CORE STABILITY: ROLE IN SHOULDER INJURY PREVENTION

There is perhaps no joint in the human body as complex, fascinating, or baffling as the shoulder.

The shoulder joint actually comprises four joints –

- **Sternoclavicular (SC) joint** (between the sternum and the collar bone)
- **Acromioclavicular (AC) joint** (between the collar bone and the point of the shoulder called the acromion, which is part of the scapula or shoulder blade);
- **Glenohumeral (GH) joint** between the glenoid part of the scapula – the socket – and the head of the humerus (HOH) – the ball; and the
- **Scapulothoracic (ST) joint** (the ‘false joint’ between the scapula and the rib cage that it rides over).

The GH joint is the most susceptible to injury as it is entirely dependent on non-bony connections for integrity, unlike the deep socket hip joint. The GH joint relies on the balance, strength and control of muscles, ligaments/capsule and labrum (cartilage) to function properly. This brings to light the importance of core stability and strength in shoulder injury prevention and management.
Core stability has become a whole science in itself in the last decade as all manner of sports professionals have realised how critical it is for the inner core of the body, namely those joints closer to the spine, to be supported by the postural muscles designed to do so. For the shoulder, the critical areas are the lumbar and cervical spine, and the scapulothoracic joint. If these areas are not stable, then significant extra loading and strain will be passed on to the shoulder joint. Scapular Dysfunction impairs force transmission from the lower to the upper extremity.

Core stability is critical for providing a stable strong support for the shoulder to work off. A good shoulder needs a good foundation. The core also provides the kinetic chain for overhead activities, allowing the trunk muscles to transfer energy and momentum for overhead sports. Injuries can be prevented if the core stability is given good focus during training itself.

For e.g.: In Tennis, a player with a strong core can generate a good torque and force from his core itself, for a backhand stroke. Thus the shoulder has to just act as a medium for force transfer. Where as a player with a weak core uses the shoulder to generate unnecessary force for the same stroke thus increasing his susceptibility to shoulder injuries. Hence, the importance of training the core for prevention of shoulder injuries and to enhance the performance.

At PHYSIOREHAB, a SHOULDER COMPLEX REHAB program ensures a painfree shoulder with enhanced function in activities of daily living and sports activity.