Swimmer’s Shoulder in the Extreme Swimmer

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The Triple Crown
Ocean’s Seven

- North Channel
- Cook Straight
- Molokai Channel
- English Channel
- Catalina Channel
- Tsugaru Channel
- Straight of Gibraltar
Main Points

1. It is critical to identify **minor** weaknesses and imbalances in the upper quadrant.
2. Strength and motor control must be addressed both in the **clinic** and in the **water**.
3. Stroke technique assessment is essential.
What is Swimmer’s Shoulder?

• Shoulder pain while swimming
• An onset of symptoms associated with:
  • Glenohumeral joint mobility
  • Impaired posture
  • Muscle imbalance
  • Muscle performance
  • Neuromuscular control
  • Overuse
  • Misuse
  • Abuse

• The incidence of shoulder pain in this population is...
The Marathon Swimmer’s Shoulder is Subject to...

- 7,040 cycles in 10 miles
- 14,080 cycles in 20 miles
- 21,120 cycles in 30 miles
Pool vs. Open Water

- Temperature
- Exposure to elements: sun, wind, rain
- Current
- Wall vs. no wall
- Sighting
- Wildlife
- Gear
Shoulder Injury in the Extreme Swimmer
What does Research tell us about Repetitive Motion and Chronic Shoulder Injury?
Is it Rotator Cuff or Bicep?

- 76% of patients with RC tears have bicep pathology - Chen et al 2011

- 85% of patients with a tear in the long head of the bicep have RC pathology - Gill et al 2007
Current Research

• Primary tendonitis occurs in 5% of patients with bicep pathology
• LHB pathology is typically a secondary process
• Biomechanical studies confirm the role of LHB in stabilizing the GHJ in all directions
• When the LHB is damaged, the humeral head migrates upward on the glenoid

-Longo et al 2011
Common Clinical Findings

1. **Tightness**
   - posterior capsule
   - posterior cuff
   - latissimus dorsi
   - sub scapularis
   - upper trap
   - pectoralis major/minor

2. **Weakness**
   - SA
   - LT, MT
   - posterior cuff
   - core
Treatment

1. Muscle Imbalance
   • Dry needling
   • Joint mobilization
   • Soft Tissue Massage

2. Strength and Motor Control:
   • Clinic
     - Rotator cuff
     - Scapular stabilization
     - Eccentric bicep
   • Water
     - Stroke mechanics
     - Swimming specific strengthening
Recommended Strengthening Exercises

- Eccentric bicep
- Serratus punches or modified push up
- External rotation
- I, T, Y
- Lat pull downs
- Straight arm extension
- Core
What do Swimmer’s Need to Watch for in the Water?

• Adduction and internal rotation on entry
• Head position
• Body Rotation
• Thoracic mobility
• Elbow position on recovery
Swimming
Take Home Message

1. Muscle weakness and imbalances must be addressed, no matter how small

2. Despite the extreme nature of the sport, basic shoulder strengthening and motor control is essential

3. Stroke technique must be addressed in pool and open water environments
Thank you!

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References


