"Little League shoulder" (proximal humeral epiphysitis)

"Little League shoulder" is pain in the upper arm or shoulder.

The upper arm bone is called the humerus. In a child, the bones grow from areas called growth plates. The growth plate is made up of cartilage cells, which are softer and more vulnerable to injury than mature bones. There is a growth plate at the part of the humerus closest to the shoulder. In Little League shoulder, the growth plate is irritated or inflamed.

It usually gets better if properly treated, but if ignored, can limit a young athlete's throwing career and cause chronic shoulder pain as an adult.

How it occurs

Little League shoulder is caused by lots of throwing. Repetitive throwing puts stress on the growth plate, and the growth plate becomes irritated. In severe cases, the stress may lead to a small break in the growth plate.

It occurs most often in pitchers but can occur in other baseball players and other athletes who do repetitive overhead movements with their arms, such as tennis and volleyball players.

Signs and symptoms

Your child will have shoulder pain when throwing. He may be sore for a few days afterwards. You may notice that his pitches are slower or less controlled. There may be swelling or tenderness around the upper arm or shoulder.

Diagnosis

Your doctor will examine your child's shoulder and arm. There may be tenderness along the
upper arm or shoulder. X-rays may show widening or a break in the growth plate.

**Treatment**

The most effective treatment for Little League shoulder is rest from throwing so that the growth plate can heal. Your child may need physical therapy to improve strength in the shoulder muscles and prevent re-injury.

Little League shoulder usually gets better if properly treated, but if ignored, it can limit a young athlete's throwing career and cause chronic shoulder pain as an adult.

**Returning to activity and sports**

The goal is to return your child to his sport as quickly and safely as possible. If your child returns to play too early or plays with pain, he is at risk for chronic shoulder injury.

Your child will be allowed to throw again when he has full strength and full range of motion in the shoulder. He should not have any pain when throwing.

Once the shoulder has healed, your child should slowly increase the number, speed and distance of throws under the guidance of a qualified professional such as a physical therapist or athletic trainer. Your child should stop throwing if the shoulder becomes painful.

**Preventing Little League shoulder**

The best way to prevent Little League shoulder is to follow recommended guidelines for appropriate pitch count limits and proper rest between pitching appearances. Most importantly, remember that children should not play through pain. All pitchers should have rest periods between pitching appearances:

**For pitchers age 7 to 16:**

<table>
<thead>
<tr>
<th>Pitches in a day</th>
<th>Rest time</th>
</tr>
</thead>
<tbody>
<tr>
<td>61 or more</td>
<td>4 days</td>
</tr>
<tr>
<td>41-60</td>
<td>3 days</td>
</tr>
<tr>
<td>21-40</td>
<td>2 days</td>
</tr>
<tr>
<td>1-20</td>
<td>1 day</td>
</tr>
</tbody>
</table>

**For pitchers age 17 to 18:**

<table>
<thead>
<tr>
<th>Pitches in a day</th>
<th>Rest time</th>
</tr>
</thead>
<tbody>
<tr>
<td>76 or more</td>
<td>4 days</td>
</tr>
<tr>
<td>51-75</td>
<td>3 days</td>
</tr>
</tbody>
</table>
26-50  2 days
1-25   1 day

For more information about preventing pitching injuries:

Injury Prevention Guidelines for Youth Baseball Pitchers

USA Baseball Medical & Safety Advisory Committee Guidelines: May 2006

Preventing Little League shoulder and elbow: Comtemporary Pediatrics

Related

See also
Institute for Sports Medicine

Glossary terms
growth plate injuries
Little League shoulder (proximal humeral epiphysitis)
Children’s Memorial Hospital (childrensmemorial.org)
2300 Children’s Plaza  Chicago, Illinois 60614-3363  773.880.4000  1.800.KIDS DOC

Copyright © 1999-2009 Children’s Memorial Hospital. All rights reserved.