

## BURNERS/STINGERS



### ■ ■ ■ Description

A burner or stinger is a common nerve condition that causes pain and weakness in the shoulder. It involves injury to all or part of the nerves to the arm and shoulder (brachial plexus). The nerves are stretched by tackle or a fall on the shoulder that causes the neck to bend toward the other shoulder or a direct blow to the neck. Injury to these nerves results in variable patterns of pain, weakness, or tingling in the shoulder, arm, or hand. The pain or weakness may last for variable lengths of time depending on the severity of injury (seconds to weeks or longer).

### ■ ■ ■ Common Signs and Symptoms

- Sudden intense burning or stinging pain from the side of the neck into the shoulder, arm, or hand and fingers at the time of injury
- Pain and discomfort (burning or dull ache) that is poorly localized
- Heaviness or fatigue of the shoulder, arm, or hand
- Loss of power of the shoulder, arm, elbow, or hand
- Numbness, tingling, or pins and needles sensation around the shoulder, arm, or hand
- Symptoms that last seconds to months

### ■ ■ ■ Causes

- Direct blow to the neck or shoulder
- Tackling or fall on shoulder with the head and neck stretched away from the shoulder

### ■ ■ ■ Risk Increases With

- Contact sports
- Ill-fitting shoulder pads
- Previous burner or stinger
- Poor physical conditioning (strength and flexibility)

### ■ ■ ■ Preventive Measures

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
  - Shoulder flexibility
  - Muscle strength
  - Endurance
- Ensure appropriate fit of shoulder protective pads.

### ■ ■ ■ Expected Outcome

Usually there is complete, spontaneous recovery within seconds. Up to 10% of burners may cause symptoms that persists minutes, hours, days, or longer.

### ■ ■ ■ Possible Complications

- Permanent weakness of the shoulder, arm, or hand
- Persistent pain in the shoulder, arm, or hand

- Stiffness of the shoulder, arm, or hand
- Persistent numbness of the shoulder, arm, or hand
- Disability and inability to compete
- Increased susceptibility to recurrent nerve injury (burners and stingers) and permanent nerve injury

### ■ ■ ■ General Treatment Considerations

Initial treatment consists of rest from the offending activity and the use of nonsteroidal anti-inflammatory medications to help reduce inflammation and pain. The nerves usually spontaneously recover within seconds but may take up to 6 months. Maintaining shoulder, elbow, wrist, and hand range of motion while waiting for nerve recovery is of paramount importance. Referral to a physical therapist or an athletic trainer may be recommended for further treatment, including ultrasound and other modalities for severe and persistent cases. Surgery is almost never necessary. Returning to play before the injury has completely recovered (normal examination and no symptoms) increases the risk for recurrent injury, increased severity of injury, and permanent injury.

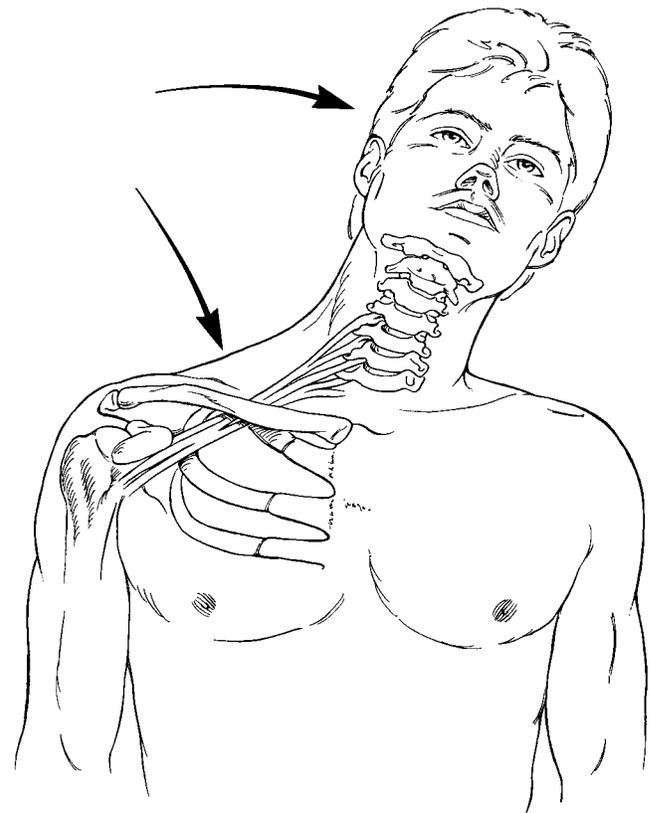


Figure 1

From Zachazewski JE, Magee DJ, Quillen WS: Athletic Injuries and Rehabilitation. Philadelphia, WB Saunders, 1997, p. 442.

**■ ■ ■ Medication**

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers are usually not prescribed.

**■ ■ ■ Heat and Cold**

Heat and cold therapy have not been proven to affect the course of this problem.

**■ ■ ■ Notify Our Office If**

- Symptoms get worse or do not improve in 2 weeks despite treatment
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

### > RANGE OF MOTION AND STRETCHING EXERCISES • Burners/Stingers

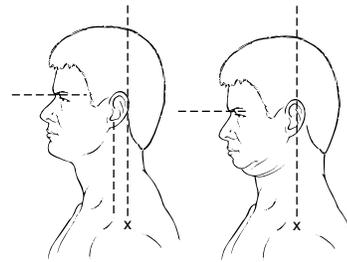
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again. Although it is critical to maintain shoulder, elbow, and wrist range of motion during recovery, it is also important to have good neck motion. Most athletes who suffer this type of injury do not have difficulty retaining motion in their arm, but do have some difficulty regaining full neck motion. These are some exercises to help you regain full neck motion. You should also seek further information from your physician, physical therapist, or athletic trainer. Please remember:

- Flexible tissue is more tolerant of the stresses placed on it during activities.
- Each stretch should be held for 20 to 30 seconds.
- A *gentle* stretching sensation should be felt. **STOP** if you feel any tingling or abnormal sensation down your arm.



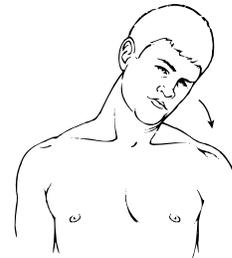
#### CERVICAL SPINE • Pivots

1. Lie on a firm surface. Roll up a wash cloth or small towel (1 to 3 inches in diameter) and place it directly under your head as shown.
2. Gently tuck your chin down toward the floor.
3. You will feel a stretch on the back of your neck.
4. Hold this position for \_\_\_\_\_ seconds.
5. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.



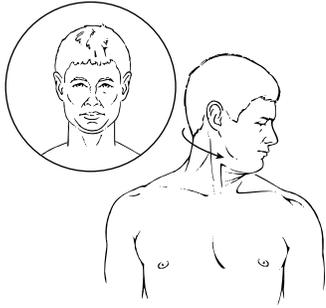
#### CERVICAL SPINE • Axial Extension

1. Sit in a chair or stand in your normal posture.
2. Gently tuck your chin and glide your head backward. Keep your eyes level as shown. You should not end up looking up or looking down.
3. You will feel a stretch in the back of your neck and at the top of your shoulders.
4. Hold this position for \_\_\_\_\_ seconds.
5. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.



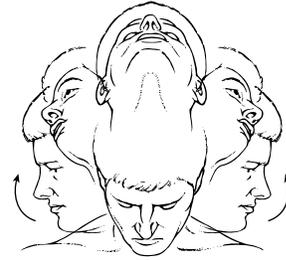
#### CERVICAL SPINE • Side Bend

1. Sit in a chair or stand in your normal posture.
2. Gently dip your ear toward your shoulder as shown.
3. Do not turn your head when you do this exercise. You should keep looking forward.
4. You will feel a stretch on the side of your neck.
5. Hold this position for \_\_\_\_\_ seconds.
6. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.



**CERVICAL SPINE • Rotation**

1. Sit in a chair or stand in your normal posture.
2. Turn your head and look over your shoulder.
3. Keep your head level. Do not dip your ear toward your shoulder when you do this exercise.
4. You will feel a stretch on the side and back of your neck.
5. Hold this position for \_\_\_\_\_ seconds.
6. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.



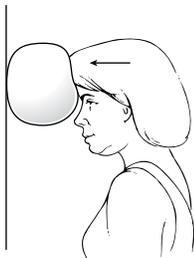
**CERVICAL SPINE • Neck Circles**

1. Sit in a chair or stand in your normal posture.
2. Gently circle your head and neck in a clockwise and a counterclockwise direction.
3. Work within your pain free range of motion. Strive to obtain a gentle feeling of stretching and relaxation.
4. Repeat in each direction 5 to 10 times.
5. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.

### > STRENGTHENING EXERCISES • Burners/Stingers

These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. One of the keys to preventing this injury from happening again is having strong neck muscles. Consult your physician, physical therapist, or athletic trainer for other sport specific exercises. Please remember:

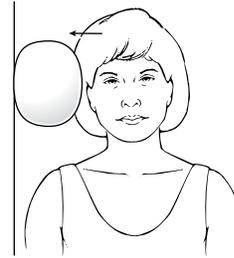
- Strong muscles with good endurance tolerate stress better.
- Do the exercises as *initially* prescribed by your physician, physical therapist, or athletic trainer. Progress slowly with each exercise, gradually increasing the number of repetitions and weight used under their guidance.



#### CERVICAL SPINE • Flexion Strength

1. Obtain a child's playground ball or towel roll approximately 6 to 8 inches in diameter.
2. Stand erect 12 to 18 inches from the wall. Place the ball between your forehead and the wall.
3. Gently push your forehead into the ball.
4. Hold this position for 15 to 20 seconds. Count out loud. Do not hold your breath.
5. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.

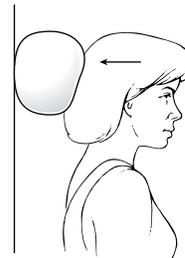
**Note:** You can also do this exercise by using your hands in place of the ball; however, this technique may cause some discomfort due to the use of your arms.



#### CERVICAL SPINE • Side Bending Strength

1. Obtain a child's playground ball or towel roll approximately 6 to 8 inches in diameter.
2. Stand with your shoulder next to a wall. Place the ball between the side of your head and the wall.
3. Gently push your forehead into the ball.
4. Hold this position for 15 to 20 seconds. Count out loud. Do not hold your breath.
5. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.

**Note:** You can also do this exercise by using your hands in place of the ball; however, this technique may cause some discomfort due to the use of your arms.



#### CERVICAL SPINE • Extension Strength

1. Obtain a child's playground ball or towel roll approximately 6 to 8 inches in diameter.
2. Stand erect 12 to 18 inches from a wall. Place the ball between the back of your head and the wall.
3. Gently push your forehead into the ball.
4. Hold this position for 15 to 20 seconds. Count out loud. Do not hold your breath.
5. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.

**Note:** You can also do this exercise by using your hands in place of the ball; however, this technique may cause some discomfort due to the use of your arms.

Notes:

(Up to 4400 characters only)

Notes and suggestions