



## Robbins Headache Clinic

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**Title:** Post Traumatic Headache  
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The post-traumatic headache syndrome is a very common sequelae following injuries to the head or neck, and often occurs after rear-end auto accidents. The headaches are usually self-limited and resolve quickly, within days to several weeks. The vast majority of patients with post-traumatic headaches simply want their pain to be improved and their disrupted life back to normal. Surprisingly few are malingering or exaggerating their symptoms.

In many patients, particularly those with more severe trauma, headaches may be a problem for months, years, or a lifetime. If the headaches develop within 2 weeks of the event, and persist for more than several months, we would consider this to be the chronic phase of the post-traumatic headache syndrome. Occasionally, patients do not develop post-traumatic migraines until months following the injury, but headaches usually begin within hours or days of the accident.

Predicting which patients will continue to suffer chronic, unremitting post-traumatic pain is a difficult undertaking. In general, patients with a pre-existing headache or migraine problem are at increased risk. Patients with a strong family history of migraine may be at increased risk for developing chronic headaches. Severity of trauma may also aid in predicting outcome, but many patients endure months or years of severe headaches after trivial head trauma. Rear-end auto collisions, without head trauma, commonly produce severe headaches and cervical pain. Factors such as the angle of impact, where the patient was sitting in the car, and what happened to the brain within the skull are key elements in producing the headaches.

Many patients have associated neck and posterior occipital pain. The neck pain tends to be independent of the headaches, and the cervical pain and headaches may resolve at different times. Physical therapy is a key element in treating the associated neck pain and tenderness, and physical therapy may also decrease the headaches.

The headaches are usually of two types: (1) tension-type headache that may be daily or episodic, and (2) migraine headaches that are usually more severe. In some patients, the post-traumatic migraine headaches are the major problem, with a periodic severe headache lasting hours to days. In other patients, the tension-type headache is the predominant problem. Many post-traumatic patients have mixed headaches, with both CDH and migraines. The occipital aching pain, so often associated with the neck pain, is usually considered to be of muscular origin. However, the occipital pain may respond to therapies for cervical pain, and at other times the occipital pain improves with the standard tension headache medications.

Medical work-up for post-traumatic headaches includes, if necessary, a CAT or an MRI scan to rule out an intracranial hemorrhage. There is also consideration for performing an EEG. The work-up is usually limited and is done according to the physician's clinical judgement. Most patients with mild post-traumatic headaches do not need to undergo extensive testing other than a neurologic exam.

There are many other symptoms that often accompany the post-traumatic headache syndrome. These tend to be similar in most patients. They include some or all of the following: poor concentration, becoming easily angered, sensitivity to noise or bright lights, depression, dizziness or vertigo, tinnitus, memory problems, fatigue, insomnia, lack of motivation, decreased libido, nervousness or anxiety, irritability, becoming easily frustrated, and decreased ability to comprehend complex issues.

The presence of headaches, neck pain, and the symptoms in the above paragraph often lead physicians, coworkers, and family members to conclude that the patient is exaggerating the complaints. However, in the vast majority of post-traumatic patients, every complaint is real, not exaggerated, and these people simply wish to feel better. The post-traumatic headache syndrome ranges from mild to severe and is often disabling to a person's life. Most patients have some degree of difficulty with their home or work life because of the headaches, anxiety, insomnia, and concentration difficulties. It then becomes a vicious cycle, with more psychological stress being placed on the patient because of the difficulties at work and at home. Unfortunately, our legal and insurance processes are not entirely fair to many of these patients, because objective testing does not reveal deficits in the vast majority of these injured patients. They are often unfairly viewed as functional or malingering.

As mentioned above, accompanying the post-traumatic headache problem is the very frequent neck pain. This is usually secondary to soft tissue damage to ligaments and muscles, but may involve disc damage and, occasionally, nerve root compression as well. Sensitivity over the occipital nerve area is very common and occipital neuralgia may accompany the post-traumatic headaches. We frequently find trigger points in the trapezium, posterior cervical, and occipital areas, with muscle spasm in these areas being very common. It is not infrequent to find such severe spasm that patients have almost zero range of motion of their cervical spine, and the neck muscles feel extremely tight upon palpation.

Treatment of the post-traumatic syndrome involves one or several of the following: medication, physical therapy, psychological counseling, and relaxation training/biofeedback. Most patients do not need all of the modalities of therapy, and treatment programs need to be individualized. First and foremost, reassurance that this condition will improve is important, as in the vast majority of cases, the headaches and neck pain progressively lessen over time.

#### **Medication for Post-traumatic Headaches**

Medication is the cornerstone of treatment, as it is consistently the most effective therapeutic modality. We have available both abortive and/or preventive medication. In the first three weeks of the headaches, we usually only utilize abortive medication. If the headaches persist beyond this point, and remain moderate or severe, preventive medicine should be instituted.

#### **Abortive Therapy**

The choice of abortive therapy depends upon the type of headache that is being treated. The principle medications for treating post-traumatic tension-type headaches are the same as those outlined in Chapter 6. I often utilize the anti-inflammatories in the post-traumatic situation, so as to aid the accompanying cervical or back pain. Muscle relaxants are more helpful than in routine tension headaches, because of cervical muscle spasm. We do not want to use addicting medication on a daily basis for more than 1 or 2 weeks. If patients require excessive amounts of abortive medication, we need to consider the use of preventive medication. We do not want to create the rebound headache situation.

Typical anti-inflammatories include aspirin, ibuprofen, and naproxen. Muscle relaxants such as Flexeril or Robaxin are often helpful, but fatigue is always a problem with this class of medication. For a complete discussion of abortive medications, see Chapters 2 and 6.

Abortive therapy for post-traumatic migraine headaches follows the same guidelines as for routine migraine headaches, as outlined in Chapter 2. Antiemetic medications are helpful for many patients. The primary migraine abortives are as follows: Extra Strength Excedrin, Aspirin Free Excedrin, naproxen (Naprosyn or Anaprox), ibuprofen (Motrin), ketorolac (Toradol), Midrin, Norgesic Forte, butalbital compounds (such as Fiorinal, Fioricet, Esgic, Fiorinal with codeine, and Phrenilin), ergots (such as cafergot pills or suppositories and Ergostat sublingual tablets), DHE injections or nasal spray, sumatriptan injections, corticosteroids, narcotics, and sedatives. For a discussion of these, see Chapter 2.

Most patients with migraine, and the majority of patients with post-traumatic migraine, simply require abortive medications for their headaches. However, if the migraines are frequent and/or severe, we need to progress to daily preventive therapy. The decision as to when to progress to daily preventive therapy is a difficult one, but most patients with severe post-traumatic migraines also suffer from daily headaches, and they usually benefit from preventive medication.

#### **Preventive Medication for Post-traumatic Headaches**

During the first 2 to 3 weeks of the post-trauma period, abortive medications such as anti-

inflammatories are usually employed. Most patients do not need daily preventive medication, and the post-traumatic headaches decrease steadily over time. However, after the initial period, if the migraine-type headaches remain frequent (at least one or two per week) or the CDH is moderate or severe, patients may benefit from prophylactic medication.

The most commonly employed preventives for the post-traumatic headaches are the antidepressants, particularly amitriptyline (Elavil) or nortriptyline (Pamelor), and the beta blockers. The anti-inflammatories often serve a dual purpose, functioning as both abortives and preventives. The antidepressants that are sedating, particularly amitriptyline, often decrease the daily headaches, migraines, and the associated insomnia. In severe cases, we need to use both a beta blocker and an antidepressant. The selection of preventive medication differs depending upon whether there is associated insomnia, GI problems, etc., and which headache type is predominant. Chapters 3 and 7 discuss antidepressants and beta blockers for migraine and tension headache.

Although the first choices for prevention medication in the post-traumatic situation are usually antidepressants and/or beta blockers, alternative medications may be utilized. Calcium blockers (verapamil) are used for migraines as a first line therapy. Valproate (Depakote), methysergide (Sansert), and MAO inhibitors (phenelzine) are employed if initial approaches have not been successful. IV DHE, used repetitively in the office or in the hospital, is very useful with severe post-traumatic headaches. I use IV DHE relatively early in the patient's course, often after 1 or 2 months, if the headaches are very severe. Concurrently, daily preventive medication is employed in these patients.

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