

Children's Bone and Spine Surgery

Little League Shoulder

What is Little League Shoulder?

- Little league shoulder is an overuse injury caused by stress to the arm bone (humerus) nearest to the shoulder. This stress causes widening of the growth plate, resulting in swelling and pain at the shoulder.
 - Mostly occurs in youth overhand pitchers.

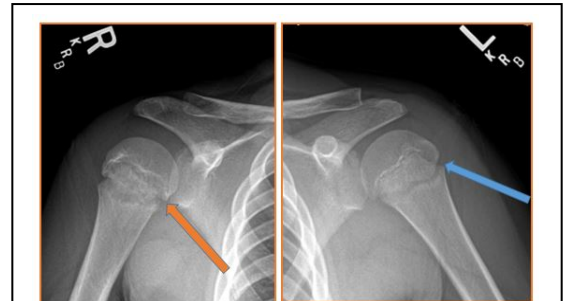
Causes:

- Little league shoulder can be caused by:
 - TOO much throwing
 - Lack of muscle strength and endurance
 - Improper throwing mechanics
 - Playing multiple positions that require different throwing mechanics
 - Playing on multiple leagues/ teams simultaneously
 - X-Ray findings can show a widening at the growth center of the proximal humerus



Signs and Symptoms:

- Athletes will complain of:
 - Trouble lifting the affected arm
 - Swelling
 - Pain with throwing
 - Over time, the shoulder can become painful at rest
 - Decreased speed and control with throwing



For the right shoulder (labeled R), note how the orange arrow is pointing to a wide growth area. This in comparison to this 10 yr old boy's opposite growth area (blue arrow) in which the growth area is normal.

Treatments:

- Little league shoulder is treated by:
 - Recommendations of 6-8 weeks of complete rest to protect the growth center of the humerus.
 - After the recommended period of rest, physical therapy referral for upper extremity and core strengthening with emphasis on proper throwing mechanics.
 - Utilizing a throwing program from Athletic Trainer or Physical Therapist
 - Allows for a gradual and safe return to play
 - Limits amount of pitches/throws to not overstress the shoulder joint

Prevention:

- Prevention strategies consist of:
 - Avoiding throwing curveball and sliders
 - Initiating a pitch count
 - Prevention strategies should be instilled until the adolescent is skeletally mature

Pitch Count Limits & Required Rest Recommendations						
Age	Pitches (Daily Max)	Required Rest (Pitches)				
		0 Days	1 Day	2 Days	3 Days	4 Days
7-8	50	1-20	21-35	36-50	N/A	N/A
9-10	75	1-20	21-35	36-50	51-65	66+
11-12	85	1-20	21-35	36-50	51-65	66+
13-14	95	1-30	21-35	36-50	51-65	66+
15-16	95	1-30	31-45	46-60	61-75	76+
17-18	105	1-30	31-45	46-60	61-75	76+
19-22	120	1-30	31-45	46-60	61-75	76+

**9-14 Year Olds: 600 pitches/season & 2000-3000 pitches/year
**15-18 Year Olds: No more than 2 games/week

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