SWIMMER'S SHOULDER

"The Swimming Injury"

By BBST Head Coach Mark Jordan

"Swimmer's Shoulder is the term used to describe the problem of shoulder pain in the competitive swimmer. Swimming is an unusual sport in that the shoulders and upper extremities are used for locomotion, while at the same time requiring above average shoulder flexibility and range of motion for maximal efficiency. This is often associated with an undesirable increase in joint laxity. Furthermore, it is performed in a fluid medium, which offers more resistance to movement than air. This combination of unnatural demands can lead to a spectrum of overuse injuries seen in the swimmer's shoulder, the most common of which is rotator cuff tendinitis" (from emedicine.com).

Some swimming experts (Stanford Swimming for example) claim that 80% of swimmers experience swimmer's shoulder and many claim approximately 35% of Senior Group swimmers deal with this common problem in our sport. According to Stanford's numbers BBST should have just over 80 swimmers with swimmer's shoulder, or, to isolate it to the swimmers that are probably training enough to develop symptoms (the Pre-Seniors and Seniors), we should have around 16 Pre-Seniors and 35 Seniors experiencing the ailment. Using the 35% figure, our Senior Group should have around 15 swimmers with swimmer's shoulder. We currently have 3 or 4 swimmers in each of these groups that have to "back-off" or "take a break" in their training due to this common issue. Obviously we are doing a lot right in this regard, but we can always do better and put BBST even further under the average! We need swimmer's and parent's help to do this!

Causes (technical):

-As the shoulder is pushed to its limits in terms of strength and endurance, the rotator cuff muscles generally fatigue before the power muscles, allowing micromotion and subluxation of the humeral head. This, in turn, decreases stroke efficiency, while leading to injuries of the rotator cuff, biceps tendon, and glenoid labrum. Superior subluxation of the humeral head is particularly problematic as it can impinge the rotator cuff tendons against the acromion above, leading to tendinitis and/or tears. The overlying subacromial bursa (also referred to as the subdeltoid bursa) often becomes inflamed, leading to painful bursitis.

Causes (practical, and in common English):

In my 14 years of swimming and 17 years of coaching swimming I have realized the following strong trends in relation to swimmer's shoulder:

1) STROKE! The "crossover" stroke flaw is the most common reason for swimmer's shoulder. When a swimmers swims with their arm entering the water or pulling through the water on the opposite side of their body it is known as the "classic impingement stroke" meaning the stresses on the internal shoulder are immense and swimmer's shoulder is likely. That said, there are always anomalies: I have coached swimmers with crossover stroke flaws that never say "boo" about shoulder pain as well as swimmers that have near "perfect" technique (no crossover) and experience swimmer's shoulder (see how life is unfair under #3 "Genetics" below). Our first priority on BBST is good stroke technique, not just because that is what makes a swimmer fast, it is also what prevents injury! We need to maintain vigilant on this issue. Remember parents, when you give technical advice to your swimmer you are erasing the professional advice from their coach and hurting the coach/swimmer relationship as well as your ideal role as "love and support" for an athlete.

2) ENOUGH PRACTICE? If a swimmer comes to practice regularly (4 or more times a week for a Pre-Senior and daily for a Senior) they are going to have A) better stroke technique, B) stronger muscles, tendons, and ligaments, and c) more endurance in their muscles, tendons, and ligaments than swimmers that come to practice

less. The more infrequent the swimmer's attendance the more likely the swimmer will be to experience swimmer's shoulder AND EVERY OTHER injury: the swimmer will naturally be less likely to have (and maintain) good swimming technique and have sufficient strength and endurance to meet the demands of the practice without extreme stress to muscles, tendons, and ligaments. This is more and more important as the season progresses (upper groups like our Pre-Senior and Senior Group use "progressive training": meaning more and more intensity as the swim season progresses). BBST has traditionally posted attendance for our most advanced groups, mainly to relate actual attendance to stated achievement goals. This tracking is also a strong indicator of who is becoming progressively more susceptible to injuries as they fall behind the "training level" of the group.

3) GENETICS As stated in #1 (Stroke) above: Life is unfair. Some swimmers are just genetically more susceptible to swimmer's shoulder than others, regardless of stroke and training levels. I had several teammates at the University of Virginia (NCAA Div. 1 perennial top 20 program, read: well-trained swimmers with excellent stroke technique!) that went to the training room after EVERY PRACTICE to get ice to tape to their shoulder! Just like with a "natural" athlete: it is not what you do, but what you do with what you are blessed with! (or were given the "opportunity to overcome adversity" with…). Swimmer's shoulder is also often associated with a growth spurt and is sometimes outgrown as the swimmer's bones/muscles/tendons/ligaments/etc. equalize in size, strength, flexibility and work in tandem better.

4) OTHER ACTIVITIES! I have coached many swimmers over the years that have discovered that activities done outside the swimming pool that stress the shoulder (posture, sleeping position, javelin, shot put, wrestling with little brother, snowboarding shoulder plants) and have initiated and/or contribute to swimmer's shoulder. Swimmers and parents: please let your coach know if this could be the case with any injury or if you injured yourself outside the pool.

When swimmer's experience pain, shoulder or otherwise, they need to let their coach know. The coach will act appropriately according to the location and level of the pain. For swimmer's shoulder I use the 3/3 rule: 3 days backing off in intensity, if not better after that, 3 days out of the water. Sometimes a swimmer may have to exit the water sooner as we do not have sufficient pool time or space to run "rehabilitation lanes" and a swimmer "backing off" may be too disruptive to the flow of a practice. Don't take it personal! Please ask your coach (before or after, not during, practice) if you have any questions or concerns about ANYTHING (injury or otherwise). If it is not a convenient time, we may ask you to set up an appointment at a later time. Thanks!