How to recognize, treat and prevent stingers

By Erica Dhuy

Certain injuries are more prevalent in collision sports than in noncontact sports. A good example of a collision sport injury is brachial plexus neuropraxia, also known as a stinger or burner. This injury is especially common in football.

With a stinger injury, most athletes will complain of pain and weakness in their shoulder and arm. However, a stinger is actually an injury to the bundle of nerve branches that originate in the neck and travel underneath the trapezius muscle before dividing into the arm.

A stinger primarily occurs from three mechanisms of injury:

- Lateral neck flexion (ear to shoulder) as the same side shoulder is depressed (figure A).
- A direct blow, usually from compression of the shoulder pads from an opponent (figure B).
- Lateral neck flexion (ear to shoulder) on the side of the bending motion (figure C).

**Symptoms**

Athletes with a stinger will complain of symptoms including:

- Shooting pain and numbness in the arm and shoulder of the affected side.
- Marked shoulder weakness, accompanied by the inability to grip with full strength.
- Tightness in the neck muscles.

These symptoms often subside within 10 minutes following the injury, but repeated injury to the brachial plexus can result in more serious damage, causing a chronic decrease in muscle tone and strength.

Coaches and trainers should inspect athletes who have experienced a stinger to rule out the possibility of a more serious injury, such as a cervical fracture, cervical dislocation or spinal cord contusion. If the athlete has tenderness directly over the spine, decreased range of motion, radiating pain or numbness down the body, or the inability to move extremities, seek further evaluation.

If a serious neck or shoulder injury is not suspected, coaches and trainers should then test the muscles for strength.

(continued on page 2)
Help your baseball players get in shape with preseason training

“Winners are made in the offseason” is a common phrase regarding an athlete’s need to be dedicated to his or her sport year-round. Part of that dedication involves staying in good physical condition in the offseason so the athlete can hit the ground running once practice begins. Athletes who are in top shape in the preseason not only have a better chance of earning a role on the team, but they are less likely to injure themselves.

For baseball players, getting into excellent preseason physical condition means training over the winter months. The following training program can be performed throughout the offseason to help your athletes get into shape and stay that way. Start steps one through four 12 weeks prior to the beginning of the season. Add in steps five and six about five weeks prior to the beginning of the season.

1. Warmup

   • Jog 30 yards followed by a quick rest. Repeat three more times. This exercise will increase the heart rate as well as the amount of oxygen pumping through the lungs.
   • Jog 30 yards with both arms extended while making small circular motions with the entire arms, followed by a quick rest. Repeat three more times. This move will loosen the shoulder muscles and increase the amount of oxygen pumping through the lungs.

By Rob Ullery, ATC

UK Sports Medicine

UK Sports Medicine is staffed by sports medicine fellowship-trained physicians. Physical therapy and rehabilitation services are available. Our sports injury walk-in clinic requires no appointment – just walk in 7:30-8 a.m. Monday-Friday.

UK Sports Medicine is located at 601 Perimeter Drive, Suite 200, in Lexington (right off Alumni Drive).

Call 859-323-4433 or 859-218-3131 for more information or to make an appointment. Visit us on the Web at ukhealthcare.uky.edu/sportsmedicine.

Ask the ATCs

Got a question relating to sports training or injuries? Just e-mail us at rs_atcmailbox@email.uky.edu and one of our trainers will get back to you as soon as possible.

By Rob Ullery, ATC

Treatment

Most stingers last only a few minutes. Athletes who have prolonged symptoms should rest and use anti-inflammatory medications until he or she feels normal again. In addition, an athlete who has experienced a stinger should follow up with 20 minutes of ice and light stretching.

An athlete may return to full activity when he or she:

• Regains full upper extremity sensation and strength.
• Has a completely pain-free range of motion.
• Shows no associated neurological symptoms.

If an athlete sustains multiple stingers it is important to see a physician to prevent chronic and permanent damage to the nerve structures.

Preventing future stingers

Properly fitted shoulder pads with a neck roll may help protect the neck from further injury. Strengthening the neck and shoulder musculature will also help prevent further trauma to the nerve.

Treatment

Most stingers last only a few minutes. Athletes who have prolonged symptoms should rest and use anti-inflammatory medications until he or she feels normal again. In addition, an athlete who has experienced a stinger should follow up with 20 minutes of ice and light stretching.

An athlete may return to full activity when he or she:

• Regains full upper extremity sensation and strength.
• Has a completely pain-free range of motion.
• Shows no associated neurological symptoms.

If an athlete sustains multiple stingers it is important to see a physician to prevent chronic and permanent damage to the nerve structures.

Preventing future stingers

Properly fitted shoulder pads with a neck roll may help protect the neck from further injury. Strengthening the neck and shoulder musculature will also help prevent further trauma to the nerve.
blood flowing through the top half of the body.

- Jog 30 yards while raising the knees to waist level and swinging the arms front to back, followed by a quick rest. Repeat three more times. This exercise not only helps reduce stress in the back, it warms up the hamstrings in order to reduce the risk of injury.

- Crouch down and shuffle sideways for 30 yards, then turn and repeat the shuffle on the other side. Repeat three more times. This exercise prepares the knees and ankles for an increase in training.

- Backpedal 30 yards as quickly as possible, then jog forward 30 yards. Repeat two more times. This exercise gets the entire body ready for more strenuous work.

- Perform cariocas for 30 yards down and back. During a carioca, you travel sideways on the while crossing one foot over and behind the other. Start on the right lead: left foot over right foot, step right, left behind right, step right, and repeat for 30 yards. Then return to the starting point by performing the move on the left lead. Cariocas increase coordination and quickness.

2. Cardiovascular work

- Sprints. Starting in a standing position, sprint straight ahead for 60 yards. Walk briskly back to the starting point. Repeat four times.

- Quick jumps. Place five cones five yards apart. From a standing position, sprint to the right side of the first cone and jump sideways back and forth over the cone four times. Repeat at each of the four cones, rest, and then perform the exercise on the left. Repeat two more complete sets.

- Shuffles. Place three cones in a triangle approximately 30 feet apart. Shuffle between cones, reaching down to teach each cone before changing leads and heading to the next one. Begin the drill in a clockwise manner and switch to counter-clockwise to return to the start. Complete three rounds per set for three sets. To add complexity to the drill, toss the athlete a baseball or tennis ball at each cone and have the athlete toss it back while changing directions.

3. Strength training

- Push-ups build the chest. Get on the hands and toes, keeping the entire body in a straight line. Bend the arms to lower the chest to the floor and return to starting position. Perform three sets of 10 repetitions. These should be done three times a week with a day of rest in between each day. For more chest work, use a moderate set of dumbbells (20-30 pounds) and try bench presses and dumbbell flies.

- Dips work the triceps and shoulder. Sit on the edge of a flat, raised surface, such as a weight bench. Scoot out and place the palms on the edge of the bench, keeping them close to the hips. Slowly bend the arms, lowering the body straight down below the hands, then straighten the arms to come back to the starting point. Complete three sets of 10 repetitions. To increase the intensity of the exercise, place the feet on the seat of a chair instead of the floor. This will place more weight on the triceps and shoulders.

- Squats improve the strength of the thighs and hamstrings. Stand with feet just outside the hips. Bend the knees, lowering the buttocks toward the ground, keeping the knees in line with the ankles. Do not let the buttocks touch the heels, as this places too much stress on the knees. To increase the intensity, hold a five-, 10- or 25-pound weight against the chest with the arms crossed.

4. Core training

- Sit-ups. Perform three sets of sit-ups with 10 repetitions each to increase the strength of the stomach muscles.

- Oblique twists. Sit on the ground with your feet raised about six inches. Lean back slightly. Hold a five-pound medicine ball and twist from the left side to the right side of your body for 10 complete sets. This exercise will increase the strength of the midsection in order to generate better rotation in hitting and throwing.

5. Throwing

The following is a five-week program. It is important to perform the other exercises first so the arm is warm before you begin throwing. Throwing should be done four days a week, preferably Monday – Tuesday and Thursday – Friday. All throwing sessions should begin with a five-minute warmup, throwing at 40 feet.

- Week 1: Throw at 60 feet for four minutes, 90 feet for two minutes and then back to 60 feet for two minutes.

- Week 2: Throw at 60 feet for two minutes, 90 feet for two minutes, 120 feet for two minutes and then 60 feet for two minutes.

- Week 3: Throw at 60 feet for two
Meet our new ATC

Nikki Lounsberry

Nikki Lounsberry is serving her first year as an athletic trainer for Tates Creek High School. She received a bachelor’s degree in athletic training from the University of North Florida in Jacksonville and a master’s degree from the University of Kentucky.

For the past two years, Nikki has worked as a graduate assistant athletic trainer for Winburn, Bryan Station, Leestown and Crawford middle schools in Fayette County.

In her free time, Nikki enjoys volunteering with the Kentucky division of the U.S. Naval Sea Cadet Corps, a program for youths age 13-17 who have a desire to learn about the Navy, Marine Corps, Coast Guard and Merchant Marine.

Save the Date

13th Annual UK Sports Medicine Symposium

Friday, May 20, 2011; 8 a.m. – 5 p.m.
Doubletree Hotel
2601 Richmond Road, Lexington

This year’s keynote speaker is Bernard Bach, MD, Chicago White Sox team physician and director of Sports Medicine Midwest Orthopaedics at Rush, LLC. Details on the symposium coming soon.

For more information, call Aaron MacDonald at 859-323-5533.
minutes, 90 feet for two minutes, 120 feet for two minutes, 180 feet for 10 throws and then 60 feet for two minutes.

- **Week 4:** Throw at 60 feet for two minutes, 90 feet for two minutes, and 60 feet for two minutes. Pitchers should throw 25 pitches at 50 percent of their strength on Monday and Thursday, while position players should take ground balls and throw to bases.

- **Week 5:** Throw at 60 feet for two minutes, 90 feet for two minutes and 60 feet for two minutes. Pitchers should throw 40 pitches at 70 percent of their strength on Monday and Thursday, while position players should throw long tosses at approximately 120 feet for five minutes.

6. **Swinging**

- Hit off a tee on the same days as the throwing program.

- Hit a soft toss after hitting off a tee. During a soft toss, a partner stands six to eight feet from the batter at about 45 degrees from the center and tosses underhand pitches near the knees of the batter.

- Hit off live pitching or a batting machine for the final three weeks of preseason training.