

**ICSET WORKSHOPS**  
**September 6, 7 and 8, 2023**

**Non-operative management of shoulder instability – A new clinical framework (Margie Olds)**

Non-operative management following a shoulder dislocation or subluxation remains a challenging and complex task. Accurate diagnosis of the condition, shared decision-making regarding operative and non-operative management, as well as timing of return to play is required. This workshop introduces a shoulder instability framework for progressive rehabilitation that addresses deficits in motor control, strength, and endurance in scapula and shoulder musculature to guide patients from an initial instability event, through to return to play (Figure 1).

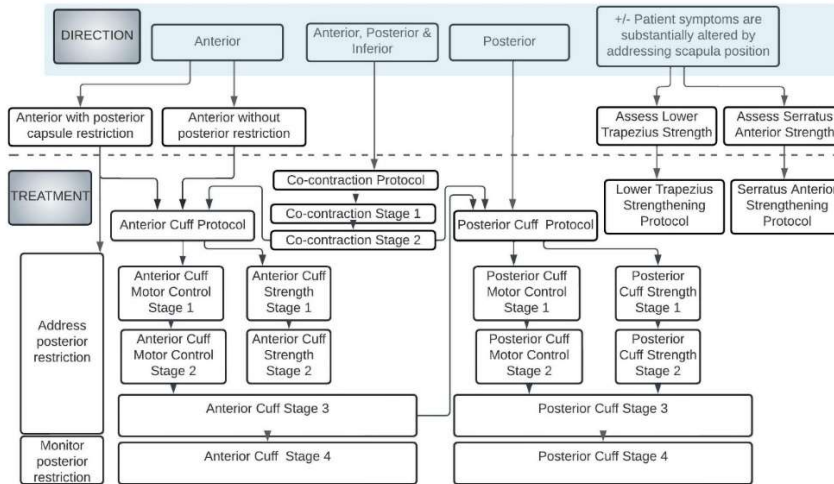


Figure 1: Progressive rehabilitation intervention from sub-acute to end-stage, based on the direction of instability, mobility limitations, and common muscular deficiencies

- In the acute setting, immobilisation and commencement of pain-free isometric exercises are recommended.
- Sub-acutely, a direction-specific rehabilitation approach is required as the pathology and impairments (such as strength and ROM) differ depending on the direction of instability. This involves a staged progression, based upon the primary direction of instability which focuses on anterior cuff or posterior cuff or co-contraction protocols (Figure 1).
  - Anterior cuff involves differentiation of subscapularis from other glenohumeral internal rotators. Differentiation of subscapularis from other internal rotators of the shoulder is thought to be clinically important as subscapularis provides support of the anterior shoulder and is commonly affected/torn in people with anterior shoulder instability.
  - Posterior cuff motor control involves differentiation of the posterior cuff from scapula substitutional movements. Increasing posterior cuff strength is thought to decrease posterior humeral head slide on the glenoid by creating an active and passive constraint against mobility.
  - Patients who present with instability in more than one direction are treated with a co-contraction protocol initially, before they commence anterior and posterior cuff strength/motor control progressions.
- Stage 3 Patients are then progressed to meet the needs of their daily life or sport by focusing on dynamic activities based upon the position, amplitude, load, and speed (PALS).
- Stage 4 Patients are integrated into more perturbations and uncontrolled environments to ready them to return to normal activities and sports.

The purpose of this workshop is to present these concepts and teach clinicians/attendees a new approach to the non-operative treatment of shoulder instability. It is hoped that by sharing these ideas, patients with shoulder instability who are managed non-operatively across the world will have improved clinical outcomes.

**Margie Olds**



Dr Margie Olds specialises in the management of shoulder injuries and is well regarded nationally and internationally for her clinical and research work in shoulder rehabilitation. Her passion for shoulder rehabilitation has extended to her having designed and developed a specific shoulder brace for use in sport and she is the Founder of 'Flawless Motion'. Margie's PhD investigated the risk factors for recurrent shoulder instability after a first-time shoulder dislocation. Her on-going research focuses on improving the clinical impact of rehabilitation for people with shoulder injuries, particularly in the area of shoulder instability. She is the founder and owner of the Auckland Shoulder Clinic and passionate about sharing her expertise with other therapists. Margie has been awarded Physiotherapy Specialist status from the NZ

Physio Board, one of only a few in New Zealand.

## **Functional Outcomes and Expectations Following Total Shoulder & Reverse Total Shoulder Arthroplasty (Matt Zens)**

This workshop will include the details of both Anatomic Total Shoulder Arthroplasty (TSA) as well as Reverse Total Shoulder Arthroplasty (rTSA). We will address the differences in surgical techniques, as well as the biomechanics and rehabilitation associated with each procedure. The American Society of Shoulder and Elbow Therapists (ASSET) consensus statement on the rehabilitation for TSA will also be addressed. A lab session will be associated with these rehabilitation techniques to demonstrate the art accompanied with the science behind the process.

### **Matt Zens**



Matt Zens is an Associate Professor in the Master of Athletic Training program at Dakota Wesleyan University in Mitchell, SD. He graduated from South Dakota State University in 2000 with a Bachelor of Science in Athletic Training, a Master of Physical Therapy from Des Moines University (DMU) in 2003 and completed his Doctorate in Physical Therapy from DMU in 2004.

Matt has been a member of the APTA and SDPTA since 2001, a member of the NATA and SDATA since 2003 and an APTA Board Certified Sports Physical Therapy Specialist since 2008. He has been a member of the American Society of Shoulder and Elbow Therapist since 2011 where he is currently serving as the President- Elect. He is also a member of the Justin Sports Medicine Team for Professional Rodeo. Prior to Dakota Wesleyan, Matt was a clinical physical therapist at the Orthopedic Institute in Sioux Falls, SD for nearly 15 years.

Matt has helped author several publications and has had the opportunity to speak at several meetings across the United States. He is also active and involved in his family's ranch, his church and his childrens' youth sports.

## Rotator cuff-related shoulder pain – What’s new in its assessment and treatment? (François Desmeules, Jean-Sébastien Roy, David H. Christiansen)

Shoulder pain is a leading cause of disability in the adult population. About 4% of adults visit a healthcare professional for shoulder pain each year, and the overall prognosis is highly variable with 40 to 50% of patients still reporting pain 6 to 12 months after the initial examination. Thus, shoulder pain can have a prolonged negative impact on function, sleep and quality of life. The most common type of shoulder pain is rotator cuff related shoulder pain (RCRSP), which account for 50 to 85% of diagnoses for shoulder pain. This workshop aims to review two fundamental components of RCRSP rehabilitation: assessment and treatment.

**Assessment:** A rapid and accurate diagnosis is important to offer appropriate efficient care management to shoulder patients. Generally, following a structured clinical physical examination, clinicians are able to make an accurate diagnosis of common shoulder pain disorders, but prescription of imaging tests may be required in certain cases. To start this workshop, we will review the evidence related to the diagnostic accuracy of different tests and combinations to accurately diagnose common shoulder pain disorders, including RCRSP. We will also review indication, accuracy, and potential limitations of common imaging tests to diagnose shoulder pain disorders. Finally, we will also review common potential red flags related to shoulder pain and present common yellow flags and tools to accurately identify them in shoulder pain populations.

**Treatment – Recommended rehabilitation interventions:** Non-surgical care is the cornerstone for RCRSP management, and clinical practice guidelines propose activity modification advice, pain management, graduated exercise, manual therapy, medication and corticosteroid injections. However, RCRSP are very difficult to treat beyond the acute phase and current evidence suggests that these guidelines result in small to moderate effect sizes compared to minimal intervention. Still, education/advice combined with graduated exercise are currently the best treatment option as they have been shown to be more effective than no intervention, slightly more effective than pharmacological treatment, and have the largest long-term treatment effect. In the second part of this workshop, we will review the most widely recommended types of exercises for RCRSP and discuss how to use education to empower patients to take control of their condition and well-being to ultimately reduce their pain and disability.

**Treatment – Context to optimize interventions:** Shoulder patients' recovery course may be influenced by therapeutic elements that are not always recognized or may be implicit in clinical encounters. Patients' beliefs and characteristics may play an important role in the treatment outcome, at the same time recent research indicates that less individualised approaches based on self-management strategies can achieve similar outcomes to one-on-one physiotherapy sessions. In this last part of the workshop, we will explore and discuss these aspects in the context of providing efficient, equitable, and patient-centred treatment, especially in a healthcare system where resources are likely to be more limited and access to care is problematic.



**François Desmeules** is a physiotherapist with a Ph.D. in epidemiology. He is currently Full Professor in the School of Rehabilitation at the University of Montreal in Canada where he is the head of the advanced practice physiotherapy programs. He also practices as a clinician in primary care for the care of patients suffering from various musculoskeletal disorders. He conducts research in the Orthopaedic clinical research unit at the Centre de recherche de l'Hôpital Maisonneuve-Rosemont. His research interests include: 1- Evaluation of the effectiveness of common orthopaedic and physiotherapy interventions for various musculoskeletal disorders mainly for shoulder, hip and knee pathologies the valuation and implementation of new professional roles for physiotherapists including advanced practice physiotherapy. Dr. Desmeules has published over a hundred scientific studies in peer-reviewed international scientific journals.



**Jean-Sébastien Roy** (ORCID: 0000-0003-2853-9940) is a researcher at the Centre for Interdisciplinary Research in Rehabilitation and Social Integration (Cirris) and a Full Professor in the Rehabilitation Department at *Université Laval* (Quebec City, Canada). His research interests lie in defining the central (neural) and peripheral (joint-level) factors associated with the onset and chronicization of shoulder pain, and in evaluating the effects of rehabilitations approaches to prevent or rehabilitate shoulder pain. He has published over 160 articles in peer-reviewed journals and 8 book chapters, mainly on neuromuscular and biomechanical mechanisms of shoulder pain, and has given over 60 presentations at national and international conferences. Before being involved full time in research, he has worked for 10 years as a physical therapist at the Laval University Hospital, specializing in the treatment of shoulder pain.



**David H. Christiansen** (ORCID: 0000-0001-7458-3921) is head of research Regional Hospital Central Jutland and associate professor at the Department of Clinical Medicine, Aarhus University in Denmark. He is a physiotherapist, Master of Health Science and a PhD in Clinical Medicine. He conducts orthopaedic clinical research at the Centre of Elective Surgery, Regional Hospital Silkeborg, where his key interests are prevention, prognosis and effect of interventions in musculoskeletal pain. He has published 70 peer reviewed journal articles and has been the principal investigator on several large scale observational and randomised interventional studies on shoulder pain.

## **Strength Testing of the Shoulder using a Handheld Digital Dynamometer (Ross Lenssen)**

The aim of this workshop is to outline, demonstrate and teach attending physiotherapists the practical aspects of Handheld Digital Strength Assessment in the Shoulder based on our clinical experience and published research. A comprehensive shoulder assessment assists in attaining a diagnosis, directs rehabilitation and activity modification, and guides return to activity post-injury. Additionally, reliable strength assessments provide valuable clinical insight for targeted injury prevention strategies and to monitor the efficacy of interventions. HHD is a portable and light-weight device that can provide reliable and repeatable strength data in a variety of movements and positions. The functional relevance of strength testing positions is a crucial consideration in assessing patients exposed to repetitive muscular and joint load in a large range of shoulder positions as well as at end of range positions of the shoulder joint.

### **Ross Lenssen**

*Senior Shoulder Physiotherapist, BAppSc(Physio), Member of APA, SEPA, VSES*

Ross Lenssen graduated from Auckland, New Zealand in 2007 and relocated to Melbourne in January 2008, where he works full-time at The Melbourne Group alongside long-term colleagues and business partners Dr Lyn Watson and Simon Balster. Ross is a well-established physiotherapist with substantial expertise in treating shoulders. Ross is a member of SEPA (Shoulder & Elbow Physiotherapists Australasia). Ross has assisted with various research projects on shoulder injuries, including Lyn Watson's Doctorate research and Sarah Warby's PhD research, both on Multidirectional Instability (MDI). He has co-authored several journal articles on shoulder instability, impingement, rotator cuff disease and strength testing. He regularly tutors or teaches on the Lyn Watson shoulder courses primarily within Melbourne and Sydney, Australia and in 2019 he taught in Whistler, Canada. Ross has presented about 'the management of acute traumatic shoulder injuries' at the APA (Australian Physiotherapist Association) conference held in Melbourne (2013). He presented about 'rehabilitation of MDI' at the ICSET/ICES conference held in South Korea (2016). He also presented about 'sporting shoulder injuries' at the APA sports level 2 course held in Melbourne (in years 2013, 2014 and 2019).