

A Minor Accident

Equals

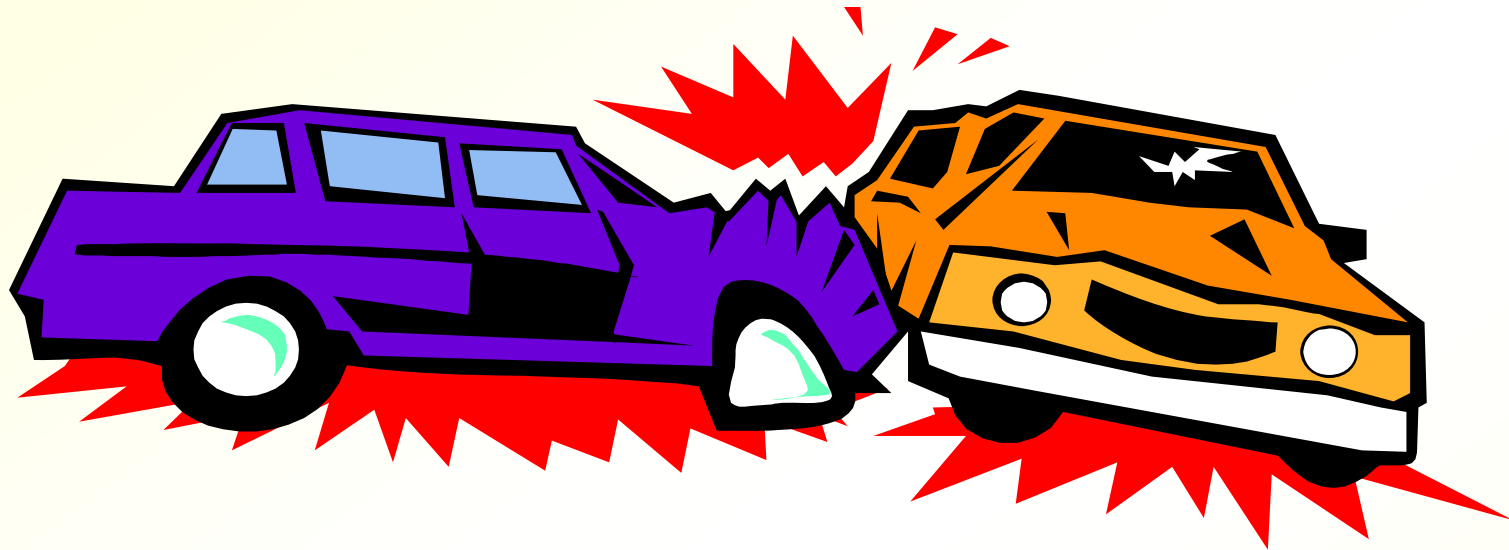
A Big Problem

From the *State of Florida Department of Highway Safety and Motor Vehicles*

The following crash information is compiled from traffic crash reports (long form) submitted by Florida Law Enforcement Agencies:

| Year | Low-Speed Crashes* | Fatalities | Injuries |
|------|--------------------|------------|----------|
| 1994 | 39,701 | 179 | 32,267 |
| 1995 | 47,578 | 213 | 38,099 |
| 1996 | 56,781 | 290 | 48,503 |
| 1997 | 55,829 | 304 | 47,016 |
| 1998 | 66,278 | 396 | 58,657 |
| 1999 | 67,602 | 528 | 55,973 |

*Low-speed crashes are when no vehicles are traveling over 10 mph and does not include bicycles or pedestrians.



“The National Highway Traffic Safety Administration reports that, in 1995, there were 5,500,000 Americans injured in motor vehicle crashes (MVCs).”

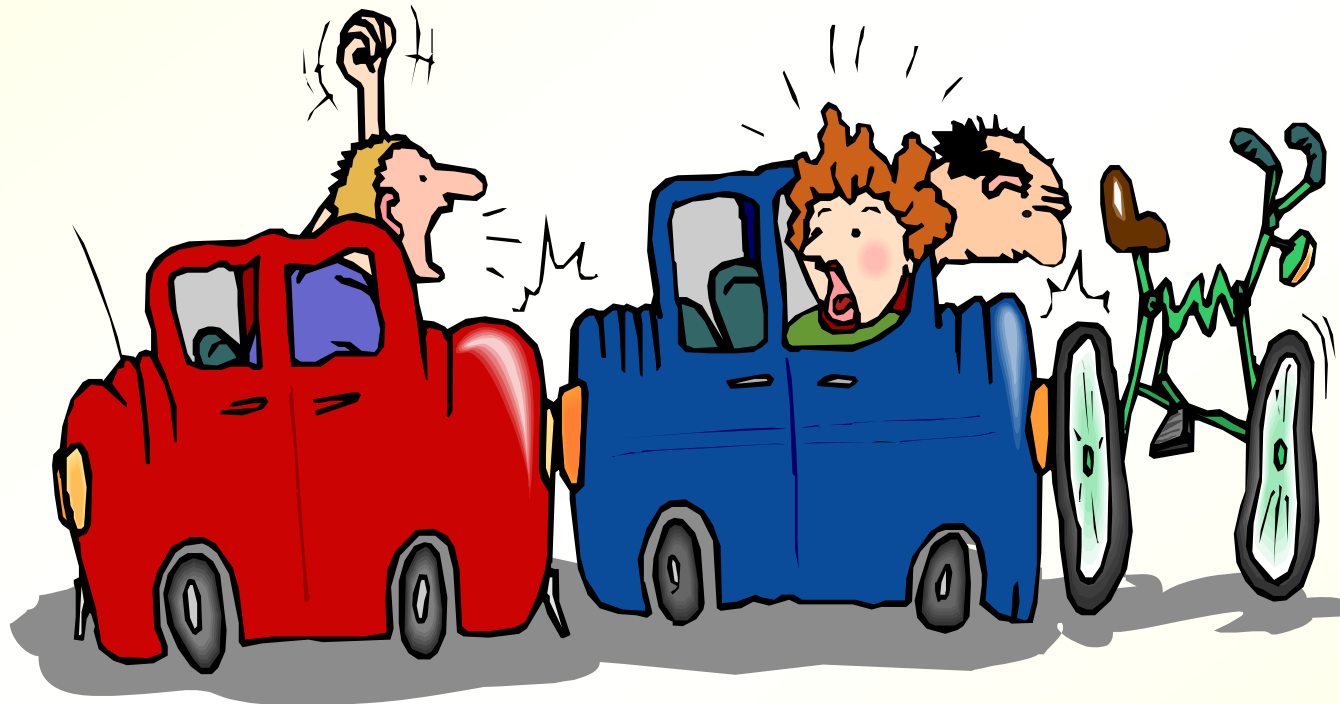
Freeman, Croft, Rossignol, Weaver, Reiser (1999-01-01). “A Review and Methodologic Critique of the Literature Refuting Whiplash Syndrome.” Spine 24(1), p. 86-98.

There were an estimated 6,289,000 car accidents in the U.S. in 1999. There were about 3.4 million injuries and 41,345 people were killed in auto accidents in 1999.



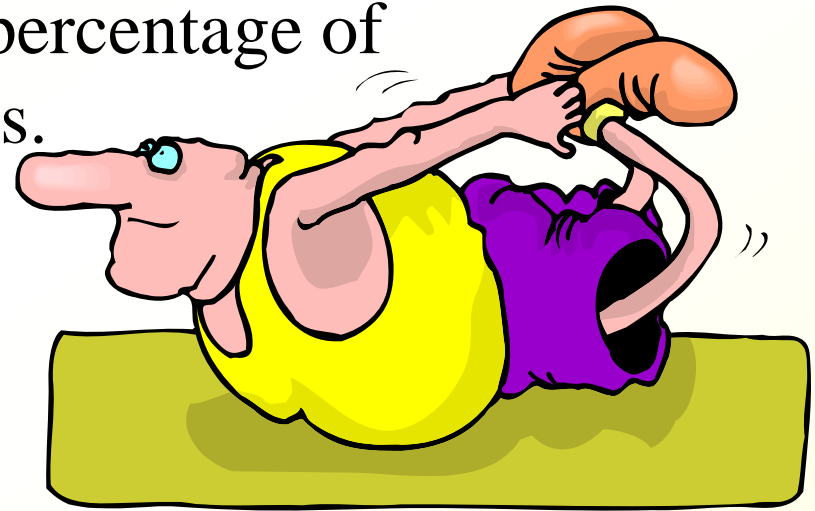
Freeman, Croft, Rossignol, Weaver, Reiser (1999-01-01). "A Review and Methodologic Critique of the Literature Refuting Whiplash Syndrome." Spine 24(1), p. 86-98.

39.6% of those injured in a rear-end motor vehicle crash have chronic neck pain seven years later.

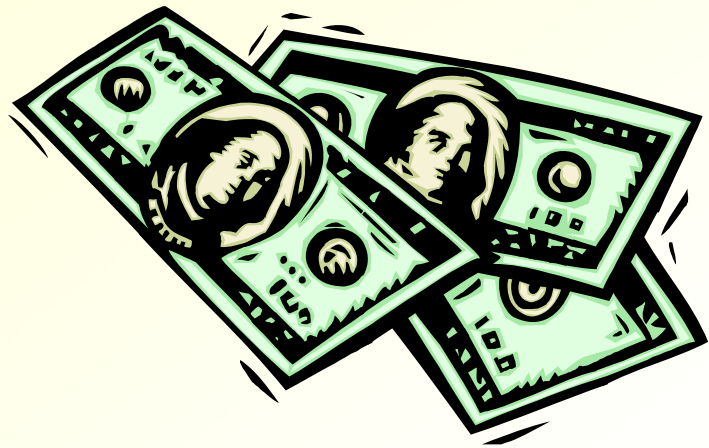


This means that there is an approximate three times increased probability for neck pain for those injured in a motor vehicle crash seven years later.

- The primary injury is to the soft tissues.
- The initial injury causes an increased mobility of the injured joints (increased flexibility).
- The injuries result in substantial percentage of individuals with chronic symptoms.
- The injuries can not be identified with available imaging methods.
- With time, symptoms may become chronic because of clinical instability.
- The most common site of injury is at C5-C6 level, and injury occurs in extension.



MM Panjabi, K Nibu, J Cholewicki. (1998-06-01). "Whiplash injuries and the potential for mechanical instability." Eur Spine J. 7(6):484-92.

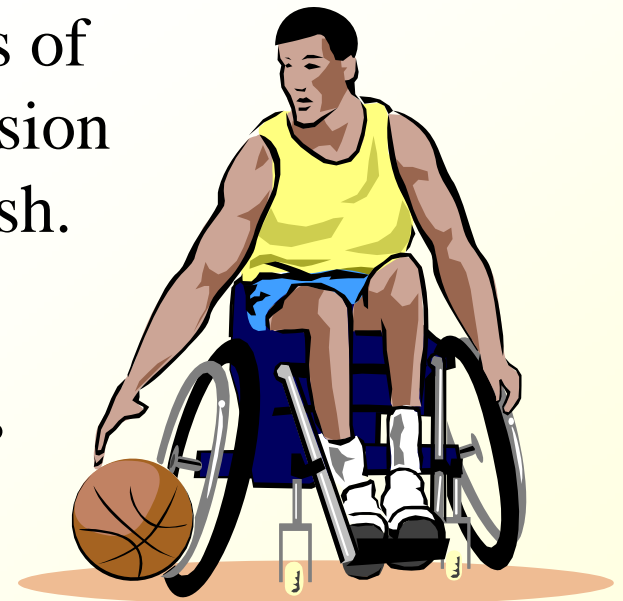


Victims of motor vehicle crashes are likely to develop chronic and multiple symptoms.

In North America, motor vehicle crash soft tissue injuries of the neck are increasing, even though fatal motor vehicle crashes are decreasing.

These injuries can result in substantial levels of disablement, even following a rear-end collision that seemed innocuous at the time of the crash.

Whiplash injuries can create physical and psychological problems for an individual, as well as a financial burden for both the individual and society.

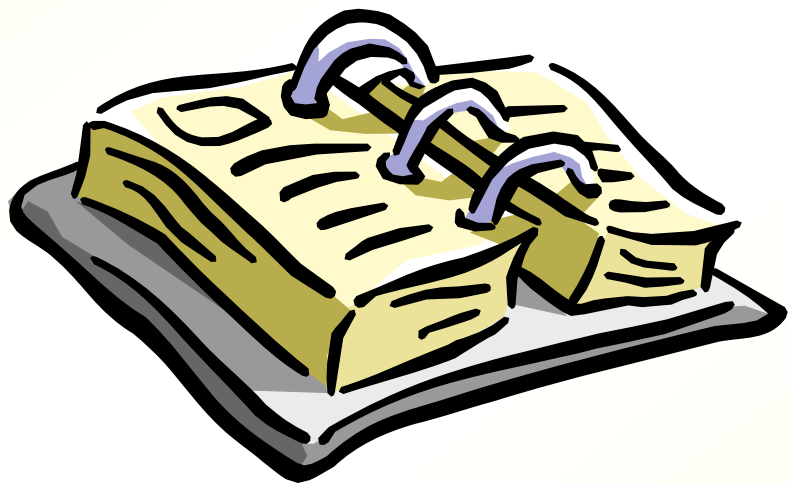


Journal of Musculoskeletal Pain. A prospective study of acceleration-extension injuries following rear-end motor-vehicle crashes. Vol. 8(1/2), 2000, p. 97-113.

Damage begins within 2 weeks of having a car accident.

This injury to the spine causes a cycle of degeneration that leads to nerve damage.

Research shows that if left uncorrected, permanent scar tissue forms.



At 6% strain, the function of the nerve had decreased by 70% in one hour.

The nerve returned to normal during the recovery period.

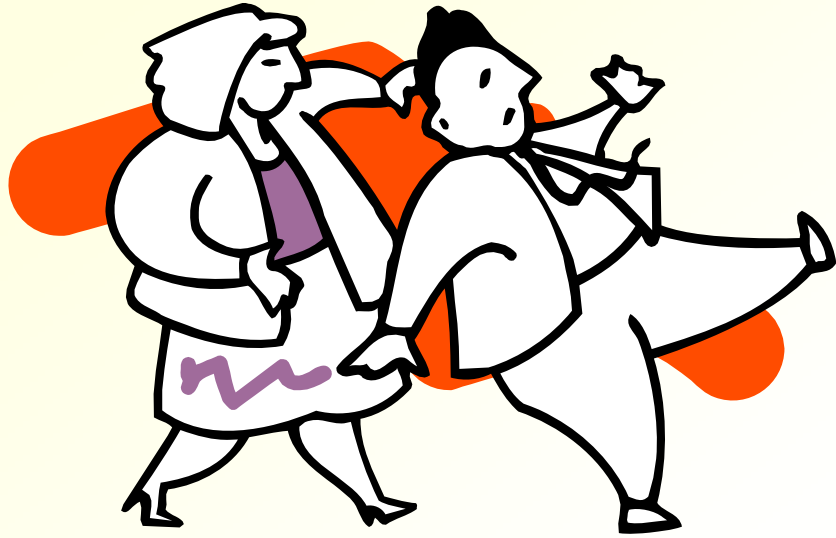


At 12% strain, the nerve was completely blocked after one hour.

Minimal recovery occurred.



Wall EJ, Massie JB, Kwan MK, Rydevik BL, Myers RR, Garfin SR: Experimented stretch neuropathy. Changes in nerve conduction tension. J Bone Joint Surg Br January 1992; 74(1), pages 126-129.

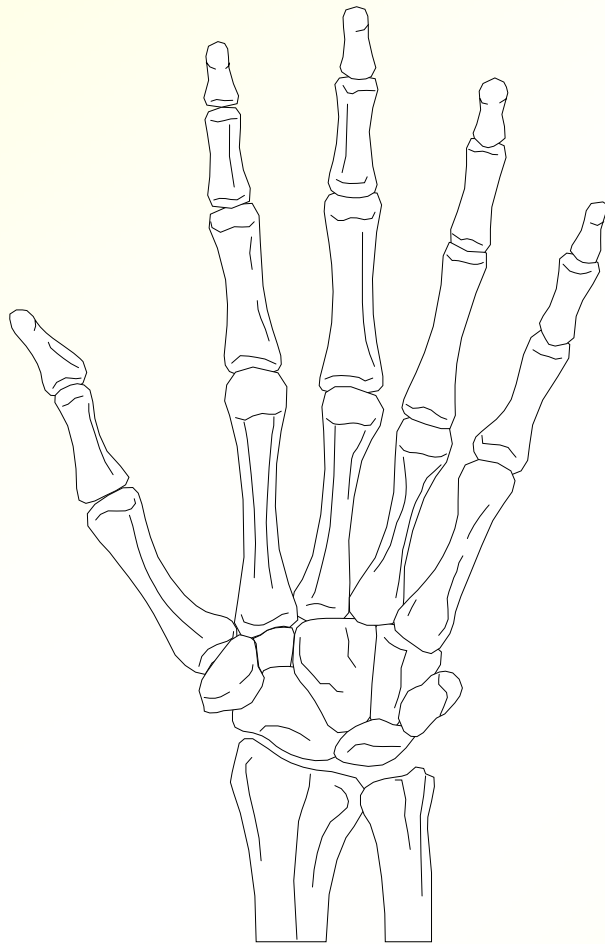


Dr. Sharpless states, “It takes the pressure of a dime on a nerve to take away 60% of its function.”



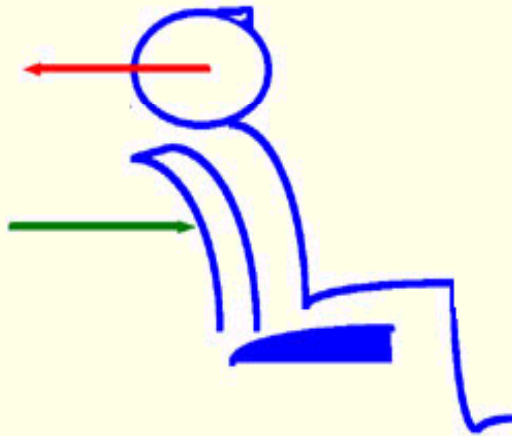
Sharpless, SK: Susceptibility of Spinal Roots to Compression Block, NINCDS Monograph 15, DHEW publication (NIH) 76-998, 1975, p 155-161.

A Broken Wrist Is An Event...



- And it is treated like an event...it is set & put in a cast.
- **BUT THEN** it takes time to heal!
- Healing is a process and all processes take time.

75% of patients with whiplash injuries will heal spontaneously in 2-3 months. These patients sustained minor injuries to their muscles and ligaments, but not to their discs or zygapophyseal joints.



Bansley, Lord, Bogduk. Whiplash Injury: Clinical Review. Pain 58, 1994, 283-307.

One-third of all patients with whiplash injuries were still symptomatic 2 years after the accident. The other two-thirds were symptom-free by the end of 2 years. Of these patients, 88% were symptom-free within 2 months.



10% of patients with whiplash injuries develop constant severe indefinite neck pain.

1% of the people in the entire population have chronic neck pain caused by whiplash injury.

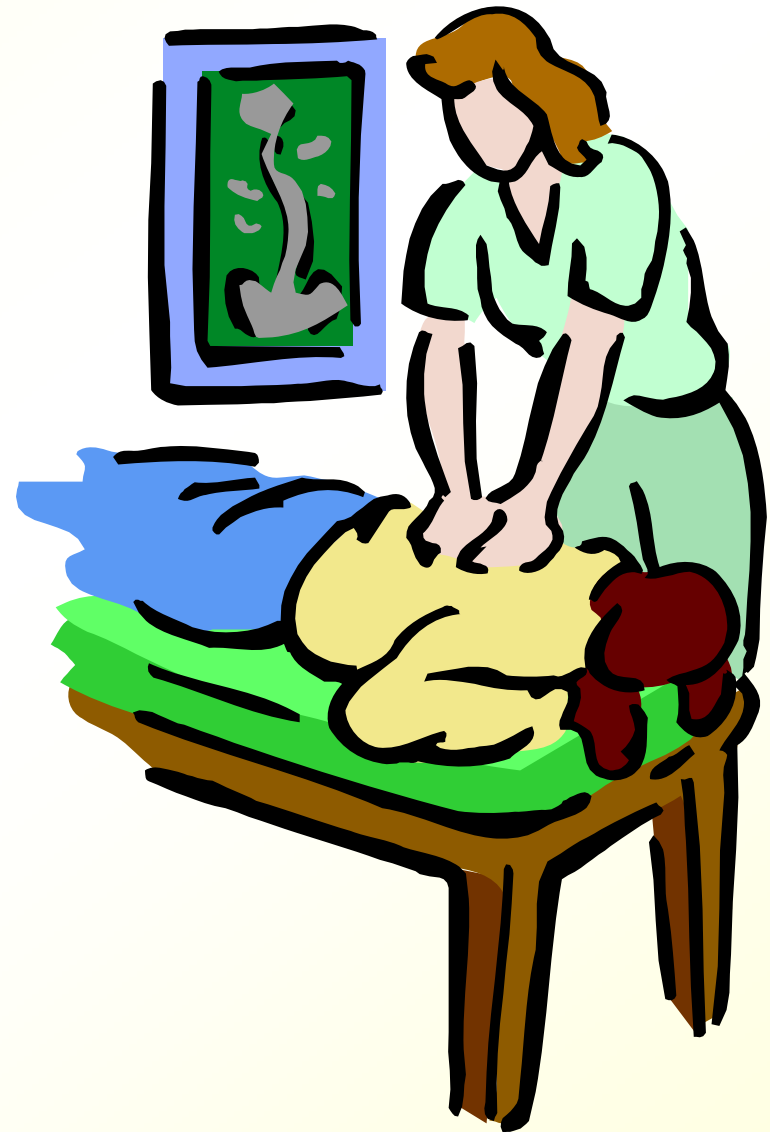


0.4% of the people in the entire population have **severe** chronic neck pain caused by whiplash injury.

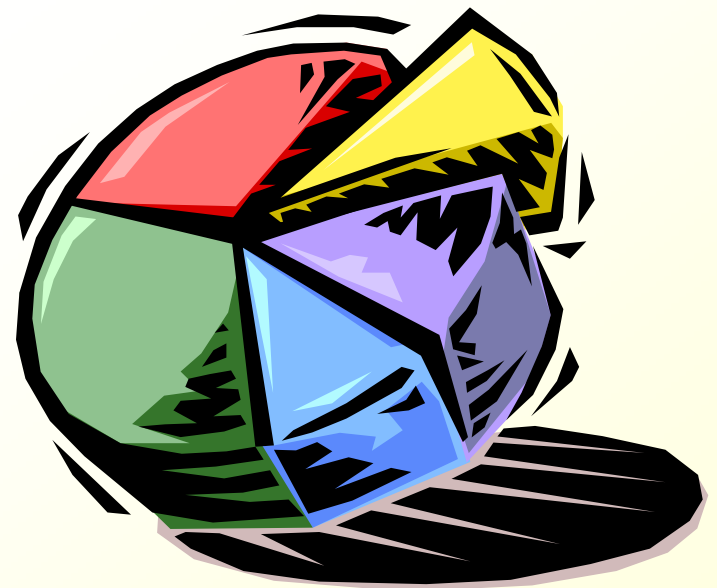
25% of patients with whiplash injuries will progress to chronic symptoms.

These patients injured their intervertebral discs, zygapophyseal joints, or alar ligaments.

These patients will not resolve spontaneously and they do become chronic.



After 2 years follow-up, 44% of those initially presenting with only symptoms had residual complaints. 81% of those with initial symptoms and physical findings were symptomatic, while those with neurologic involvement were 90% symptomatic.



In An Automobile Accident...



- **Women are more vulnerable to injury.**
- **Women are more likely to suffer long-term consequences from an injury.**

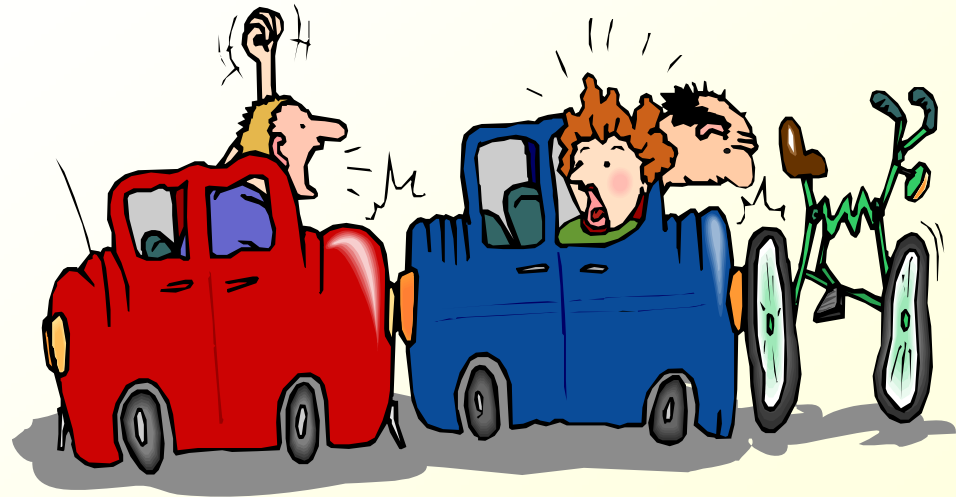
Rear End Collisions

Rear-end collisions cause extension-acceleration whiplash injuries, which are considered to cause the greatest damage.

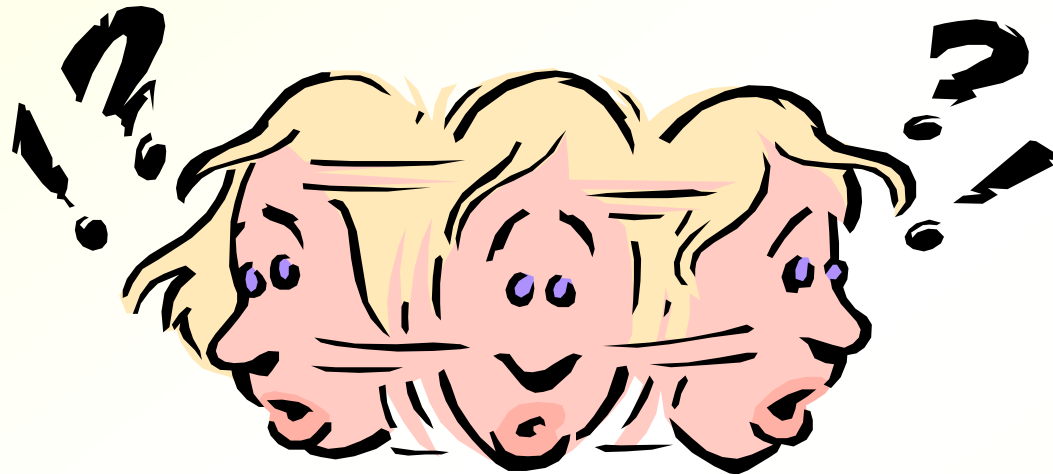
Follow-up x-rays taken an average of 7 years after injury in one series of patients without prior roentgenographic evidence of disc disease indicated that 39% had developed degenerative disc disease at one or more disc levels since the injury.

Deans, Neck Sprain - A Major Cause of Disability Following Car Accidents, p. 10.

Holm, in The Cervical Spine, Lippincott, 1989, p. 440.



Head Rotation



If the head is turned at the moment of impact, there is increased injury on the side to which the head is turned, as: “not only will the already narrowed foramen be compressed more, but the torque effect on the facets, capsules, and ligaments will be far more damaging.”

Cailliet, Neck and Arm Pain, F.A.Davis Company, 1981, p. 85.

McCain, Clinical Spectrum and Management of Whiplash Injuries, p. 316.

The head being turned at the moment of impact increases injury.

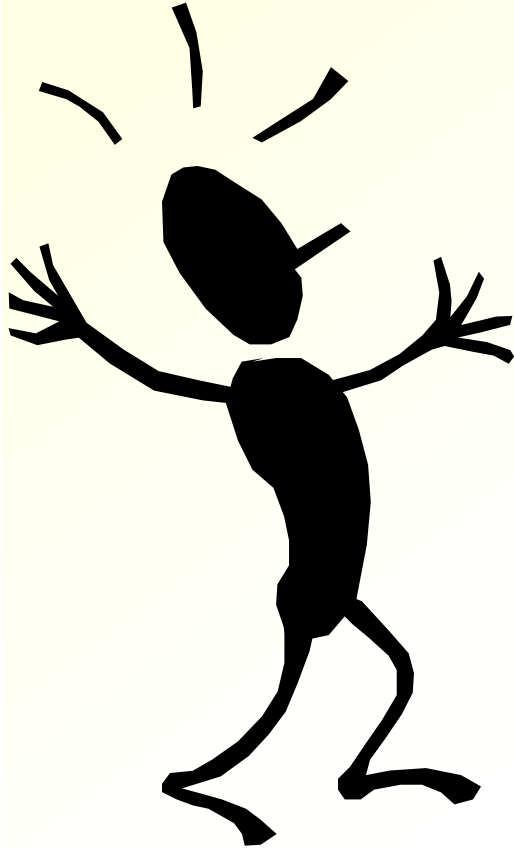
- When the hyperflexion-hyperextension or hyperextension-hyperflexion occurs with head rotation present, the pattern of tissue injury is different, and the extent of damage produced is always more severe. Rotation increases stress in certain soft tissue structures, which then reach their limit of motion at an earlier point, thus resulting in more severe injury with less application of force.



Webb, Whiplash: Mechanisms and Patterns of Tissue Injury, Journal of the Australian Chiropractors' Association, June, 1985.

McCain, Clinical Spectrum and Management of Whiplash Injuries, p. 316.

Lack of Awareness



**Being caught by surprise
or being unaware prior to
impact worsens the
prognosis.**



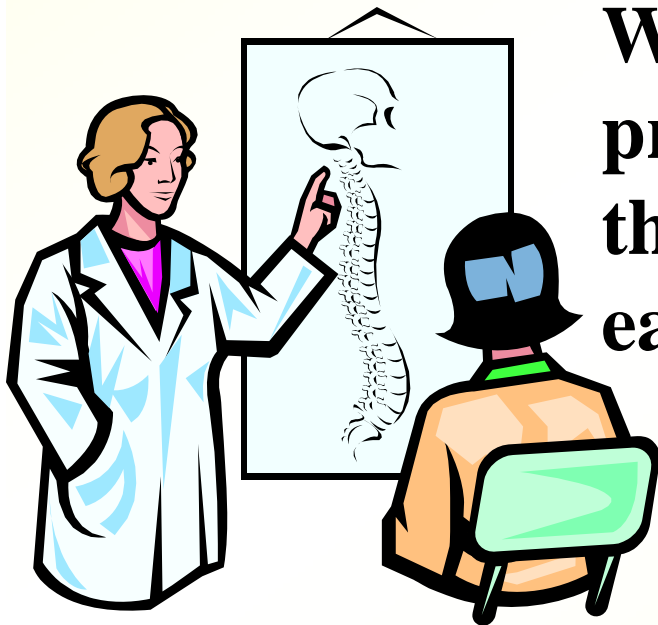
Ryan, Neck Strain in Car Occupants: Injury Status after 6 Months and Crash-Related Factors, p. 536.

McCain, Clinical Spectrum and Management of Whiplash Injuries, p. 316.

Sturzenegger, The Effect of Accident Mechanisms and Initial Findings on the Long-Term Course of Whiplash Injury, p. 446-447.

A Pre-Existing Degenerative Condition

The injury may be compounded by the presence of degenerative disc disease of the spine.



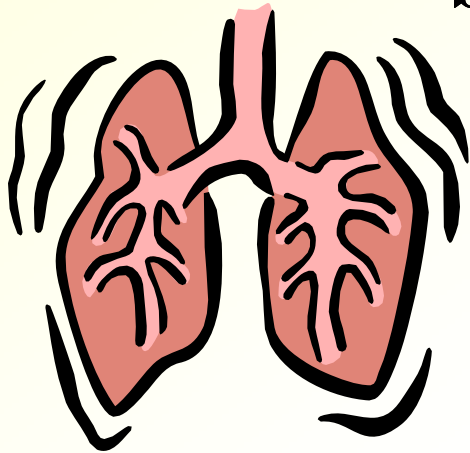
With advancing age, especially in the presence of degenerative disc disease, the tissues become inelastic and are easily torn.

Cailliet, Neck and Arm Pain, F.A. Davis Company, 1981, p. 103.

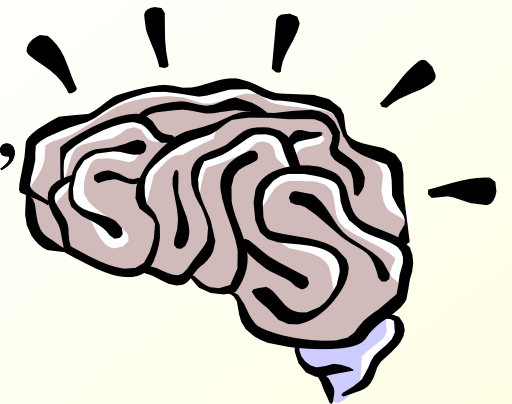
Turek, Orthopaedics Principles and their Applications, Lippincott, 1977, p. 740.

Gray's Anatomy, page 4, states "The nervous system regulates and coordinates all functions of the body."

(This includes seeing, digesting, breathing, eliminating, etc.)



The autonomic nervous system regulates the actions of organs, glands, and blood vessels.



Thermography (heat scan) allows the chiropractor to detect interference in your nervous system from the injury.

THE COLLAPSE OF THE MEDICAL MODEL

- 3rd Leading Cause of Death in the U.S. (Heart Disease, Cancer)

1. 180,000 Iatrogenic Injury

- 3 Jumbo Jet Crashes every 2 days - *JAMA 1994*
(Swissair Jet Flight 111-229 Die)

2. 106,000 Drug Reactions

3. 80,000 Medical Malpractice

- According to the Dean of the University of Arizona: College of Pharmacy, “We spend \$75 billion for drugs annually and \$76 billion of the problems caused by drugs.”



Pain Pill Research

Overuse Linked to Kidney Damage

A study, published in a recent issue of the *New England Journal of Medicine*, found that the risk of kidney failure appeared to be doubled by either heavy average use (more than 365 pills in a year) or moderate cumulative use (more than 1,000 pills in a lifetime).

IBUPROFEN

Brand Names: Advil, Nuprin

Advantages: Relieves pain, fever, and inflammation.

Disadvantages: Interferes with clotting. May cause stomach bleeding, ulcers and irritation.

Heavy or prolonged use may damage liver and kidneys.



ACETAMINOPHEN

Brand Names: Tylenol, Datril

Advantages: Relieves pain and fever. Does not irritate stomach.

Disadvantages: Heavy or prolonged use may damage liver and kidneys.



NAPROXEN

Brand Names: Aleve

Advantages: Relieves pain and fever. One dose lasts 8-12 hours.

Disadvantages: May cause stomach bleeding, ulcers and irritation. Prolonged use may harm kidneys.

Did You Know...

- The drug business is now the most profitable business in America, and today more than 50% of the world's drugs are consumed in the U.S.?



- In 1979, the average American was prescribed one drug per year with an average cost of \$5.50?



- People over 60 make up about 17% of the U.S. population, but they take 40% of all prescribed drugs and average 8 different drugs each year?



- In 1991, the average American was prescribed 6½ drugs, and the average cost of each was \$22.50?

Chiropractic is based on two facts of reality:

- **The body is a self-healing and self-regulating organism (if you cut yourself, it will heal).**
- **The nervous system is the master system and controller of the body.**



Therefore, if there is any interference with nerve function, there must then be interference with healing and regulation. People do not lose their health do to the lack of drugs in the blood, etc...Something inside is interfering with health expression. Let me explain what a vertebral

SUBLUXATION is...

Following the chiropractic treatment, 93% of the patients had improved.



“The results of this retrospective study would suggest that benefits can occur in over 90% of patients undergoing chiropractic treatment for chronic ‘whiplash’ injury.”

Woodward, Cook, et al. (1996). “Chiropractic treatments of chronic ‘whiplash’.” Injury 27(9), p. 643-645.

A retrospective study from the journal *Injury*, in 1996, demonstrated that chiropractic treatment benefited 26 of 28 patients (93%) suffering from chronic whiplash syndrome.



Controlled experimental and clinical trials have yielded convincing evidence that early, controlled mobilization is superior to immobilization for musculoskeletal soft-tissue injuries.

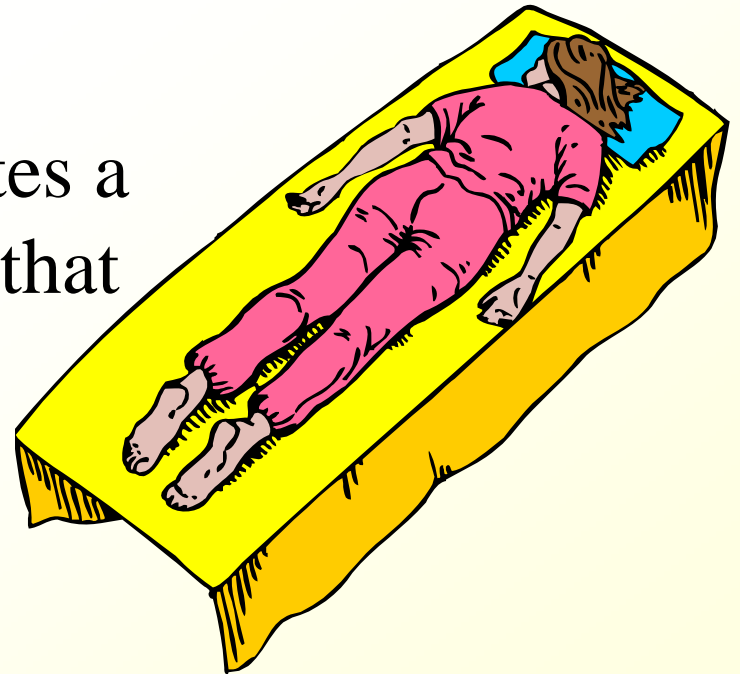
The superiority of early controlled mobilization is especially apparent in terms of producing quicker recovery and return to full activity, without jeopardizing the long-term rehabilitative outcome.



The Physician and Sports Medicine. Immobilization or early mobilization after an acute soft-tissue injury? Vol. 26, No. 3; March, 2000, p. 55-63.

Chiropractic Adjustments...

- This controlled movement allows the injured tissues to heal better and quicker
- This controlled movement improves the fluid exchanges of the disc and synovial fluid, which reduces pain and joint degeneration.
- This controlled movement initiates a neurological sequence of events that causes pain inhibition.
(Decreases the Pain)





Should I Be Evaluated?

SYMPTOMS OF WHIPLASH:

- Neck Pain
- Neck Stiffness
- Shoulder Pain
- Headache
- Pain Between Shoulder Blades
- Back Pain
- Numbness/Tingling
- Pain in Arms
- Pain in Legs
- Dizziness or Lightheadedness
- Blurring/Double Vision
- Difficulty Swallowing
- Pain in Wrists/Hands
- Pain in Ankles/Feet
- Loss of Memory or Concentration
- Ringing in Ears
- Pain in the Face/Jaw

