



Acceleration/Deceleration Injury (Whiplash)

By: Maureen Dwight, Registered Physiotherapist

Next year, in Ontario, over 100,000 people will be involved in a car accident that results in an injury! There are new legislations aimed at reducing these statistics, i.e. Graduated Licensing, but what should you do if you are unfortunate enough to be in one of these accidents?

Mechanism of Injury

When the car is struck from behind, your body is propelled forward and the head moves backward. Shoulder harness seat belts limit the forward motion of the body. The backwards motion of the head is limited by the headrest. Then the head is snapped forward by the elasticity of the stretched structures. Forward motion is limited by the head striking the chest.

To limit injury, position the top of your headrest parallel to your head to block backwards rotation. If you know the accident is going to happen try to look straight ahead. Rotation of the neck significantly increases the potential for injury.

The better your sitting posture and the closer your head is to the headrest, the less the potential for backwards motion. The driver will absorb some of the body's forward motion through their arms on the steering wheel. The passenger can absorb forces by holding the seat, if they are forewarned.

Post-accident (Neck Whiplash)

Any symptoms of concern should be medically cleared prior to following this advice.

If you have mild soreness or fear of late onset soreness, you should observe the following procedures.

A car accident should follow the same procedure as any sports injury.

- As soon as possible put ice on your neck.
- Plan to spend the next 48 hours quietly. This does not mean complete bedrest (unless medically advised).
- Avoid sporting activities that involve your upper body
- Avoid prolonged reading or computer work.
- Walk short durations, but often.

Medication may be indicated for inflammation or pain.

The aim is to settle down the acute inflammation the same as in a sprained ankle. Acute inflammation will recede within 48-72 hours.

If you use a neck collar it is generally recommended on an intermittent basis. In the first few days a collar may be helpful in limiting movement but prolonged use will weaken neck muscles and add to the stiffness.

As healing progresses the pain will be replaced by stiffness. Initially you will have periods of pain mixed with periods of stiffness. Stiffness is a sign that healing is occurring.

Treatment can be progressed to include stretching, further posture correction and "hands on" treatment by a therapist. Initially these techniques (mobilizations/massage) are gentle and then become deeper as the tissues continue to heal. You should be doing a specific stretch and posture programme several times per day. The programme may take only 5 minutes but it is more effective when done frequently. A longer stretch programme with a reduced frequency is recommended as healing continues.

A strengthening programme starts around the same time as the stretch programme. It will be gentle at first and then increase in intensity. General athletic principles of training the uninjured part can allow strengthening to begin almost immediately.

Fitness involving the lower body can be started early. Stationary bike, leg and lower abdominal work should be done in a non-irritative fashion.

When strengthening the upper body, I recommend beginning with the hand and wrist muscles then progressing to the arms, shoulders and finally the neck.

How long will this last?

The pain from a mild "whiplash" can be resolved in a few days to a few weeks. Most soft tissue injuries of the body, whether from a car accident or an athletic injury take 6 weeks to heal. Don't expect it to be much faster! This is normal tissue healing. Little can be done to speed it up but you can slow it down by being too exuberant.

Stiffness and weakness will take a further 6 weeks to recover, in a straight forward injury. If there is previous history of injury or poor posture it may take longer. You may have increased symptoms under periods of stress or increased activity. These should become less frequent and intense as healing continues.

Silken Laumann has shown us that the better shape you are in pre-injury the better healing post-injury. A regular fitness programme, good posture, strength and flexibility will help to lessen the impact of any mishap.