Crthopaedic Surgery & Sports Medicine



Shoulder Dislocations Return to Play After a Serious Injury



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In the final game of his 2005 season with the San Diego Chargers, Drew Brees dove for a fumble in his own end zone and Gerard Warren, the Denver Broncos' 325-pound tackle, landed on him. Brees stood up after the play holding his right arm as if he were resting the elbow up on a fireplace mantle, as his shoulder was gruesomely dislocated. Fortunately for Drew Brees, he underwent successful arthroscopic shoulder surgery and was able to continue his career, becoming the 2009 Super Bowl MVP and winning quarterback for the New Orleans Saints. Shoulder dislocations like this are serious injuries that can also occur in other contact sports like wrestling, and hockey.

Most shoulder dislocations occur when the athlete's arm is forced upward and outward behind the athlete's body, dislocating the humeral head (ball of the upper arm bone) out the front of the glenoid (shoulder socket) [Figure 1a]. When a shoulder dislocates, the ligaments that connect the humeral head (ball) and glenoid (socket) and keep the shoulder stable are typically torn off the front of the glenoid with its labrum (tissue thickening surrounding the glenoid) (Figure 1b). This tear of the labrum with the ligaments from the glenoid is referred to as a "Bankart Lesion" (Figure 2). Fractures to the bone of the humeral head ("Hill Sachs Lesion") and glenoid, tears of the rotator cuff, and stretch injuries to nerves to the arm can also occur during a dislocation.

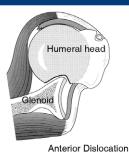


FIGURE 1A

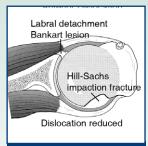
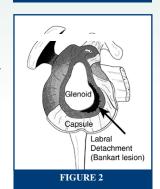
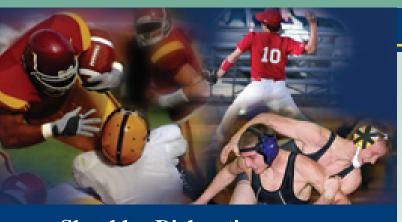


FIGURE 1B





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Shoulder Dislocations continued

When a shoulder dislocation occurs on the field, team athletic trainers are usually the first ones on the scene. The athletic trainers, often with the assistance of the team physician, act quickly to take a brief history of the injury, examine the athlete, insure no other injuries have occurred, and reduce ("pop") the shoulder back in place. The reduction is usually performed by placing a significant traction force on the arm to unlock the dislocation while pushing the humeral head, which is typically down in the front of the armpit, back into place. Often, another person is needed to provide counter-traction by holding the torso down with their body or a sheet. This quick response from the medical team is important to restore blood flow to the dislocated humeral head and to reduce the shoulder atraumatically (without further injury) before the shoulder muscles start to spasm and tense up.

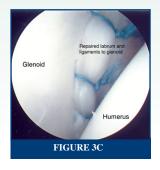
Following the reduction, early evaluation by a sports medicine physician is important to determine the extent of the injury. Physical examination, x-rays, and an MRI are performed to rule-out neurovascular (nerves and blood vessels) injuries, fractures, and ligament or rotator cuff tears. Some fractures and tears to the rotator cuff require early surgery. Fortunately, in younger athletes (<40 years of age), most dislocations only result in tears to the ligaments and surgery can be delayed.

Typically, the sports medicine physician will refer the athlete to a physical therapist to restore the motion, strength, proprioception (position sense) and function of the shoulder. Following several weeks in an appropriate rehabilitation program, some in-season athletes may return to play; however, most contact sports require bracing to help prevent further dislocations. Braces restrict motion and may hinder performance and preclude return to certain positions and sports (throwing arm in Quarterbacks and wrestling).

Without surgery to repair (re-attach) the ligaments in the shoulder, athletes less than 25 years of age have an 80 to 100% chance of repeat dislocation. More recent studies also suggest that early surgery to repair the ligaments may result in a better outcome as related to recurrent dislocations, development of later arthritis, and patient satisfaction. The surgery can be performed with specialized arthroscopic instruments through two small, less than ½ to 1







cm incisions (Figure 3). Surgery is followed by six weeks of immobilization in a sling and a specific rehabilitation program with a physical therapist. Return to activities and contact sports is typically allowed after 4 to 6 months. Success rates and patient satisfaction is high, with less than a 5% chance of repeat dislocation.

Shoulder dislocations are serious injuries to the shoulder which can result in injury to the cartilage, bone, ligaments, and rotator cuff. Fortunately, if treated properly with an expert medical team of athletic trainers, physical therapists, and primary care and orthopaedic sports medicine physicians, athletes with shoulder dislocations can return to play.



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OTRF can't do it without you. There is no question that healthcare is expensive and difficult for most to afford; however, to continue to make important advances in healthcare, we need everyone's help to fund research and education. To conduct its work, OTRF has been fortunate to receive large donations from larger, more affluent parties and organizations; but, it still thrives mostly on small donations from many different individuals. Most donations come from the many patients and families that Dr. Chudik directly touches in his practice. Often, it is no more than the price of a Starbuck's cup of coffee; but every donation, large or small, makes a difference. Thank you for your support.

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ORTHOPAEDIC SURGERY AND SPORTS MEDICINE TEACHING AND RESEARCH FOUNDATION

OTRF was founded by Dr. Steven Chudik in 2007 and is a non-for profit organization dedicated to funding research and education for the purpose of keeping people active and healthy.

Injury to and degeneration (wear and tear with use and age) of our musculoskeletal system (our joints and cartilage, muscles and tendons, bones and ligaments) threaten our ability to stay active, work, and lead healthy lifestyles. Too many individuals are getting injured or developing arthritis at younger and younger ages. At alarming rates, little leaguers are injuring their elbows, young female athletes are rupturing their anterior cruciate ligaments (ACL), weekend warriors are tearing their meniscus, golfers are missing the season with rotator cuff tears, physical laborers are getting injured and are unable to work, and young adults are unable to stay active because of debilitating arthritis.

There is a great need to disseminate knowledge amongst our community so that we can better prevent these injuries and degeneration (wear and tear) and best preserve our ability to stay active and healthy. We also need to fund unbiased, quality, and cutting edge research to develop better and less invasive methods to prevent and manage these injuries and degeneration.

To meet these needs, OTRF produces the newsletter, "ACTIVE BONES," shares information regarding health performance related issues of nutrition and fitness, hosts Athletic Training educational programs, conducts local educational seminars for health care providers and the community, and most importantly funds research and development particularly in the areas of cartilage injury and repair; sports injury prevention; knee ligament injury prevention and reconstruction; and minimally invasive surgery for fracture, tendon, ligament, cartilage and joint repair.