

# Shoulder Injury Prevention Program for Competitive Swimmers

## Coach Handout

What is “swimmer’s shoulder”?

- Shoulder pain in competitive swimmers that occurs during and after workouts
- Shoulder pain and inflammation of the rotator cuff and biceps tendon from overuse and compression of tissues (subacromial impingement)
- Triggers: decreased muscle strength and endurance, muscle imbalances, altered scapular patterns, incorrect stroke technique, poor posture, fatigue, and overuse

The truth about shoulder pain:

- Shoulder pain is not normal
- Shoulder pain will slow success
- Shoulder pain is associated with injury
- Shoulder pain will not go away during taper time
- Shoulder pain can negatively influence:
  - o Swimming technique and performance
  - o Muscle activation
  - o Participation in practice and competition

Four Steps to prevent shoulder pain and injuries:

1. Identify risk factors
  - Strength deficits
  - Muscular imbalances
  - Scapular dyskinesis
  - Poor posture
  - Poor stroke technique
  - Fatigue
  - Intensity of training
  - Volume of training

2. Address stroke technique

- Dropping the elbow
- Arm position during catch phase
- Amount of body roll
- Shortened pull phase
- Breathing pattern

3. Make practice modifications

- Decrease training volume
- Lower training intensity
- Change strokes
- Add or remove equipment
- Stroke drills
- Rest
- Recommend physical therapy

4. Begin a prevention program

- Involves: shoulder strengthening, shoulder stretching, and core activation
- Perform 2-3 times a week for the entire swim season
- Encourage swimmer participation

## Helpful Online Resources:

### USA Swimming: Prevention of Shoulder Injuries

- Go to [www.usaswimming.org](http://www.usaswimming.org) → click on Tips & Training on the top menu bar → select Injury Prevention
- This site contains a video and injury prevention articles.
  - The video explains the anatomy of the shoulder and demonstrates more advanced shoulder exercises that can eventually be added to the prevention program.  
Video Link: <http://www.usaswimming.org/DesktopDefault.aspx?TabId=1551>
  - The articles discuss various tips to maintain healthy shoulders in swimmers.
    - “Shoulder Injury Prevention” 2002. Article Link:  
<http://www.usaswimming.org/ViewMiscArticle.aspx?TabId=1645&mid=702&ItemId=700>
    - “Helping Prevent Shoulder Injuries” 2011. Article Link:  
<http://usaswimming.org/ViewNewsArticle.aspx?TabId=1551&itemid=3804&mid=11843>
    - “Shoulder Problems: Fix Your Technique” 2012. Article Link:  
<http://usaswimming.org/ViewNewsArticle.aspx?TabId=1551&itemid=4177&mid=11843>
    - “Sore Shoulders? Try This” 2013. Article Link:  
<http://usaswimming.org/ViewNewsArticle.aspx?TabId=1551&itemid=5733&mid=11843>
- Check this site frequently for new articles and information!

### Swimming World: Shoulder Pain vs. Soreness

- <http://www.swimmingworldmagazine.com/lane9/news/ascaeducation/36283.asp>

## Shoulder Injury Prevention Program Protocol and Progression:

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	<p>Phase I Strengthening Exercises:</p> <ul style="list-style-type: none"> <li>- Side lying ER &amp; IR</li> <li>- Push Up Plus</li> <li>- Prone W, T, I</li> </ul> <p>Start at 3x10 and progress to 3x15 based on:</p> <ul style="list-style-type: none"> <li>- Proper technique</li> <li>- No pain or discomfort</li> <li>- Level of perceived effort</li> </ul> <p>Phase I Stretching Exercises:</p> <ul style="list-style-type: none"> <li>- Doorway/corner stretch</li> <li>- Sleeper stretch</li> </ul> <p>Perform 3 sets with 30 sec hold</p>					<p>Phase II Strengthening Exercises:</p> <ul style="list-style-type: none"> <li>- Standing ER &amp; IR</li> <li>- Standing Rows</li> <li>- Prone W, T, Y on ball</li> </ul> <p>Start at 3x10 and progress to 3x15 based on:</p> <ul style="list-style-type: none"> <li>- Proper scapular rhythm</li> <li>- No pain or discomfort</li> <li>- Level of perceived effort</li> </ul> <p>Phase II Stretching Exercises:</p> <ul style="list-style-type: none"> <li>- Cross body stretch</li> </ul> <p>Perform 3 sets with 30 sec hold</p> <ul style="list-style-type: none"> <li>- Chin tucks</li> </ul> <p>Perform 10 sets with 10 sec. hold</p>					<p>Phase III Strengthening Exercises:</p> <ul style="list-style-type: none"> <li>- Standing ER in 90-90</li> <li>- Prone Y to W on ball</li> <li>- Prone I to W on ball</li> <li>- Prone T to W to Y on ball</li> </ul> <p>Start at 3x10 and progress to 3x15 based on:</p> <ul style="list-style-type: none"> <li>- Proper scapular rhythm</li> <li>- No pain or discomfort</li> <li>- Level of perceived effort</li> </ul> <p>Phase III Stretching Exercise:</p> <ul style="list-style-type: none"> <li>- Towel or foam roller stretch</li> <li>- Sleeper stretch</li> </ul> <p>Perform 3 sets with 30 sec hold</p>					

Terminology:

- Prone: on stomach
- Supine: on back
- Side lying: on side