# INTRODUCTION

The Cervical Epidural Lysis of Adhesions procedure has provided significant relief for numerous individuals who cope with radiating arm pain. The medical procedure performed by your doctor is just one step in the process towards pain relief. After proper diagnosis, the first stage of treatment involves site specific injection of medications through a unique, steerable catheter which calms the painful nerve by inflammation reduction and dissipation of scar tissue. Physical therapy is the next critical component to further ensure improved, lasting recovery. This pamphlet will highlight the importance of physical therapy following medical intervention and instruct you on proper technique.

Healthy nerves should move freely within the body to ensure proper blood supply, fluid exchange and nutrition. A helpful and effective method of re-nourishment is routine stretching and exercise.

The movement of healthy nerves within the spinal canal should not hurt, but pain is often felt when they are restricted, swollen or "angry". Nerves can become irritated and swollen when they are compressed, such as by a bulging disc, an osteophyte, or scar formation following surgery or leaking disc. Restrictions can also be caused by the presence of scar tissue. As individual nerve roots exit the vertebrae, they pass through an opening called the neural foramen. During the exercise of the head and neck, the nerves will move slightly in and out of the foramen. When nerve movement is compromised, this normal sliding movement is no longer possible. The Lysis procedure is designed to release tension on the nerve, restore mobility and thereby reduce the radiating pain. Rotating the head and neck can open up or make the neural foramen larger.

The following stretching exercise is designed to compliment the clinical procedure. They help to regain and maintain the movement of the nerves in and out of the spinal canal. This type of exercise-induced nerve root movement is referred to as Neural Flossing<sup>™</sup>.

Although results may not occur immediately, the benefit of this stretching exercise is paramount. Increased flexibility and strength may emerge after one month. It is important to perform this exercise with increasing duration from 20 to 25 to 30 seconds. The prolonged or sustained stretch of the affected nerve results in pulling the nerve through the foramen maintaining a clear pathway. This exercise should be carried out two to three times a day. For chronic pain sufferers, this stretching exercise should be continued indefinitely to prevent the restriction of affected nerve roots and the resulting return of pain.

There may be other components of your pain originating from the small joints (facet joints) in the cervical spine. This type of pain may limit the rotation and movement of the neck. This pain may need to be addressed separately by nerve blocks, radiofrequency of the nerves going to these joints and physical therapy. The muscle spasm that is often part of the symptom may need deep heat and massage therapy

Before initiating the exercise, one should dress in comfortable, non-restrictive clothing. This will allow the stretching to be correctly performed and provide the patient with the full benefits of the Neural Flossing<sup>™</sup> technique.



Note: This brochure is intended for general education only. Please ask your physician about specific questions pertaining to your condition.

Disclaimer: Before initiating any of these stretches, you should discuss this technique with your physician.



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# Physical Rehabilitation Guide for Cervical Neural Flossing™

Post Cervical Lysis of Adhesions -Patient Education





## **STRETCHING EXERCISE**

Standing erect, firmly grasp a stable surface (ex. door frame) with outstretched arm. Press elbow and shoulder forward.

Important: While performing this exercise, the head should tilt away from the affected area.



Next, slowly tilt head in opposite direction from outstretched arm to achieve gentle tension.



### Note:

The arrows in this picture indicate the back & forth movement of the cervical nerve roots while performing this stretching exercise.

### About the procedure

During the Cervical Epidural Lysis of Adhesions procedure, your physician will generally place a needle laterally around the area of T1 or T2 and inject contrast dye to outline scarring around the pain-generating nerve root. The physician will then introduce an Epimed steerable spring-guide catheter under X-ray guidance to the source of the pain. Medications are then injected to open up the affected region by fluid dissection. A steroid and hyperosmolar solution in some cases may be injected to help calm the swollen "angry" nerve root.

Patients requiring the Cervical Epidural Lysis of Adhesions procedure will often experience significant pain reduction. Pain relief is possible when nerves are less swollen or "angry", uncompressed and unrestricted. If pain returns, the Lysis procedure can be repeated within several months or later. However, the exercise detailed in this pamphlet is designed to maintain pain relief or, at least, reduce the need or frequency of repeat procedures.



Finally, rotate chin towards opposite shoulder as is comfortable. Hold this final position for approximately 20-30 seconds. It is imperative that you maintain gentle pressure in order to benefit from the cervical Neural Flossing<sup>™</sup> effect.

