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Shoulder Rehabilitation : How to “get in” and when to “get out” ...

Dr Jo Brown

Subacromial pain syndrome involving rotator cuff tendinopathy is a common cause of shoulder pain and disability, with 1 in 3 experiencing shoulder pain at least once in their lives. Recurrence is common and symptoms persistent with 40-50% of patients reporting morbidity after 6-12 months, and 14% after 2 years. The reason for this are multiple including ineffective rehabilitation.

Evidence suggests that structured exercise and rehabilitation may be as effective as surgery if managed correctly. Significant improvements have been demonstrated in trials involving rotator cuff strength, scapula retraining and flexibility exercises. Most published programs until recently primarily utilised isotonic concentric or eccentric exercises however isometric exercises have been advocated following studies producing immediate analgesic effects and strength gains in lower limb tendinopathy.

In upper limb tendinopathy, in particular rotator cuff tendinopathy the evidence is constantly evolving and smaller available studies support the use of isometrics in early phases of rehabilitation. In comparison to lower limb tendons it appears that low load, rather than high load may have positive effects on pain and tendon thickness in rotator cuff tendinopathy. The exact parameters for the use of isometrics in rotator cuff or subacromial pain syndrome are yet to be determined and being investigated in a current USC project.

Despite most of the research into rotator cuff tendinopathy and isometrics being in its infancy they appear indicated not only in early phase of rehabilitation “a starting point”, but advocated for their analgesic effect to settle any “flare” throughout the rehabilitation process.

The “entry point” to rehabilitation is integral in the patient’s participation and performance in the rehabilitation and is often the first point that a patient disengages with the rehabilitation process. Education and the management of patient expectations is imperative for patient compliance and the overall success of the rehabilitation program. Pain management strategies and load monitoring tools are imperative to safe progression and effective rehabilitation.

Once pain is under control the next phase of rehabilitation should increase focus on isotonic loading and building strength. The specific parameters of this loading should be individualised and guided by load monitoring principles. Literature regarding this phase lacks heterogeneity between studies, but slower and heavier contractions have been advocated with progressive load and speed with as



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tendon capacity improves. Scapula strength is important on many levels but when it should be introduced and to what extent is still debated.

Direction specific treatment and rehabilitation has been hypothesised and validated in some studies, however these results are yet to be reproduced in the athlete population. The athlete, particularly the overhead athlete perhaps should be managed differently given the loading requirements of their given sport. The final phase of rehabilitation or the return to sport phase is the second point at which rehabilitation often fails, either because the athlete does not reach this phase and is lost from rehabilitation thinking they are “better” and return to sport prior to sport specific training prematurely or the treating clinician lacks the understanding and knowledge of the athlete’s tendon load and sporting requirement.

Know how to “get in” to the rehabilitation and “when” to get out are key to successful shoulder rehabilitation.