

Products & Technology

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R&D Report: The Curve Restorer

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by Calvin Hargis, DC, DABCO

The improvements we are seeing in patient cervical curve restoration are impressive

Cervical curve reversal is one of the leading causes of patient symptoms and degenerative spinal changes. Accompanied by forward displacement of the head, the muscles of the neck and upper back must contract progressively harder as cervical kyphosis worsens. The increased muscular force needed to hold the displaced forward head increases spinal compression, leading to advancing disk and joint deterioration. A host of patient symptoms are related, including neck pain, headaches, TMJ pain, radiculopathy, myofascial syndromes, upper back pain and fatigue, occipital neuralgia, balance problems or in-coordination, and emotional stress.

As I have treated hundreds of patients with cervical curve loss over the years, I had tried several devices that claimed to restore patient curves. I found none effective. Some devices indicated curve improvement while patients were x-rayed with the devices in place, but made no permanent correction when removed from the patient.

Dissatisfied with such offerings, I began to seriously consider how a device could be constructed to achieve permanent and lasting curve correction. Obviously, one would need to first stretch the reversed cervical curve forward and then, at the same time, be able to work the major muscles of the neck and upper back to strengthen and hold the correction. It also seemed obvious that this would take time.

Having three young daughters, all of whom had worn braces (a fact that had taken its toll on my pocketbook), I realized that it was not the vertebrae that would be resistant to change, but instead the soft tissue of the disks, joints, ligaments, and muscles. The patient would also need to use the device daily for best results, making affordability and ease of use important.

Beginning in 2003 with my partner Hill Laboratories, I began working with patients in a clinical setting. We have continued to refine the device and monitor patient progress over the past 4 years. The improvements we are seeing in patient cervical curve restoration are impressive. Using comparative lateral cervical spine x-rays on a quarterly basis, we have validated our patients' consistent progress.

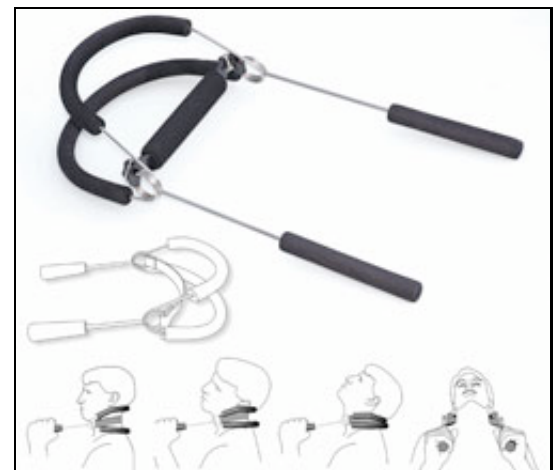
Cervical Curve Restoration

We have seen dramatic permanent restoration of cervical curvatures. With daily use of the Curve Restorer (manufactured by Hill Laboratories), the typical patient is achieving curve correction in 6 to 12 months. A typical case is that of a female patient in her 20s who was an active horse trainer and riding instructor. She had taken numerous falls in her time. This may have accounted for her cervical curve reversal, measuring a negative or kyphotic 11°. As a result, she was plagued by chronic neck and upper back pain and occasional headaches.

The patient began daily Curve Restorer exercises in July 2003, along with weekly adjustments. In November 2003, 4 months into the program, we did a comparative lateral C spine x-ray. The patient had progressed from a negative 11° of spinal curve to a positive 4°. This was an improvement of 15° in 4 months. For this follow-up x-ray, she was standing (as are all our patients) in a relaxed, erect position without any external aid or device that would alter the cervical curve.

Five months later in April of 2004, a third x-ray demonstrated a 30°, smooth and perfect-appearing lordotic cervical curve. Her symptoms of pain and headache were greatly reduced. Not only had her riding improved, but she was a "referring dynamo" for my practice. Imagine her pleasure in seeing the x-ray proof of her improvement. Not only had we eliminated her complaints, but we were able to make a lasting change to her spine that would have far-reaching benefits in terms of reducing the degenerative changes that ongoing curve reversal would have produced.

Additionally, I had been given 9 months in which to educate my patient as to the importance of spinal hygiene. During this period, we developed an important doctor-patient bond that continues to bring her and her referrals to my office for spinal care.



With the Curve Restorer, the user is able to stretch the neck forward slightly, allowing the two rearward curves to contact the head and shoulder region.



How It Works

The Curve Restorer comprises an elastic strap that is pulled into the mid rearward neck as the user grasps the two forward handles. Pulling with a light force of a few pounds, the user is able to stretch the neck forward slightly, allowing the two rearward curves to contact the head and shoulder region. At this point, a series of exercises are performed against resistance coils to strengthen the major muscles of the neck and upper back. This unique combination of simultaneous stretching and exercise allows for a gradual reshaping and strengthening of the neck and upper back.

As the user places the elastic strap to the mid-neck and pulls forward to position the rearward curve to the skull base and shoulder, approximately 4 pounds of forward pressure is exerted by the elastic strap on the mid-cervical spine. When the product and patient are positioned in this fashion, and as the patient maintains forward pull on the handles, a series of exercises is performed. Ten minutes of daily exercise is sufficient to restore cervical spine curvature in 6 to 12 months.

Cautions and Considerations

The exercises needed to restore cervical curvature are somewhat strenuous, and like any exercise routine, need to commence slowly. Patients with unstable cervical spines, or patients having spines with advanced degenerative changes, are advised only to use this device with the consent of their doctor.

As with any treatment, good judgment should be exercised. Should symptoms flair, the regimen should be discontinued until it can be determined that the patient has sufficient healing or capacity for the exercises.

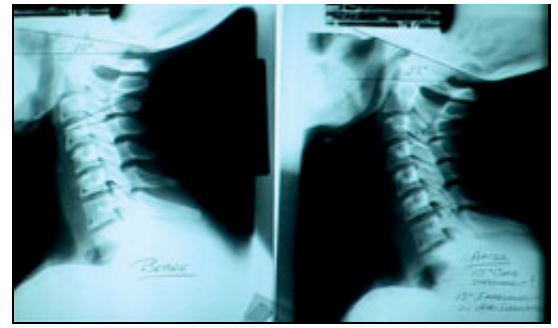
Other Benefits

Although the Curve Restorer is excellent in restoring cervical lordosis, it has many other benefits. From a purely physical standpoint, the Curve Restorer is probably the most biomechanically specific exercise device to target the muscles of the neck and upper back, making it a great rehabilitation tool.

A patient education and instructional video is included with each unit to teach the exercises and to aid the patient in understanding the importance of restoring his or her cervical spine lordosis.

Calvin Hargis, DC, DABCO, is a 1980 magna cum laude graduate of Palmer Chiropractic School and a board-certified chiropractic orthopedist. He is a patented inventor with various braces currently in production. Contact him at healthline@drhargis.com.

Normal Version



After daily Curve Restorer exercises, along with weekly adjustments, the patient had progressed from a negative 11° of spinal curve to a positive 4°, an improvement of 15° in 4 months.



Video demonstration of the Curve Restorer from hilllabs.com.

[QuickTime](#) 

(high resolution)

[ASF](#) 

(low resolution)