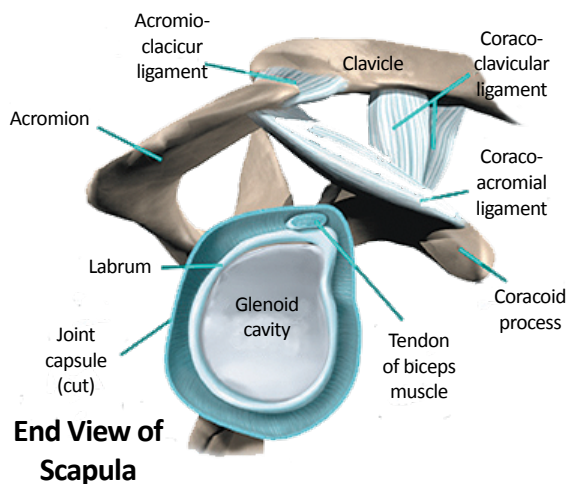


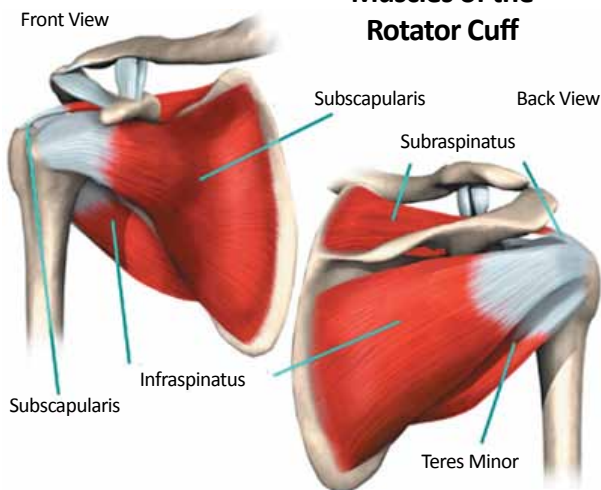
# Common shoulder injuries in triathletes

Text: Andri Smuts B.physt, M.Physt (sport) UP

## Anatomy of the shoulder



## Muscles of the Rotator Cuff



### Common causes of shoulder injuries:

- Overuse: repetitive overhead activities
- Abnormal shoulder biomechanics: strong movers, weak stabilizers
- Direct trauma
- Bad posture
- Bad flexibility

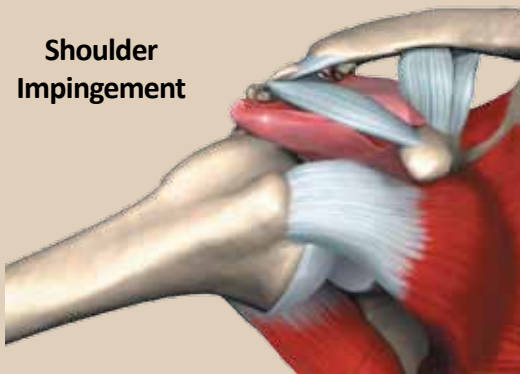
### Most common shoulder injuries:

- Rotator cuff strain or inflammation of rotatorcuff tendon, leading to impingement
- Instability: easy dislocation or subluxation
- Tears of the labrum of the glenoid
- Referred pain from the neck or thoracic spine
- Sprains of the acromioclavicular joint
- Collar bone fractures
- Biceps tendon inflammation

Shoulder impingement:

- Common in overhead activities like throwing and pitching
- Also very common in swimmers and tri-athletes: freestyle and butterfly
- Swimmers develop excessive strength in the internal rotators (pectoral muscles)
- This reduces the space underneath the end of the collarbone and the head of the shoulder and result in impingement and chronic swelling of the tendons
- This leads to a vicious cycle of swelling and even more impingement due to swelling of the tendons and can lead to small rupture in the tendons

**Shoulder Impingement**



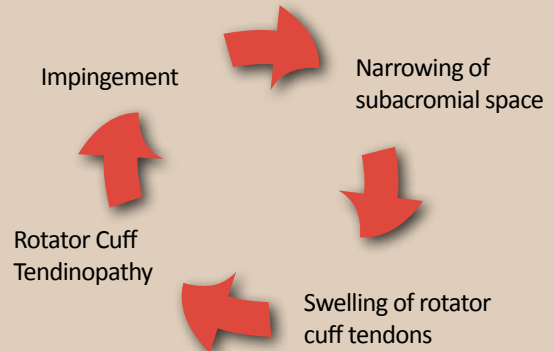
Clinical features of athletes with impingement syndrome

- Athlete complains of pain with overhead activity but no pain with activities below 90 degrees of flexion
- Painful to sleep on affected side
- Painful with palpation over anterior part of shoulder
- Painful with resisted abduction, horizontal flexion and internal rotation: Empty can test (see picture below)



Rotator Cuff Tendinopathy

Primary	Secondary
Overuse Faulty Biomechanics	Overload due to abnormal mechanics or impingement



Basic Dry Land Exercises

Front Support

- Keep back in a line
- Do not lift your bum
- Progression: Lift one leg without dropping the hips or rotating



Back Support

- Open chest up
- Sternum (breast bone) to the ceiling
- Progression: Lift one leg without dropping the hips or rotating



### Elastic Band Exercises

#### Shoulder External Rotation

- Sit up straight – lengthen your spine
- Keep elbows in at your sides
- Palms up
- Pull elastic out



#### Shoulder Abduction

- Sit up straight with band behind you and arms at your sides
- Pull the arms outwards and slightly back against resistance of band



#### Single Arm Elevation 1

- Sit up straight
- Lift arm in a diagonal across body from opposite hip up against resistance
- Keep body still



#### Single Arm Elevation 2

- Sit up straight
- Pull arm down diagonally towards same hip
- Keep body still



## High Performance Centre Physiotherapists

012 362 9850 / physio@hpc.co.za



General sports physiotherapy practice which also offer:

#### Biomechanical Analysis

- Functional movement analysis to identify :  
muscle length- and strength imbalances  
movement impairments  
areas at risk for injury
- Correction of the above and injury prevention
- Pre-season preparation
- Stretching programmes
- Strengthening programmes
- Identification of incorrect muscle recruitment patterns with correction

#### Massage

Includes sports, pre-event, recovery, lymph & pregnancy  
Massage therapist also available

#### Individual and group Pilates classes

- Whole body exercise which challenge people on all movement ability
- Improves posture
  - Strengthens stabilisers
  - Improves flexibility
  - Breathing technique
  - Improves circulation
  - Skill-based conditioning
  - Relaxation

#### Osteopath on site (Monday & Wednesday AM)

Spinal alignment and postural correction

### Pre-Season Special !!!

**Biomechanical Analysis R350 (Includes evaluation and 2 week exercise programme)**

# Tiredness in sport



*Text: Dr Org Strauss, hpc*

**P**ersistent tiredness, often accompanied by a feeling of lethargy and impaired sporting performance presents commonly among sports men and women. These symptoms might be the primary reason for a visit to your medical practitioner or maybe an additional complaint of a sportsperson presenting with an injury, commonly an overuse injury.

There are many possible causes of tiredness in sportspeople like, overtraining syndrome, viral illness, inadequate nutritional intake, depletion of iron stores, insufficient sleep, chronic fatigue syndrome, dehydration, allergic disorders, asthma, magnesium/zinc/vitamin B deficiencies, jet lag, anemia, medication use, hypothyroidism and psychological stress, to name a few.

Athletes in heavy training are constantly tired but can easily differentiate between normal healthy tiredness and abnormal tiredness. Abnormal tiredness are accompanied by a deterioration of training and competition performance and the condition is not easily reversed. Healthy tiredness can be reversed with rest for a day or two.

Questions that you should ask yourself to distinguish between normal or abnormal tiredness are the following:

- Do I fall asleep during the day?
- Is there a constant feeling of fatigue or does the tiredness only occur during or after exercise?
- Is the tiredness constant or intermittent? The later may indicate a venue where a certain allergy occurs or dehydration in humid weather etc.
- How long has the tiredness been present and was it related to a certain event like a viral illness or

overseas trip?

- Are there associated symptoms like a sore throat or coughing and chest tightness after exercise which may indicate disease or exercised induced asthma?

Guidelines for professional and other sports people to avoid overtraining and tiredness are to keep a proper training diary and do proper planning and periodization of training programmes. This will help the athlete to get adequate rest between hard training sessions. This diary should also include comments on amount of sleep, social events and other commitments such as sponsor functions etc.

Psychological factors such as fear of mayor impending competition, concern about poor training performance and fear of failure should also be considered and taken into consideration by the athlete. Anxiety and depression may play a role and could be treated in athletes.

A nutritional diary can contribute a lot, this will help the athlete control and monitor his fluid intake as well as intake of proteiens, carbohydrates, fatty acids and other important micro nutrients.

If unsure it is always wise to consult your medical practitioner and have him exclude medical causes of tiredness. This will be done through the taking of a proper medical history, physical examination, blood tests and special investigations like xrays, MRI scans etc. Once an athlete has developed chronic fatigue syndrome or overtraining syndrome, the athlete might take months to recover. The important principle to remember in all sport is that rest is as important as training itself because the body needs enough time to recover.

Happy training! 🌈