	Coaches & medical staff should encourage rowers to seek assessment of Low Back Pain (LBP) early. Delaying this can prolong recovery.	Assessment & management by a Medical Doctor & Physiotherapist experienced in managing rowing-related LBP is ideal.	Episodes of rowing-related LBP are most often not serious, they are self-limiting & early management will educate the rower about severity & recovery.	Many factors contribute to a presentation of rowing-related LBP, these include; physical, biological, social & psychological –they all need to be managed.
	INITIAL TRIAGE – first presentation	ACUTE- first week	SUB-ACUTE – return to rowing	REHABILITATION – return to full training
EXAMINATION	Establish type of presentation; Non-specific LBP with / without somatic referral Radicular pain with / without radiculopathy Inflammatory component to pain Atypical pain requiring red flag exclusion Psycho-social screening for; mental health issues, catastrophizing, anxiety, upcoming competition & / or life stressors.	Re-assess findings from initial triage including; sitting tolerance, lumbar range of motion & ability to complete activities of daily living (ADL). Assess rowing specific ranges; specifically hip flexion & hamstring length, as they affect how the pelvis & lumbar spine move in the boat. Improvement in the motion of the pelvis & hips is desirable.	Assess rower's ability to move through rowing specific movement & ability to tolerate spinal load. If have not yet rowed, trial erg row &/or short duration on-water row with assessment before & after. Response to on-water training should be continually assessed. Coach or medical staff should ensure rower's stroke pattern consists of appropriate pelvic motion & limits excessive low back motion.	Ensure the rower is confident in their ability to progress. Objective markers in initial triage assessed for signs of resolution; pain should be absent during ADL & cross training. Rowers should be able to row with usual power & tolerate changes in; water conditions, rowing rate & seating in boat. Rowing stroke pattern should be monitored during water or erg sessions that induce high levels of fatigue.
MANAGEMENT	Restore function in ADL with early & effective pain relief. Manual therapies may assist. Avoid aggravating activities. Red flags include changes in; sensation or motor control, bladder or bowel function OR systemic signs of illness such as weight loss, night pain & sweats. Referral to medical specialist required. Refer to Psychologists if there is a regular person the rower sees / specific need identified.	Control of pain with activity modification +/- medication (prescribed under International Olympic Committee & World Anti-Doping Agency guidelines) +/- manual therapies. Restore movement via rowing specific exercises & progress towards spinal load requirements. Poor sleep, performance pressure, fear avoidance behaviour & life stressors signal consideration for support on an individual basis.	Rowers should be active participants in their recovery. It is important for the rower to avoid developing a fear of specific movement patterns, a cognitive functional therapy approach or a confidence with movement approach can be helpful. Splinting or overprotective movements should be discouraged. If a rower is finding it difficult to cope or if they have already accessed psychological services, this should be encouraged & continued.	Emphasis placed on restoring usual rowing biomechanics & addressing modifiable risk factors that can prevent reoccurrence. Continue to support self-management, the rower should be seen less for specific interventions such as manual therapies or ongoing use of medication. Do not progress to this stage if red flags identified. Yellow flags include recurrent history of failing to progress or symptoms in excess of presentation; progress slowly & with care.
EXERCISE & TRAINING	Avoid complete rest. If rowing aggravates; stop on-water & rowing ergometer (erg) training. If can sit without pain; start short duration stationary bike. If sitting is painful prescribe walking; duration & including hills or steps is dependent on symptoms. If rower is able to row on-water or erg without pain or muscles guarding, they should be encouraged to do so.	Focus on what the rower CAN DO to maintain fitness but not exacerbate LBP. Continuation or graduation of a cardiovascular cross-training program within limits of the pain. If the rower tolerates sitting, stationary bike used. As sitting tolerance increases, a trial erg row can commence & then progression to a short duration on-water row of less than 10km. If sitting is not tolerated, use of an elliptical trainer, swimming or walking should be encouraged.	If not able to row; continue cross-training with increasing duration & intensity. Can use; stationary bike, elliptical trainer, ski erg & walking including up hills & stairs. Consider swimming but gradually increase to avoid shoulder pain. Modality is dependent on symptoms & access. Return to rowing program should be agreed on by medical staff, rower & coach. Intensity & volume increase, building on-water rowing before erg unless rough water prevents this. Consider boat type when prescribing training: 8-10km x1 ≠ 8+. Rower can continue to use cross-training to 'top-up' training load. The planned & completed training load should be monitored. Clinicians & strength & conditioning (S&C) coaches should work together to formulate exercises individual to the rower that address rowing specific ROM, trunk strengthening & movement deficits.	Return to full training should planned with increasing on-water distance & intensity as well as progressive increase in erg +/- S&C & cross-training. This should be individually tailored. As rower approaches return to full on-water training a reduction in cross-training occurs as part of overall load management. A strength & mobility program that addresses modifiable risk factors for LBP should continue to ensure change is made & may be prescribed for long term maintenance. Medical and coaching staff should work together to ensure the rehabilitation program translates into technical changes to protect from further injury. S&C training should initially avoid high loads, progressive increases towards usual training can occur, monitoring response. Medical & coaching staff should continue to work with the rower to achieve this.
EDUCATION	Provide injury education, alleviate fears & include the rower in initial planning. Manage coach & the rower's expectations. Involve coach from outset & allow them to contribute ideas about injury occurred.	Involve the rower in planning & educate about the multi-dimensional nature of LBP including contributors to onset & persistence of pain. Support may come from coaching staff, medical staff, family & friends or psychology.	The rower & coach should have a thorough understanding of what symptoms can be tolerated when returning to training. A rower should have; no / low levels of pain during rowing, pain not getting increasingly worse when rowing & no pain immediately after rowing. Continue to reassure & educate the rower & coach.	An athlete centred & coach supported approach should be encouraged. Empower the rower to self-manage, have input into the plan & follow the plan with the support of the medical staff & coaching team around them.