

Shoulder injuries and rehabilitation

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The shoulder is a unique joint in the human body as it mainly relies on a variety of muscles for stability, rather than bones and ligaments. Therefore, the joint has limited skeletal stability and a high degree of mobility. It is due to this uniqueness that injuries – specifically chronic instability and repetitive stress injuries – commonly occur in the shoulder (Shultz, Hougum and Perrin, 2010).

Because the shoulder relies so heavily on musculature for support, muscle weakness, dysfunction and imbalance commonly cause joint injuries. The shoulder is also capable of moving at high velocities, for example when throwing a ball or javelin. These actions, and the velocity at which they are conducted, expose the joint to considerable eccentric forces over a broad range of motion which may result in many types of injuries (Shultz, Hougum and Perrin, 2010).

Common shoulder injuries include:

- Impingement syndrome:** This is caused by a decrease in the area in which the supraspinatus muscle and the subacromial bursa pass. This area is under the subacromial arch. The syndrome commonly occurs in activities involving repetitive overhead shoulder motions.
- Rotator cuff tear:** The rotator cuff is a group of muscles that internally and externally rotate the shoulder and provide it with dynamic stabilisation. Cuff tear injuries are commonly found in overhead throwing sports.

- Dislocation and subluxation:** A partial dislocation (subluxation) means the head of the upper arm bone (humerus) is partially out of the socket (glenoid). A complete dislocation means the humerus is entirely out of the socket. Such dislocations may result from a traumatic event (rugby tackle) or chronic shoulder instability.

- Glenoid labrum tear:** The glenoid labrum is a fibrocartilaginous rim attached around the margin of the glenoid cavity (socket). Tears can be caused by acute trauma (such as falling when outstretched), dislocations, or chronic instability.

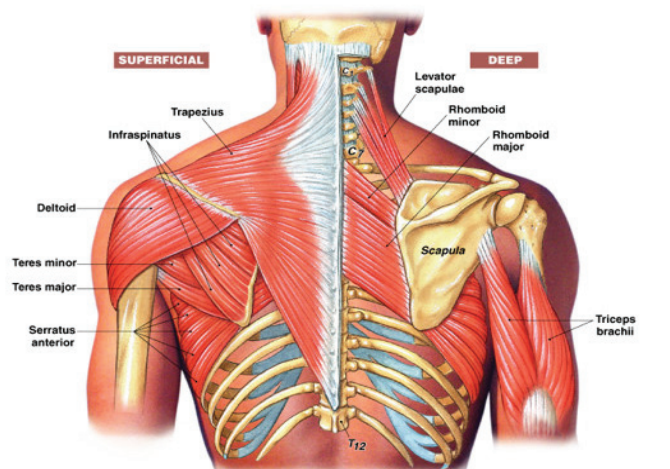
If you suffer from shoulder pain, the first step in your rehabilitation is to get the condition diagnosed. Depending on the condition, you may require physiotherapy or biokinetics. Surgery may be required for severe cases. In the case of

biokinetics, an evaluation will be conducted to assess the condition of the shoulder. This requires a postural analysis, range of motion tests, strength tests, functional tests and any special test specific to the shoulder's condition.

A scientific biokinetic exercise programme will then be prescribed, based on the results of the evaluation. Programmes usually run for six weeks – after which the injury is reassessed to identify progress levels and future management strategies.

If you (or anyone you know) suffers from shoulder pain, please have it examined as soon as possible. The sooner you begin your rehabilitation, the better your chances of recovery.

For any further information, please feel free to contact a biokineticist at the ISR.



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Shultz, S.J., Hougum, P.A. and Perrin, D.H. 2010. *Examination of musculoskeletal injuries*. Human Kinetics. Third edition. Champaign, United States of America. Illustration: www.examiner.com