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 renourishment 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 or swollen. 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 stretching exercise outlined in this brochure 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^{**}.

Although results may not occur immediately, continued practice of this stretching exercise produces the best long-term outcome. Increased flexibility and strength may emerge after one month. It is important to perform this exercise with increasing duration from 20-30 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 2-3 or more times a day with each session lasting no longer than 3 to 5 minutes. 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 or cryolysis 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[™] technique.

NOTE FROM PHYSICIAN

Neural Flossing Exercises by flexion rotation, after a Neuroplasty procedure of the neck, thoracic spine or lumbosacral area, increases safety and efficacy by the run-off of injected fluids from the spinal canal. The same exercise can be helpful if you are experiencing post-procedure pain, numbness, weakness, or the inability to void. In the event of a visit to the emergency room or other hospital facilities, you must call your doctor or designate. The hospital staff must understand the potential consequences of fluid loculation accumulation which can cause spinal canal dysfunctions by compression of blood supply and secondary ischemia. It is important to continue the flexion rotation as long as the post-procedure pain, numbness, or weakness persists.

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Disclaimer: This brochure is intended for general education only. Please ask your physician about specific questions pertaining to your condition. Before initiating any of these stretches, you should discuss this technique with your physician.

CERVICAL NEURAL FLOSSING[™]

Post Cervical Lysis of Adhesions Physical Rehabilitation Guide*

A EPIMED



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



Next, slowly tilt head in opposite direction from outstretched arm to achieve gentle tension. It is important that you tilt your head away from the affected area.



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-guided 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 hyper-osmolar 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, 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 important that you maintain gentle pressure in order to benefit from the cervical Neural Flossing[™] effect.



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