



## WATER POLO

Over the past 20 years, water polo participation has grown significantly in the United States. Sportsmanship, equipment, and attention to preparation and strengthening can help prevent injuries and enhance and improve performance.

Water polo is physically challenging, combining the rigors of swimming, wrestling, and repetitive throwing. Similar to basketball, it involves bursts of activity around the goal and during transition, as well as subtle moves and positioning under the water. All of these factors contribute to injury risk, with shoulder injuries among the most common in the sport.

### WHAT ARE SOME COMMON WATER POLO INJURIES AND HOW CAN THEY BE PREVENTED?

#### Shoulder Injuries

A water polo player's arm is in a vulnerable position when cocking to throw. Tears of the labrum, the anchoring point for ligaments and the bicep tendon, can occur from both acute injuries such as dislocations and from repetitive injuries, such as too much throwing. After dislocation, some players can be managed in season if they can demonstrate full range of motion, full strength, and no or minimal instability symptoms. Surgical repair can be performed post-season.



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## WHAT ARE SOME COMMON WATER POLO INJURIES AND HOW CAN THEY BE PREVENTED? CONTINUED

Throwing in water polo differs from throwing in other sports because the players' legs do not have stable support. This can lead to an increase in fatigue of the muscles around the shoulder blade and upper back. According to one report of upper extremity injuries in water polo, 80 percent of players have shoulder pain during their careers. Focusing on dry-land core and shoulder muscular strengthening is critical for prevention and rehabilitation of shoulder pain and weakness.

### Knee Injuries

Eggbeater kicking during games and practice can put strain on the knee, similar to when performing the breaststroke, commonly resulting in injuries such as medial collateral ligament strains and meniscal tears. Prevention activities should emphasize proper hip flexibility and strengthening the quadriceps and hamstring. Pre-season dry-land training, cross training, and water treading exercises can help prevent injury.

### Back and Spine Injuries

In playing water polo, the back and spine are subjected to combined bending and rotational forces more often than in other throwing sports. This makes neck and lower back areas prone to injury, such as a strain or tear in the lumbar disk. Fortunately, severe spine trauma rarely occurs. Prevention is emphasized with core abdominal and back strengthening exercises.

### Hand and Wrist Injuries

Grasping, twisting, and blocking during play frequently results in finger sprains and dislocations. If pain in the hand and wrist continues or if there is a deformity, xrays to test for possible fractures might be necessary. Sprains can typically be managed with buddy-taping but may require hand therapy. Proper sportsmanship is the key to prevention.

### Facial Injuries

Eye and ear injuries from opponents' hands and ball strikes may include eye cuts, eardrum rupture, and even facial fractures. Emphasis should be on wearing and maintaining proper protective headgear with ear cups, and keeping players' fingernails clipped and filed. It is difficult to completely prevent these types of injuries, but protective equipment does help.

## WHEN IS IT NECESSARY TO SEE A HEALTHCARE PROFESSIONAL?

Injuries accompanied by loss of sensation, weakness, deformity, severe or persistent pain, ringing or muffled hearing, blurry vision, or persistent bleeding should be evaluated by a physician. Other pain due to overuse or mild injuries can be treated by rest and taking pain relievers such as ibuprofen or acetaminophen. Swelling and pain can also be treated with alternating ice and heat therapy.

## EXPERT CONSULTANTS

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Sports Tips provide general information only and are not a substitute for your own good judgement or consultation with a physician. To order multiple copies of this fact sheet or learn more about sports injury prevention, please visit [www.STOPSportsInjuries.org](http://www.STOPSportsInjuries.org).

## RESOURCES

Franic M, Ivkovic A, Rudic R. Injuries in Water Polo. *Croat Med J.* 2007;48:281-8.

Colville JM, Markman BS. Competitive water polo. Upper extremity injuries. *Clin Sports Med.* 1999;18:305-12. Medline:10230566.