#### **Overhead Throwers**



To throw hard an athlete forcefully rotates their shoulder, putting significant strain on the ligaments and rotator cuff muscles. For throwers a "loose" shoulder is often ideal, but this can also lead to instability. Numerous parts of the shoulder are utilized and strained while throwing: the rotator cuff, the glenoid, the ligaments, the labrum, and the biceps.

#### Tendonitis

What is it?	Athletes often develop tendinitis in the shoulder or elbow as the rotator cuff or biceps tendons get inflamed and swollen. This is caused by the intense usage. Symptoms include pain, heightened while the arm is cocked and in the beginning stages of a throw. With biceps tendonitis, you may feel pain in the front of the shoulder. Pressure in the area of the biceps will cause pain. Use of the arm while reaching for a shelf or fastening a seat belt may also cause pain.
Treatments	Treatment includes ice, rest, stretching, and anti-inflammatory medication. Surgery is typically not required. If there is underlying instability as well the symptoms might not improve and surgery might be necessary to ultimately relieve pain. Tenodesis of the biceps: (arthroscopic or open) The tendon is removed from the bicipital groove by detaching it from the top of the socket at the superior labrum. It is then fixed into the humerus bone outside so it cannot move over the shoulder joint. This procedure is usually curative of pain and it does not compromise shoulder function.

# Rotator Cuff Tears

What is it?	The rotator cuff consists of four muscles that connect from the scapula to the humerus bone and form a cuff around the ball and socket. These muscles help the ball move on the socket, but also compress the ball into the socket to maintain a stable fulcrum for rotation when the shoulder moves. If the RC is over-stressed it will tear, similar to a rope fraying.
Treatment	NON-OPERATIVE   Physical therapy treatment including stretching and strengthening of the affected   muscles and tendons may help. Anti-inflammatory medication may also be   recommended.   OPERATIVE   If the tear is too severe or gets worse surgery is necessary. Operative treatments   generally involve a repair of torn tendons and removal of bone spurs.   If there is substantial arthritis or an un-repairable rotator cuff tear, a shoulder   replacement may be indicated.

## Labral Tears

What is it?	The labrum is a ring of cartilage that surrounds the socket (glenoid) of the shoulder. It helps stabilize the shoulder and acts as an attachment point for many ligaments. Tears in the labrum for overhead	Biceps muscle tendon (cut)	Glenoid	-abral tear
	athletes can result in "microinstability," which is abnormal motion of the ball on the socket resulting in pain with throwing.	Joint capsule (cut)	OMMG 2003	abrum
Treatment	First line treatment is rehabilitation and/or arthroscopic repair of the torn labrum.			

### Superior Labrum Anterior and Posterior (SLAP) Tears

What is it? A sudden pull of the biceps from a fall or lifting a heavy object can detach the superior labrum that sits at the top of the glenoid socket with the biceps running through it.

The lesion can develop in the cocking phase. Repeated cocking causes internal impingement and a peeling back of the labrum that occurs when the rotator cuff contacts the labrum abnormally. If a piece of labrum is torn off it may also get stuck between the ball and socket. This is most noticeable during rotational movements.

This lesion can result in pain while using your arm in the front of your body, or an audible clicking and popping in the shoulder. A feeling of shifting and instability of the shoulder may also occur.





TreatmentWhen therapy or conservative treatment<br/>fails arthroscopic repair is necessary by<br/>placing an anchor underneath the lesion<br/>in the bone. These sutures are then<br/>brought through the labrum which is<br/>pulled back against the bone, allowing it<br/>to heal in place.Image: Conservative treatment<br/>patients can go home the same day, but<br/>the arm is kept in a sling for 4 weeks.<br/>Physical therapy will begin one week after.

Tommy John Surgery (ulnar collateral ligament reconstruction)				
What is it?	Tommy John was a pitcher for the Los Angeles Dodgers who was the first to			
	have this surgery in 1974. Ulnar			
	collateral ligament			
	Posterior			
	Anterior Anterior			
	Dunaie			
	Ligaments are soft tissue structures that			
	connect bone to bone. The ulnar collateral			
	ligament (UCL) is on the side of the elbow			
	ulna.			
	This ligament provides a main source of stability for the elbow. Overuse or			
	repetitive stress such as from throwing or other athletic activity can damage the			
	ligament and cause the elbow to become loose and unstable. The UCL can also be torn during an injury or dislocation of the elbow.			
	Symptoms include pain on the incide of the albow a sense of instability			
	numbness or tingling of the "funny bone," and decreased ability to throw.			
	Occasionally elbow dislocations result in tears to ligaments that cause persistent			
	elbow instability. Athletic events such as wrestling, MMA, football and rugby can			
Treatment	cause this.			
Treatment	UCL injuries may first be treated with rest, ice, and nonsteroidal anti-			
	inflammatory drugs. Physical therapy may help.			
	For those who do not respond to non-surgical			
	treatments or who want to resume strenuous			
	overhead activity rolling joint surgery is necessary.			
	The surgery replaces the damaged ligament with a graft from somewhere else in the body such as the			
	forearm, hamstring, knee or from a cadaver. Tunnels			
	are drilled through the ulna and humerus and the			
	gran is passed through to reconstruct the ligament.			