By Dr Angela Cadogan PhD, NZRPS



6 Exercises Involving High AC Joint Stress

If the AC joint is symptomatic, the following exercises may increase symptoms. There are suggested modifications provided below.

The following advice is not intended to be prescriptive and should not replace the advice of a trained professional. Exercise prescription should be based upon the assessment of the symptoms, clinical signs, muscle strength & functional requirements for individual patients by an appropriately trained professional.

1 OVERHEAD EXERCISES

Exercises involving full arm elevation cause increased scapula upward rotation and maximal clavicle rotation and may aggravate AC joint pain. *Modification: Reduce range of elevation by using the incline position.*



2 PUSHING

Pushing movements result in high levels of pectoralis major and anterior deltoid activity causing high compressive forces at the AC joint, and result in protraction of the scapula (joint translation forces). *Modification: These are difficult to modify. Weigh up the relative value and functional need. Consider balancing these with "pulling" exercises.*







3 PEC MAJOR AND ANTERIOR DELTOID EXERCISES

Any exercise that activates pectoralis major and anterior deltoid to any significant degree will be contributing to increased AC joint compressive forces and may aggravate symptoms. *Modification: These are difficult to modify. If pectoral and anterior deltoid strength is required, find the least provocative exercise and minimise leading frequency.*

minimise loading frequency.







4 TRACTION

High traction loads on the arm (E.g dead lifts) cause inferior shear forces at the AC joint and tensile strain at the AC joint ligaments. This may aggravate symptoms and may disrupt ligamentous healing in low-grade AC joint injuries (Grade I-II). *Modification: If these exercises are designed for leg strength, select alternative leg strengthening exercises to minimise traction forces on the upper limbs*.



5 WEIGHT BEARING

Weight bearing causes compression through the AC joint surfaces through axial loading and through muscle compressive forces. Tricep dips also cause scapula anterior rotation at the AC joint that may aggravate AC joint symptoms. *Modification: Select alterative tricep exercises to replace tricep dips, and if planks aggravate symptoms, replace with other non-weight bearing abdominal strengthening exercises E.g, crunches, sit ups, oblique abdominal twists etc.*







To learn more about the AC Joint with Dr Angela Cadogan.







Shrugs case translation at the AC joint (superior and inferior) and may aggravate AC joint symptoms. *Modification: Unless the upper trapezius is weak, thiis movement is of limited value in a shoulder strengthening programme. If the AC joint is symptomatic avoid this exercise. Upper trapezius is active as part of the force couple with lower trapezius and serratus anterior in scapula upward rotation. Any exercise involving scapula upward rotation under load will include upper trapezius strengthening.*



"I go into more depth about how to manage these cases in my online AC Joint course."

Your Instructor

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Dr Angela Cadogan is a NZ registered Physiotherapy Specialist (Musculoskeletal). She has a PhD in Musculoskeletal Diagnostics from AUT University, with a sub-specialty in the diagnosis and management of shoulder pain. She has published several papers from her thesis in the area of shoulder diagnostics and sports physiotherapy.

Angela is based in Christchurch, New Zealand where she works as a clinical consultant in her own physiotherapy practice and in a diagnostic Orthopaedic Triage role (Shoulder) with the Canterbury District Health Board.

Angela has an ongoing research interest in shoulder conditions and has been an invited keynote speaker at many national and international shoulder conferences.



Angela is the Director of Physio Academy and runs her own online and in-person courses to help upskill other physiotherapists in the assessment and management of the shoulder. For more information, go to: www.drangelacadogan.co.nz

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Dr Ian Horsley discusses the management of ACJ traumatic injuries and the differential diagnosis, along with rehabilitation strategies that include the scapula and thoracic spine. Ian covers the ACJ anatomy and its relationship to the SCJ and discusses the clinical examination of the ACJ. The concept of regional interdependence is presented with respect to ACJ dysfunction and how to move from a local to global examination.

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