

healing itself, it does so imperfectly. When a bone is broken, it heals with bone and becomes stronger than before. Ligaments, however, heal as scar tissue which is laid down in an irregular pattern, therefore, less elastic and less flexible than normal ligaments. This process may also prevent the growth of nerves, resulting in weak and stiff muscles. Everyday activities pull at the scar which is less flexible than the surrounding muscle. This increases the chances of re-injury. Lack of motion in one area of the neck will cause the area next to it to have too much motion. This can cause the disc protecting the nerves to become thin and for arthritis to develop.<sup>3</sup> This may lead to chronic future pain and disability. Therefore, increasing the motion of the stiff ligaments and muscles during the first eight weeks after an accident is essential to the quicker resorption of scar tissue and the formation of stronger, more flexible muscles and ligaments. This makes them more resistant to future muscle sprains or injuries.

■ **Phase 3 - Remodeling Phase.** Lasts from 3 weeks to 12 months or more.<sup>2,5</sup> The scar tissue assumes its final form. The scar tissue is remodeled so that the muscle tissue can better withstand the stresses put on it.<sup>2</sup> Inactivity causes scar tissue to stick together. This results in a permanent loss of flexibility. Studies have shown that scar tissue can contract up to six months after an injury.<sup>4</sup> Chiropractic care allows the normal stiffening reaction to be reduced by the formation of freely moveable scar tissue.

## ■ SUMMARY

Depending on the severity of the injury, chiropractic adjustments and exercise may be needed up to one year to bring about and maintain normal range of motion in your neck after an auto accident.

The doctor of chiropractic is trained to treat the underlying cause of your problem. Your chiropractor will take a thorough history to determine if your condition can be helped by chiropractic care. Often there is no charge for your initial consultation and/or examination.

Your doctor of chiropractic is a whiplash specialist. Thousands of car accident victims have been helped by the inexpensive, pain-free way to health. Make the smart choice - choose chiropractic.

\* Photography: William Roden \* Illustrations: Patricia Lightfoot

## ■ Chiropractic and Insurance

Most insurance companies understand the value of chiropractic care after a car accident and often cover the total cost of your care. Our clinic will gladly assist you with your paperwork related to insurance.

## ■ The Courts

Your chiropractor is a whiplash specialist. His/her treatment and reports will help you to recover fair compensation for injuries related to your car accident. It is best to work with an attorney that understands the many benefits of chiropractic care to obtain the best settlement.

Most personal injury cases are settled out of court. But, if the insurance company refuses to settle, we will be glad to tell the court how the extent of your injury has affected your life.

## ■ Symptoms Checklist

Please place a check mark before any symptoms you may be suffering from due to your car accident. Make sure to show this list to your chiropractor.

- |  |   |
|--|---|
| <input type="checkbox"/> Migraine Headache     | <input type="checkbox"/> Nervousness                    |
| <input type="checkbox"/> Mental Dullness       | <input type="checkbox"/> Nausea                         |
| <input type="checkbox"/> Depression            | <input type="checkbox"/> Painful Joints                 |
| <input type="checkbox"/> Dizziness             | <input type="checkbox"/> Painful Back                   |
| <input type="checkbox"/> Double Vision         | <input type="checkbox"/> Poor Circulation               |
| <input type="checkbox"/> Insomnia              | <input type="checkbox"/> Tension                        |
| <input type="checkbox"/> Loss of Balance       | <input type="checkbox"/> Fatigue                        |
| <input type="checkbox"/> Loss of Hearing       | <input type="checkbox"/> Tingling in Arms or legs       |
| <input type="checkbox"/> Eye Strain            | <input type="checkbox"/> Cold Hands or Feet             |
| <input type="checkbox"/> Poor Memory           | <input type="checkbox"/> Aches All Over                 |
| <input type="checkbox"/> Ringing in the Ears   | <input type="checkbox"/> Anxiety                        |
| <input type="checkbox"/> Loss of Neck Motion   | <input type="checkbox"/> Shortness of Breath            |
| <input type="checkbox"/> Stiff or Painful Back | <input type="checkbox"/> Any Change After Your Accident |
| <input type="checkbox"/> Muscle Spasm          |   |

## ■ Footnotes-

<sup>1</sup> Kellet, Jim. "Acute Soft Tissue Injuries." A review of the literature. Medicine and Science and Sports and Exercise. (American College of Sports Medicine, 1986)

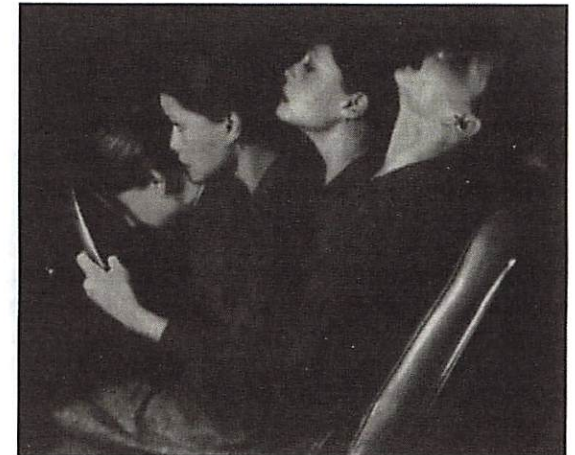
<sup>2</sup> Steven, Roy, M.D. Sports Medicine Prevention Evaluation, Management and Rehabilitation. (Englewoods Cliffs, N.J.: Prentice Hall (p. 126, 127)

<sup>3</sup> Foreman & Croft, "Whiplash Injuries." Cervical Acceleration/Deceleration Syndrome. (Williams and Wilkens, 1988)

<sup>4</sup> Van der Meulin, J.H.C. "Present State Of Knowledge on Process of Healing in Collagen Structures." International Journal of Sport Medicine. (suppl. 1.) (1982) 3:4-8.

<sup>5</sup> Frank, G. D.L.Y. Woo, O. Amiel F. Harwood, MGomez and W. Akeson, "Medical Collateral Ligament Healing." American Journal of Sports Medicine. (1983) 11: 379-389.

# HOW YOUR BODY HEALS AFTER A CAR ACCIDENT



## Your Choice

## HOW YOUR BODY HEALS AFTER A CAR ACCIDENT - YOUR CHOICE-

After several years, even a minor car accident as slow as 5 m.p.h. may lead to thinning of your discs and painful arthritis in the joints of your neck and back. Initial symptoms such as sore and tight neck and lower back muscles may take up to two weeks to first appear. Symptoms often get worse over time with a greater chance of re-injury. In its early stages, it's possible to have thin discs and arthritis without pain. Often the initial pain may subside, only to return full blown years later.

How your body heals after a car accident is your choice. You may choose not to receive any treatment, to go only to a medical doctor, take drugs and receive no treatment, or to increase your flexibility and decrease your pain through gentle chiropractic care. Each option has its consequences, therefore, it is vital to make an informed decision. When one car is hit by another, thousands of pounds of force are exerted upon the tiny bones of your neck. Your head, which is very heavy compared to your neck, is whipped toward the striking vehicle. Your neck muscles then stretch and you react with violent spasms in the other direction. The painful result is injury to the ligaments, muscles, and nerves, and occasionally broken bones.

There are three phases of healing after a car accident.

■ **Phase 1 - Acute Inflammatory Phase.** Lasts up to 72 hours.<sup>1</sup> The initial reaction is one of inflammation. The signs of inflammation are heat, pain, swelling and redness. Pain may be due to torn muscles or ligaments, or tight, swollen muscles.<sup>2</sup> Torn ligaments allow excessive movement which can cause pinching of the nerves. This can cause weakness, pain, tingling and numbness. Nerve cells cannot be regenerated when they are destroyed. Whatever specialized function they were responsible for is lost forever.<sup>3</sup> Muscle fibers attempt to grow, but unless these fibers are accompanied by a nerve supply, they fail to mature.

■ **Phase 2 - Repair or Regenerative Phase.** Lasts from 72 hours to 8 weeks.<sup>4</sup> You may wonder why soft tissue won't heal by itself. While the body is capable of

## COMPARISON OF MEDICAL OR NO TREATMENT TO RECONSTRUCTIVE CHIROPRACTIC CARE

### MEDICAL (OR NO TREATMENT)

*Cervical Collar* - allows your neck to form scar tissue.

*Pain Medication* - takes the edge off the pain but doesn't eliminate it. Only treats the symptoms.

*Muscle Relaxants* - temporary and partial relaxation of muscles.

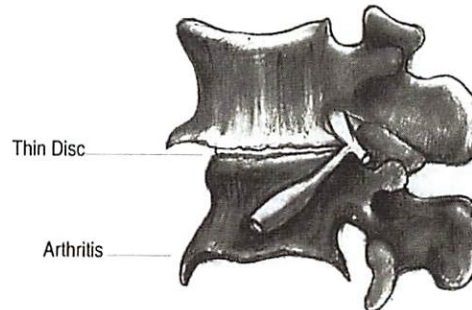
*Bed Rest* - maintains stiff scar tissue. Make posture worse.

*No Treatment* - your back and neck become stiff and painful. Arthritis develops and discs that protect the nerves become thin.

### MEDICAL (OR NO TREATMENT)

- 1) Painful, inflamed arthritis
- 2) Sore, tight, less flexible muscles
- 3) Poor posture
- 4) Decreased athletic ability
- 5) Thin discs
- 6) Decreased flexibility in the neck and lower back
- 7) Greater chance of re-injury

RESULTS OF NO TREATMENT



### RECONSTRUCTIVE CHIROPRACTIC CARE

*Spinal Manipulation* - forms freely moveable scar tissue. This increases the nerve flow to your muscles. This treats the cause of the pain and eliminates it.

*Deep Tissue Massage* - long lasting relaxation of tight, stiff muscles.

*Postural Exercises* - improve posture.

*Range of Motion Exercises* - increase flexibility.

*Cervical Tractioning* - improves posture and increases the space between the discs.

### RECONSTRUCTIVE CHIROPRACTIC CARE

- 1) Prevention of arthritis, pain free neck and lower back
- 2) Stronger, more flexible muscles
- 3) Improved posture
- 4) Increased athletic ability
- 5) Normal sized discs
- 6) Improved flexibility in the neck and lower back
- 7) Decreased chance of re-injury

NORMAL VERTEBRA

