

Swim Smooth PHYSIO TALK with Michelle



Understanding shoulder pain in Swimmers

Shoulder pain is common in swimmers, dominantly freestyle swimmers, due to the repetitive arm stroke action involved in the freestyle stroke. The number of arm cycles a swimmer completes is obviously relative to the number of training miles or kilometres they train in one week. To give you an idea, competitive swimmers on average train 20 to 50 kilometres per week in the pool, which can be translated to over 1 million arm revolutions per year. Its no wonder swimmers are at risk of developing overuse injuries in the shoulder.

So what is causing the pain in my shoulder? Shoulder pain is most commonly classified into three categories; **Impingement Syndrome, Overuse Injury or Shoulder joint Laxity and/or Instability**. More correctly these labels describe the injury patterns of the shoulder. Below is a description of each injury pattern.

Shoulder Joint Impingement

Shoulder impingement can be defined as compression or impingement of the structures within the subacromial space (top of the shoulder joint). Within this space lie muscular tendons (i.e. rotator cuff), and the subacromial bursa (fluid filled sac that prevents muscle on bone friction). Impingement arises due to thickening of the structures within the space, upward migration of the ball of the shoulder joint and/or poor posture/ biomechanics while swimming.

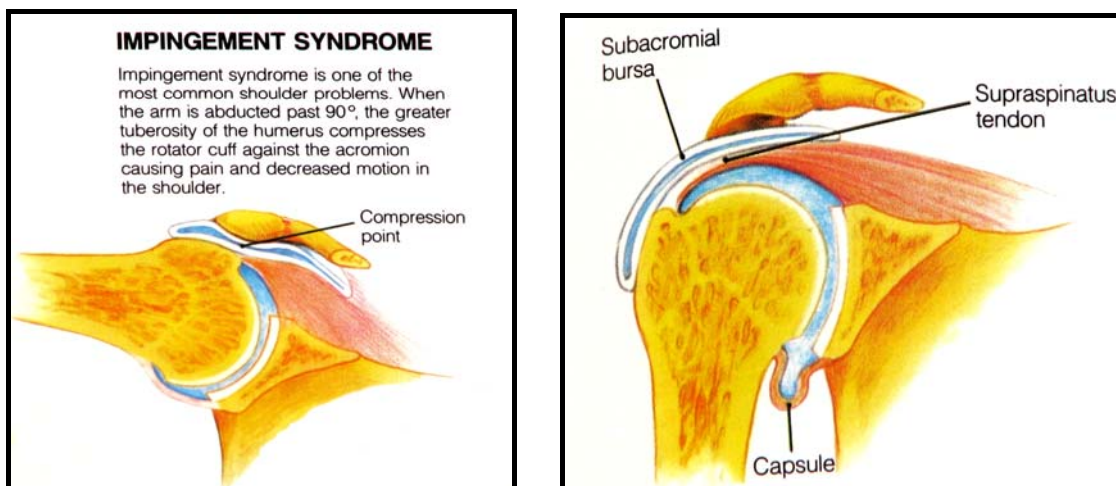


Figure A & B. Impingement Syndrome

Overuse Injuries

Overuse injuries are generally defined as tendonopathies. Tendonopathy means injury to the tendon of a muscle. Injuries to a tendon occur when the load applied to the tendon, either in a single episode or over a period of time, exceeds the ability of the tendon to cope with that load. Swelling results and in some cases this swelling becomes chronic

and can lead to degeneration of the tendon or wearing out. Tendon injuries can be very difficult to treat because rest is one of the most important factors to a successful recovery!

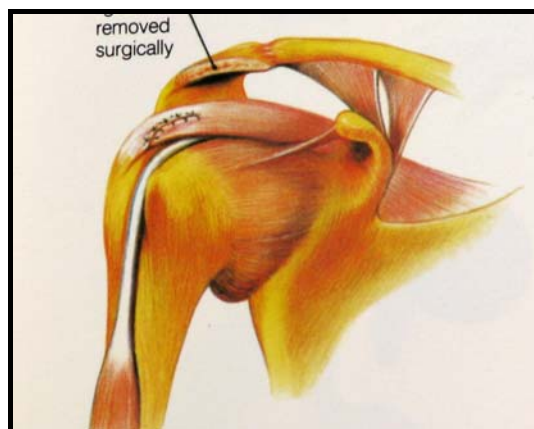


Figure C. Rotator Cuff tear

Shoulder joint laxity and/or instability

Joint laxity and/or instability generally develop over an extended period of time. Gradual deterioration in the ligaments and inhibition of the rotator cuff muscles leads to laxity or loosening of the shoulder joint. If this is not addressed instability of the shoulder joint can occur which may lead to a capsular lesion, which is a tear in the lining of the socket of the shoulder joint.

Elements of each of these three patterns can co exist and are often interrelated. For example, a swimmer who has been diagnosed with a rotator cuff injury will experience pain, which prevents the muscles from working properly thereby allowing the ball of the shoulder joint to move more in the socket. Overall, the shoulder joint moves more than what is normal which leads to laxity or instability in the shoulder. This laxity allows the ball of the shoulder joint to migrate upwards, which causes impingement, or compression of the structures in the top of the shoulder.

There are common signs and symptoms associated with shoulder impingement, overuse injury or shoulder joint laxity. These may include one or several of the following; swelling, redness or discolouration, pain, limited movement, torn tissue (muscle or ligament), muscle weakness, tenderness to touch, clicking or catching sensations or noises and an interrupted sleeping pattern.

If you are experiencing any of these above signs or symptoms, I strongly recommend you go and see a physiotherapist to address the symptoms and determine the seriousness of your problem. I would also advise seeking the expertise of a qualified swim coach who should be able to identify any inefficiencies in your stroke and recommend ways to improve your technique.

STAY TUNED FOR MORE PHYSIO TALK.



Happy Swimming!