

Medicine for Managers

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Whiplash Injuries

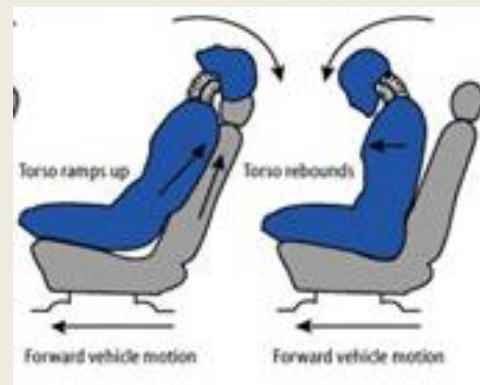
These days, the usual answer to the question “What is a whiplash injury?” is “about £4,000 from the insurance company!” Certainly the incidence and profile of the injury has increased markedly in recent years and many associate the increase with the so-called accident-chasing solicitors.

A whiplash injury is an injury to the neck following a sudden distortion such as commonly occurs in a motor vehicle accident. Its proper name is a cervical acceleration-deceleration injury which actually describes the nature of the event. Similar injuries can be caused in a variety of ways including falls from horses, trampolines and stools, sudden lurches on a roller-coaster, skiing accidents and during shaken-baby syndrome. Interestingly, the injury was originally called ‘railroad spine’ in the days when accidents resulted from train crashes rather than motor accidents.

The most common symptoms associated with the condition are neck pain and stiffness, shoulder pain, arm pain and weakness, back pain and headache. A variety of other symptoms may be reported including depression, anxiety, other emotional symptoms, sleepiness and post-traumatic stress syndrome.

Essentially the mechanism of injury is that, on suffering a rear impact, such as in a car, the car

moves forward whilst the person stays still, the seat then accelerates the person’s body forward whilst the head remains stationary resulting in forcible hyper-extension of the neck (i.e. the head is tilted upwards).



The head is then thrown or ‘whipped’ forward as it effectively catches up with the torso and is hyper-flexed. (i.e. the chin moves down towards the chest). Finally the head returns to the neutral position. This whole event happens in less than half a second. The degree of injury depends on the speed of impact and the position of the head amongst other things. The consequences vary from minor neck stiffness

and tenderness to more severe pain in neck and back with nerve symptoms and headache. In the most severe accidents there may be a fracture or dislocation of the cervical spine with injury to the spinal cord.

Most patients involved in an accident end up at the A&E department or in the GP's surgery. The usual findings are of neck ache or backache which developed 12 to 24 hours after the accident (as the muscle spasm increases). Most display no serious features and can be treated with simple analgesia. More severe cases may need a cervical collar for support and may be referred for X-ray to exclude more serious injury. Relatively few patients need further investigation such as MRI or referral to a specialist orthopaedic surgeon or neurologist. Normally the more mild symptoms wear off in two to twelve weeks and benefit from self-help techniques such as regular flexion, extension and rotational exercises half a dozen times a day.

There has been considerable work on reducing the frequency and severity of whiplash injuries, most notably through the development of head restraints. There are many designs but their principal purpose is to prevent the hyperextension of the neck with backwards movement of the head. Commonly the head restraint is incorrectly located with the result that it does not provide the necessary protection. It should be set about 3½ inches below the top of the head and virtually touching the back of the head whilst driving. A correctly set head restraint may reduce the risk of whiplash by about a third.

Claims for personal injury are rising. A report in 2011 suggested that road accidents had declined by 11% in 2011 but claims for personal injury had risen by 18%. Nearly half a million people claim for whiplash injury every year and the costs add about one-seventh to the average insurance premium.

Undoubtedly there will be further developments in car seat design over time and the severity of whiplash injuries will be further reduced although whether the number of claims will diminish is quite a different question!

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