see a significant reduction in pain and an increase to baseline functionality. If your symptoms continue, your physician may recommend interventional procedures such as steroid injections or radiofrequency ablation to help you return to your baseline level of pain and functionality. These are simple, safe, and effective procedures that are proven to decrease pain. If they are warranted, your physician will discuss the procedures with you as well as give you educational material. In addition, our website [www.innovativepainandwellness.com](http://www.innovativepainandwellness.com) has educational videos explaining the procedures.

6 POST-INJURY NUTRITIONAL RECOMMENDATIONS

During the first two weeks after injury is critical to create an optimal healing environment for the various damaged nerves, ligaments, muscles, and joints. They need adequate minerals, vitamins, water, and amino acids to heal properly. A balanced diet with abstinence from dehydrated substances, such as alcohol, caffeine, salt, and too much red meat, may be beneficial. During the first day after trauma, the body is in its injury shock phase. Nutritional changes are not advised for the first day because of the potential for disturbing the body`s preprogrammed metabolic balance system.

Megadoses of vitamins and minerals are not suggested. A well-balanced, digestible multivitamin supplement will suffice.

SUPPLEMENT	SUGGESTED DOSAGE	COMMENTS
VITAMIN C	1,000-3,000 MG/DAY	REQUIRED FOR TISSUE GROWTH AND REPAIR
VITAMIN B COMPLEX	100 MG/DAY	IMPORTANT FOR STRESS
ZINC	50 MG/DAY	IMPORTANT FOR TISSUE REPAIR
CALCIUM/MAGNESIUM COMPLEX	1,000 MG/DAY	REPAIR OF SKELETAL TISSUE, AND MUSCLE CONTRACTION/RELAXATION



## CIGARETTE SMOKING

Smoking during the first few weeks following an injury interferes with the normal healing process. If you smoke during this time you may slow your recovery down or end up with pain that you would not have otherwise. This may result in your requiring more treatment and a worse outcome. Cigarette smoking results in oxygen deficiency to already injured tissue. Smoking is never recommended, especially for the first 4-8 weeks after a traumatic injury.



## CONCLUSION

Whiplash injury is a common occurrence after a trauma. The most common cause of whiplash injury is a motor vehicle collision. If left untreated, whiplash injury can lead to chronic, lifelong difficulties including pain and decreased range of motion. The team of doctors and healthcare professionals at Innovative Pain and Wellness is uniquely specialty trained to provide you with the best possible outcome and return to baseline functionality. We have treated thousands of patients and are here for your complete care and road to recovery!

**CALL FOR AN APPOINTMENT AND EVALUATION. WE ACCEPT MOST INSURANCES AND ALL PERSONAL INJURY CASES.**