

New Product: **A New, Effective Means for Supine, Home Cervical Traction**

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INTRODUCTION

From early childhood on, the women of Burma place coil after coil of gold around their necks. Because of their forced long, beautiful necks, these women have often been called the "giraffe women." Truth be known, medical x-rays have shown that their necks don't stretch, but their chests sink from the weight of all that gold. Walking around for years without being able to use their neck muscles weakens the women's necks. If the heavy coils are removed, the weakened neck muscles cannot support the weight of the head and suffocation occurs.¹

INCIDENCE

Although our patients are not threatened by such extreme forces, they too suffer from permitting their neck muscles to weaken over time. Demands of modern society twist and hold necks in strained positions for prolonged periods of time over assembly lines, CRT's, and desks. For example, the National Institute for Occupational Safety and Health (NIOSH) reports that neck problems are 20 to 30 percent more common with users of CRT's than nonusers.²

We are not safe outside of the office either. Many Americans carry their emotional stresses locked up in tightened neck

muscles that cause pain. For some, this tension is expressed in headaches when the tight muscles cut off the blood supply to the brain. Others experience pain simply from the taut muscles themselves. Women can be more vulnerable to this kind of headache as they generally have weaker neck muscles.³

Rush hour traffic or blinding snowstorms can cause drivers to become tense, to lean forward, and to remain in this position for hours. It is inevitable that any quick motion to these tightened neck muscles could be harmful. To compound the tension factor, some insurance companies estimate that over 50 percent of all traffic accident claims include whiplash. Every year there are roughly 25 million automobile accidents. For every whiplash lawsuit filed, thousands of dollars are involved.

Dr. Rene Cailliet, a physiatrist and noted author, suggests that more people suffer from neck pain than from lower back pain. Other experts place neck pain as the second most common complaint. It is impossible to put an exact figure on the number of neckaches suffered each year. Most go undetected and untreated. Yet almost every American at some point in their life suffers from at least minor stiffness in their necks.

Whereas the necks of the Burmese women are praised for their beauty, our neglected necks are often seen as nothing more than a handy place to hang a necklace

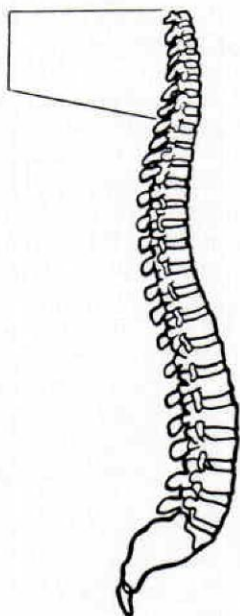


Figure 1. Spinal column showing relative size of cervical vertebra with thoracic and lumbar segments.

or drape a tie. We have allowed ourselves to slump under the burdens of modern society. Our collapsed posture not only detracts from our looks but throws off the entire complex spinal column. When the spine is misaligned and curved forward from slouching, the neck is thrust forward in an abnormal position that can eventually lead to pain.

ANATOMY

By its design the neck is prone to pain (Figure 1). Composed of the seven smallest vertebrae, the neck balances the head, one of the heaviest body parts at 18-20 pounds. In a healthy neck, there are full-sized discs that space these vertebrae, cushioning the nerves, blood vessels, and muscle tissues running through the neck. Stress or pressure on these discs can pinch nerves and cause pain. Proper vertebral spacing is needed. If lost, it should be recreated through the proper use of traction and teaching a range of motion exercises.

The neck is a station that contains the pharynx, larynx, thyroid gland, trachea,

esophagus, tonsils, and lymph glands. A patient complaining of a sore neck may actually be suffering from any number of unrelated problems. On the other hand, a patient complaining of headaches, stiffness or pain in the neck, shoulder or arm, or loss of feeling in the arms, may have referred pain caused by pinched nerves in the neck. The professional treating patients suffering from neck pain must almost assume a detective role. There are many external factors that may be causing the pain (i.e., obesity, poor posture, overwork, or tension). These must be identified before a treatment can be effective. Most physicians would admit to frustrations in diagnosing and treating neckaches, one of the most neglected medical problems.

Out of necessity, a greater emphasis must be placed on holistic health, on treating patients as a whole mind and body composition.

PROBLEM DEFINITIONS

Several causes of neck pain have been identified:

- **Scalenus Anticus Syndrome** occurs most often in people who routinely raise their arms, i.e.—teachers and auto mechanics.⁴ The scalenus anticus muscle, which stretches between the third and sixth vertebrae and the first rib, may be pressed on nerves and arteries beneath. The persistent pain radiating from the neck into the arms and fingers increases when the head is turned and arms raised.

- **Whiplash**, or flexion-extension injury, is one of the most common neck problems encountered. It occurs when supporting ligaments are overstretched. The discs between neck vertebrae may be torn or ruptured. The muscles, nerves, or arteries in the neck may be injured from the quick snap of the neck backwards and then forward. Usually patients will feel a slight ache in the back of their necks with the development of severe pain 24 hours after the accident. "With a slower onset of symptoms, there is a better prognosis."⁵ About 30 percent of the patients will experience muscle spasm.

• **Poor posture** is one of the greatest causes of neckaches. One posture problem is work station syndrome. "Posture that causes the head to hang forward for long periods may put too much pressure on those discs."⁶ Other contributors are: excessive body weight and weak abdominal muscles.

• **Tension** has been discussed as one cause of neckaches.

• **Cervical Spondylosis** is a progressive deterioration of the discs and calcification of the ligaments of the neck that often results in interscapular stiffness and muscle spasm.

CONTEMPORARY TREATMENTS

Current treatments for cervical spinal pain now include rest, relaxation therapy, traction, applications of heat and cold, self-hypnosis, nerve blocks, biofeedback, massage, cervical collars, positive positioning accessories, surgery, psychotherapy, and exercises to increase range of motion.

We know that a great number of all neckaches go away within a couple of months no matter what treatment is used. Active treatment, however, may speed healing. One of the best methods of treatment is the healing power of "hands-on" care given by a trained professional.

PHYSICAL EXAMINATION

When a patient presents him/herself with neck stiffness or pain, a pulling on the shoulder area, or even swelling, a cervical disc problem may be indicated. A professional diagnostic test should be performed to better assess the extent of the disorder prior to treatment. A complete medical history, including the patient's own assessment of the problem and description of symptoms, should be gathered. Visual inspection and manual examination should include full range of motion testing and postural alignment.

SELECTION OF TRACTION: SITTING OR SUPINE

When traction is the indicated form of treatment, care must be taken to prescribe a simple, yet effective unit. The easier a unit is to set up and use, the greater the likelihood of it being used on a consistent basis.

For years, patients using traction had the choice of using ineffective sitting home versions or spending hours in the clinic for effective supine traction. Traction applied when a person is sitting up "doesn't pull in the right direction,"⁷ and is less comfortable. "In the sitting position, more force must be applied than in the supine because there is increased muscle tension and protective guarding."⁸

The advantages of a supine position are:

- greater posterior separation
- reduced muscle guarding
- less force required to overcome the weight of the head
- increased patient relaxation
- improved stability of patient
- easier alignment of the patient and traction apparatus

NEW TREATMENT ALTERNATIVE

With the introduction of Necktrac[®] to treatment options, patients can now benefit from supine traction at home (Figure 2). Necktrac[®] is an effective, non-invasive home treatment approach that uses supine positioning and the patient's own head weight to gently pull the cervical spine and elongate the intervertebral disc spaces (Figure 3).

Necktrac[®] has dramatically reduced recovery time for cervical patients. Because it is primarily a home care system, the patient is directly involved and takes an interest in his/her own care. "It is ludicrous to treat the neck patient for one hour three times a week when they are spending hours per day aggravating their problem."⁹

Necktrac[®] is indicated for common

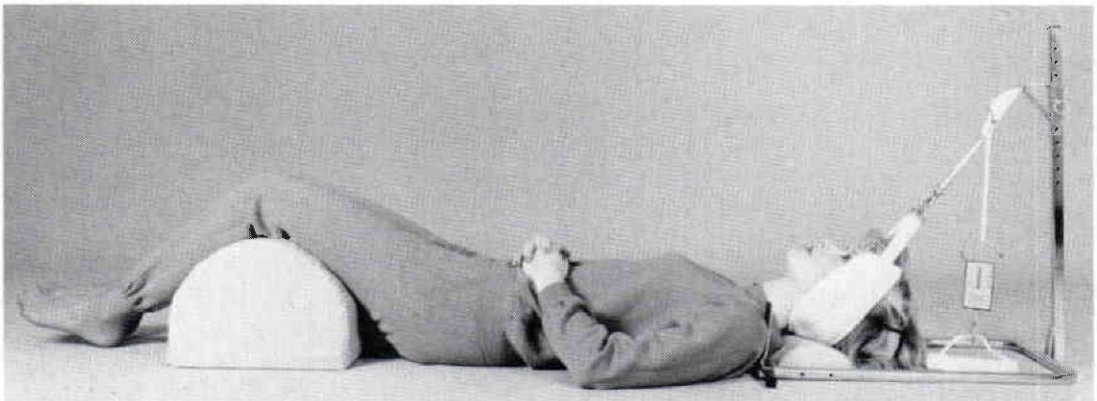


Figure 2. Lateral view of the Necktrac® supine traction system.

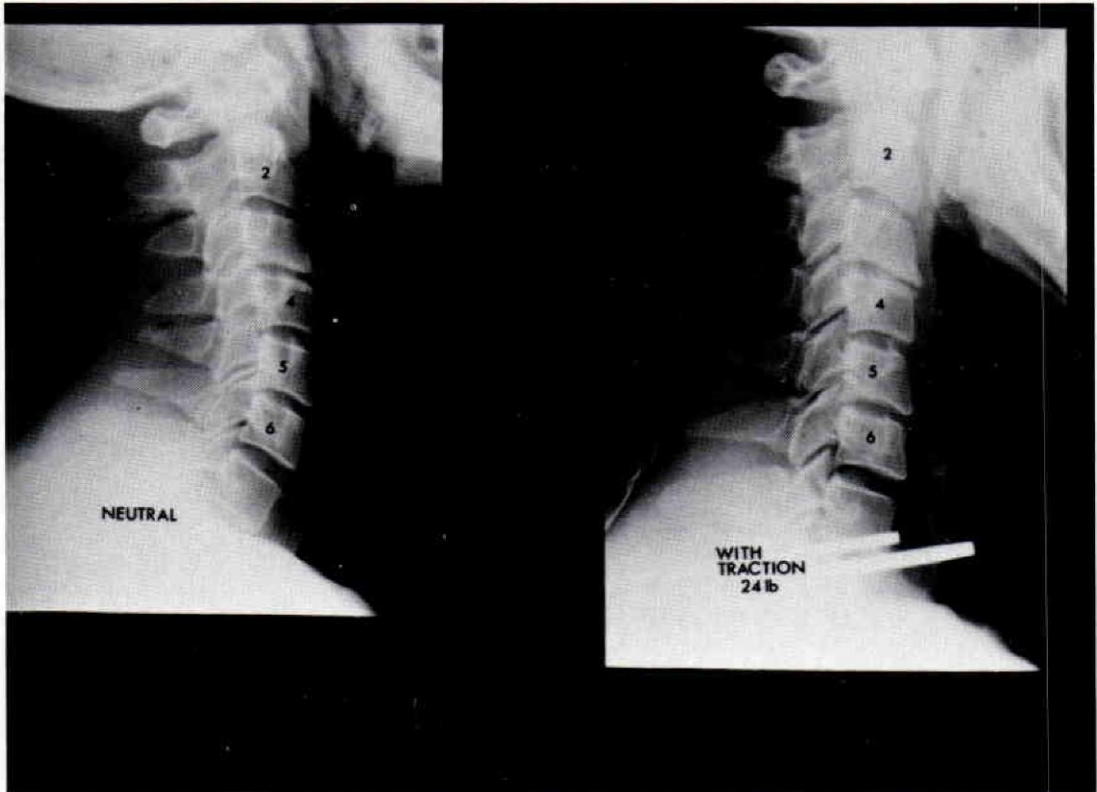


Figure 3. Note position of spinal elements with and without traction.

mechanical disorders such as degenerative spondylosis, osteoarthritis, and minor strains and sprains. It aids the reduction of: muscle guarding, venous and lymphatic congestion, apophyseal joint compression,

nerve root compression, derangement, and adhesion formation. It can also be indicated for pregnancy, osteoporosis, nuclear prolapse, and acute whiplash relative to individual patient skills.

DESCRIPTION OF COMPONENTS AND USAGE

The Necktrac[®] system for clinic or home use consists of a collapsible, lightweight, free standing frame, head cradle, foam positioning/comfort devices, and treatment mat.

The Necktrac[®] head cradle has a special foam insert designed to grip below the occiput (Figure 4). Accompanying Velcro[®] straps are fully adjustable to help position and secure the cradle at the base of the occiput of the back of the head (Figure 5). Necktrac's[®] head cradle will conform to and cradle most patients without the addition of a chin strap. Pressure on the temporomandibular joint (TMJ) and subsequent pain and discomfort is therefore avoided.

The Necktrac[®] frame is designed to provide segmental treatment. Both horizontal sleeves and the vertical bar adjust to achieve the proper angle of pull in traction. With the unit set at its highest vertical and shortest horizontal slot, pull is achieved at the C-7 level. Lowering the vertical and lengthening the horizontal sleeve will result in higher cervical segment treatment, i.e., C-1 level.

As in any treatment, the conservative approach to Necktrac[®] should be tried first. Slow, gradual traction is more beneficial than rapid, high-volume pull. Many cervical patients can be treated simply by unloading the weight of the head from the neck.

For unloading, adjust the shoulder pad attachments to patient's shoulder width. Shorten the horizontal sleeves to the shortest hole. At the same time, secure the sliding cleat mount in its highest position on the vertical bar with the pull pin. Be sure the patient's knees are flexed and supported by a knee crescent (Figure 2). Lock the rope by removing one hand from the handle and placing a finger on the rope above patient's forehead. Pull slightly toward forehead to lock rope into cleat. To release, simply pull up on handle of rope (Figure 6).



Figure 4. The Necktrac[®] head cradle.



Figure 5. Velcro[®] closures help secure the head cradle at the base of the occiput.

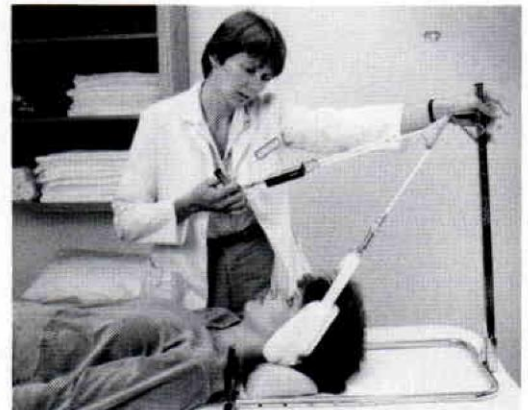


Figure 6. Assignment to amount of traction using scale to measure pounds of pull.



Figure 8. The use of a proper pillow for sleeping can greatly reduce pain symptoms.

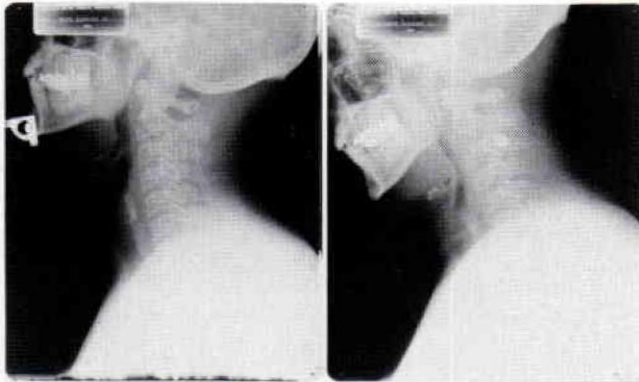


Figure 9. (left) Note improvement in x-ray of cervical spine with use of therapeutic pillow.

PREVENTION AND SELF CARE

Cervical problems can be reduced and prevented, but it must be an ongoing program—beginning in the clinic and continuing in the home and in the place of work. Postural training (the development and maintenance of correct posture), use of proper body mechanics and assistive devices and simple corrective neck exercises all have their place in a pain relief program. It is the health care professional's responsibility to provide this knowledge to patients. The more a patient does for him/

herself, the more effective the treatment will be.

Supporting the cervical curve in its normal neutral position is the objective while sleeping. The best sleeping position is on one side with legs bent and arms down. Use of a proper pillow for sleeping can greatly reduce pain symptoms (Figure 8). Note how the restoration to the normal spinal curve is achieved in the x-ray (Figure 9) by using a Support II™ therapeutic pillow.

Well designed seats are also important. A good chair should distribute your weight evenly, support both your lower and upper

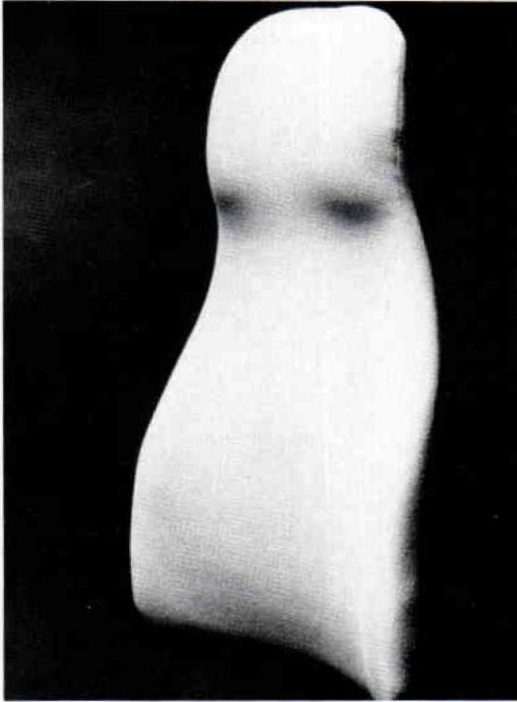


Figure 10. A seating form designed to support the entire spinal column.

spine, and position your knees higher than your hips while your feet are comfortably planted on the floor. Currently, most automobile and office seats contribute to muscular tension and headaches by allowing improper posture. Use of an upright seat support extending from the base of the spine to the head is needed. The lateral support of the OBUS Forme® (Figure 10) properly aligns the spine into a proper postural position.

Instructing patients in range of motion neck exercises and encouraging the continuation of this daily exercise routine is another important component of treating the neck. Extension (Figure 11), self-distraction (Figure 12) and range of motion (Figure 13) exercises all serve to loosen and make flexible the muscles associated with the neck.

CONCLUSION

Necktrac® when used as part of a medically supervised "self help" program has already helped thousands suffering from



Figures 11, 12, and 13. Range of motion exercises.

neck pain obtain relief and resume normal, active lives.

We are beginning to realize the vastness of neck problems. The advent of home traction in the supine position is encouraging as a treatment option. But until the American public is properly educated in the vulnerability of their necks to pain and the steps necessary to prevent problems, we will continue to see a rise in the number of sufferers.

Furthermore, it is the duty of the medical professional to become educated to the particular needs of the neck pain sufferer. For too many, vertical, non-effective over the door traction devices are being prescribed, with resultant TMJ problems.

With proper knowledge, equipment, and range of motion instruction, even the worst cervical pain sufferer can lead a relatively pain free life.

AUTHOR

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