



## Managing Neck Muscle Weakness

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Some people with ALS develop muscle weakness of the neck. This may cause limited mobility of the head. Turning the head from side to side or holding the head upright may be difficult, as the neck supports the head that weighs about 20 pounds. Limited head movement can contribute to a stiff neck, a poor head posture, and severe pain if these problems are not managed. In fact, neck muscle weakness can lead to a vicious cycle of limited head mobility and a stiff neck (resulting in pain and impairing head mobility even further), causing more pain with emotional distress. Emotional stress can also compound muscle tightness and cause pain.

People with neck muscle weakness are vulnerable to injury. If the head suddenly flops backward, forward, or sideways, this can cause muscles and ligaments in the neck to tear. It can also cause serious injury to the cervical spinal cord or vertebrae in the neck. Such injuries may be a result of "overstretching" due to a sudden excessive force that propels the neck forward, backward, or to one side or another. Hyperextension (backward) or hyperflexion (forward bending) injuries may

be referred to as a "whiplash." This can occur, for example, when a person is transferring in or out of a bed or a chair and the neck is jarred. For some people, even a slight jerk of the head can cause a torn muscle in a weak neck. Injuries to the neck can be very painful, especially when turning the head, raising and lowering into bed and rolling over when in a lying position. Besides causing pain and injury to the neck, poor head posture can aggravate breathing, swallowing and communication.

Through effective management of neck muscle weakness, complications of pain and injury can be prevented or treated. Finding the best methods for supporting the head in an upright position to protect against injury is essential.

### ***Strategies for improving the head posture and promoting head / neck mobility, comfort and safety include:***

#### **1. Achieve and maintain a good body alignment when sitting to promote an upright head position.**

Use of a cushion, pillow, or rolled towel behind the lumbar region of the low

back not only helps to align a slumped posture, but will help keep the head and shoulders from slouching forward. If sitting in a high back chair, placing a rolled towel behind the neck also improves the head posture and helps prevent or alleviate discomfort in the neck.

Placing a pillow under each arm or on top of each armrest of the chair helps promote an upright head position, and provides maximum comfort when sitting for a long time. Proper alignment of the head, neck, and body allows the lungs to expand for better breathing.

#### **2. Wearing a soft collar or a neck brace, called a cervical collar, is an effective method of holding up the head if this is difficult.**

A collar supports the head when the person is walking or being transferred from one sitting position to another. To protect against injury from sudden motion, people with advanced neck weakness should wear a collar when they are moving or being transferred from one seat to another, when walking, or riding in the car. Use of a collar to hold up the head when walking permits a better sight line

and may reduce the risk of falling.

### **3. Identify and use the appropriate cervical collar(s) that will best meet your needs.**

Most people with neck weakness are unable to tolerate wearing a collar all the time, especially one that can lead to skin breakdown and discomfort. A variety of comfortable collars are available. One of the most common is a soft foam collar. Although non-rigid collars provide comfort, they offer minimal support if neck weakness is advanced. One popular lightweight collar is the Headmaster Collar™ (Symmetric Designs Ltd., Salt Spring Island, B.C.). It is a low-profile cervical collar with a padded chin rest. The padded tubular design feels cool and comfortable, even in warm weather, and does not constrict the neck. Another collar to consider is the Aspen Cervical Collar™ (Long Beach, CA). It offers good neck support with a breathable type of foam and is found to be comfortable by a number of collar wearers. Cervical collars can be obtained at most medical suppliers, and the cost is usually covered by health insurance if ordered by the physician.

### **5. To promote comfortable use of head support, alternating the use among several collars may be a solution to reducing pressure points on the skin of long-term collar wearers.**

Perhaps the Headmaster Collar™ might be used as a supplementary collar to relieve pressure points. In

addition, a thin-cushioned skin dressing, such as Duoderm® (Convatec, Princeton, NJ), can be applied over pressure areas to protect against skin breakdown. In some countries, Duoderm is referred to as Granuflex® or Varihesive®.

### **6. Laying back in a reclining chair is an other method to support the head and to help keep the head from falling forward.**

This may include a reclining wheelchair with a high back or one in which a headrest can be attached. Power lift chairs also recline, and with a push of a button they can recline back exactly to the desired angle. People with excessive oral secretions might have difficulty reclining backward. To help prevent choking on oral secretions, the head can be positioned to the side and propped with a pillow.

### **6. Using a head support system can position the head in an upright position by a band across the forehead that attaches to an adjustable headrest that amounts to a chair.**

Some head support systems include the use of an elastic band, such as the Dynamic Forehead Strap System (Whitmyer Biomechanix, Inc., Tallahassee, FL) that moves with the user for a greater degree of movement and comfort than is provided by conventional bands. Head support systems usually can be obtained from a medical supplier who specializes in wheelchair accessories. People who need maximum support in holding up the

head and neck who cannot tolerate long term use of a cervical collar might benefit from intermittent use of a head support system.

### **7. When in bed, avoid sleeping on a pillow that is too high.**

This will not only strain the neck, but may cause wakefulness at night. A rolled towel placed underneath the back of the neck with the head resting on a low pillow can provide support and comfort of the neck and head when sleeping. In addition, people who have trouble keeping their head upright might try lying in bed a few times during the day to relieve the neck muscles.

### **8. Stretching exercises of the neck muscles can help promote mobility of the head, alleviate stiffness of the neck, and help prevent and treat neck pain.**

**Two exercises can be done safely:**

1. Slowly turn your head to the right as far as possible, hold, and return to the center. Do the same to the left.
2. Tilt your head straight over toward the right ear, hold, and return it to the center. Do the same on the left side. To avoid injury, evaluation and training of other exercises by a physical therapist or a visiting nurse may be warranted.

### **9. People who have unresolved neck pain or difficulty holding up their head should consult with their physician who may prescribe physical therapy for treating their problems.**

A physical therapist is specially trained to evaluate the neck, help relieve neck pain, make recommendations for supporting the neck and head,

and provide education on reducing the risk of neck injuries. Some methods of treatment may include the use of moist heat, massage and exercises that stretch

the neck to alleviate stiffness and to enhance mobility and comfort. Life should not have to be a "pain in the neck."

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