

Injury prone?



GB rower Matthew Rossiter demonstrates good spine posture and bad. In July 2010, Matthew won a silver medal in the men's four at the World Rowing U23 Championships

PHOTO: GB ROWING TEAM



Mark Edgar, Head of Medical Services for the GB Rowing Team, provides advice on resolving common rowing injuries

Rowers often seem to train with ongoing injuries. They are particularly susceptible to injuries in three specific areas - the lumbar spine, the wrist and the chest wall. So, what can be done?

The lumbar spine

Lumbar spine injuries constitute the greatest current threat to a rower's ongoing training and race preparation. There are a significant number of potential injury diagnoses when considering the

lumbar spine but these are probably beyond the scope of this article.

However, following on from the last article where we looked at youngsters who row, there are some aspects of growth and developmental changes to consider when formulating a training programme. What is critical to note is that, by and large, children do not have back pain. Their neurology is plastic enough to defy normal clinical presentation so it is essential that a youngster is taken seriously if he or she has ongoing back pain.

Youth trouble

A youngster with back pain might have:

- Difficulty in sitting through a lesson in class.
- Inability to progress from one training session to another.
- Inability to complete training sessions or alternative sports / PE classes.
- Morning pain.

Such youngsters often progress from one health professional to another with some relief of symptoms but never a resolution

of symptoms. They try to continue to train sometimes with ongoing significant pain which continues to affect their day-to-day school and academic activity.

Youngsters with these symptoms should be examined thoroughly, even having an MRI scan to exclude the possibility of significant muscular, bony or soft tissue damage including disc pathology with neurological involvement.

Lumbar issues

Rowing-related lumbar spine issues include (although not exclusively) the following:

- Dehydration of lumbar intervertebral discs.
- Damage to the posterior (annular) wall of the disc.
- Splitting or fissuring of the annular wall leading to bulging of the annular wall.
- Rupture of the annular wall with extrusion of nuclear material (disc nucleus).
- Lumbar spine facet joint inflammation or degeneration.
- Ligamentous damage.
- Associated muscular irritability.

However, there are some pain / injury presentations that resolve quickly. In fact, very few rowers don't have some form of discomfort in their lumbar spine during their career. Indeed, if everyone with a slight back ache sought treatment then perhaps no rowing would be done!

Is it serious?

But how do you decide between a 'slight back ache' and 'significant back pain'? Consider the six pointers below:

- Pain should not be so significant that you cannot complete a training session.
- The pain you have is on a day-by-day basis,

“What is critical to note is that, by and large, children do not have back pain”

- becoming less as you continue to train.
- You should be able to continue on the normal training programme.
- Your recovery from each training session (with regards to your back pain) should be quicker on a day-by-day or session-by-session basis.
- You should experience decreasing (to nil) morning stiffness or other related symptoms - e.g. you are able to sit through normal class lessons, you can sit normally at work, you can drive your car unlimited distance.
- No night pain / pain that wakes you at night.

Remember these are some points to note. The take home point is that if you are 'unable to continue' then you need to be checked out properly.

Lumbar treatments

Treatment for lumbar spine problems also falls into a myriad of methods. What is important with respect to the six bullet points mentioned is that you are improving

“Lumbar spine injuries constitute the greatest current threat to a rower's ongoing training and race preparation”

based on the ideas listed above and that your training is moving forward with a good reduction of symptoms.

If treatment is continuing but you don't seem to be improving then you need to look at the diagnosis and assess whether it is correct. Perhaps you are trying to do too much with respect to the healing and rehabilitation process or perhaps the treatment is just not appropriate for your injury. Remember that significant lumbar spine injuries will take a long time to fully resolve perhaps in the region of three months in some cases and in others far longer.

Although the general physiotherapy and orthopaedic treatments are also beyond this article, what is pertinent is the role of core stability or trunk strengthening.

Both exercises will help the body to strengthen the small postural control muscles so that they can oversee the motion of the structures around the damaged part of the lumbar spine. Improved core stability or trunk strength will allow better muscular control around

develop is commonly called 'teno' and more correctly 'intersection syndrome'. Physiotherapist Jane Callaway worked with the GB Rowing Team for six years and so has in-depth experience of rowing-related injuries. She carried out a survey indicating a consensus that most cases of intersection syndrome are usually bought on by change. So change includes the following:

- Change from stroke to bow side or vice versa.
- Change from steady state to speed work or vice versa.
- Change in weather - head wind, choppy water.
- Change in handle type (plastic handle, wooden), thickness, inboard.
- Change in technique - e.g. inappropriate gripping / poor technique.
- Changing oar and boat so that the oar catches in a tight gate during the feathering process or indeed the squaring phase. ▶



The most common reason for wrist injuries is some kind of change

the damaged area allowing the normal healing process to take place without the continual over stressing.

At a later stage these muscles will also assist in allowing significant loading to be achieved without deformation of the vulnerable structures. Of course this loading mechanism goes hand in hand with accurate and competent rehabilitative cross training followed by a return to full training.

Wrist injuries

The most common wrist injury that rowers



Unfortunately most rowers will experience some back discomfort at some point

“The take home point is that if you are ‘unable to continue’ then you need to be checked out properly”

All cases of teno should be reviewed by the coach to resolve any question of coaching, technical or equipment issues.

In cases of teno, soft tissue of the wrist cannot cope with the alteration in training or the training environment. Commonly intersection syndromes should resolve over either a few (*i.e.* three) days or could take up to three weeks. During this time cross

training should be carried out on a stationary bike or by running. Plus of course normal **RICER** - Rest (perhaps a wrist splint), Ice, Compression, Elevation and (appropriate) Rehabilitation with your GP possibly prescribing some anti-inflammatory medication.

Chest wall injuries

Chest wall injuries are also a common occurrence with rowers. The exact cause is unknown, but it is clear that the structures of the chest (the ribs and associated thoracic vertebra, sternum, intercostal and scapula muscles) all play an important part

Common chest wall symptoms include:

- Previously able to complete training then unable to due to sharp chest wall pain.
- Pain rolling over in bed.
- Pain with breathing deeply, coughing, sneezing.
- Pain sitting up in bed.
- Inability to sleep on that side.

Diagnosis is either by clinical history and examination (point tenderness and pain on chest compression) or by MRI scan. In the past an isotope bone scan has been carried out.

The symptoms will usually last about three weeks from the first missed training session. Cross training should be carried out to maintain fitness. Normal training should be resumed only when the symptoms have settled. But begin your training gradually, starting with rowing before progressing onto the ergo and then weights.

If significant pain returns during any stage of the ‘return to rowing progression’ then a further three weeks of recovery should be undertaken from the date of the onset of this latest pain response. Clearly therefore it is better to be conservative about your recovery rather than rushing back to full rowing training. This does not discount hard bike or running sessions if these can be achieved without bringing on the symptoms listed above.

General injury resolution

So listed above are some time frames for injury resolution. These are based on clinical experience. Some minor injuries will take a few days to resolve and shouldn’t interfere significantly with normal training. I would expect this level of injury to resolve over a period of about three days.

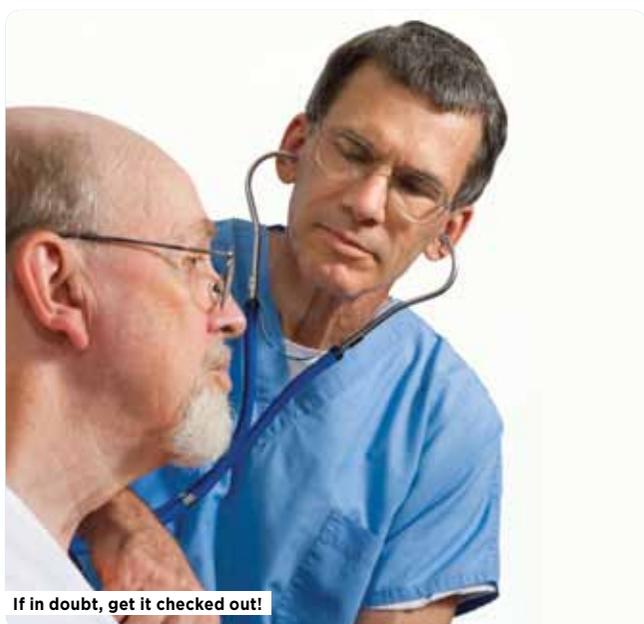
If the injury is a bit worse then allow three weeks - for example, any rib or chest wall stress injuries. If the injury is even more significant, for example a lumbar spine disc episode, consider that the injury could take up to three months to resolve.

“What is pertinent is the role of core stability or trunk strengthening”

in both the loading through a rowing stroke and also in respiratory ventilation: *i.e.* breathing - clearly if you don’t breathe, then you die!

Chest wall or rib stress response is usually slow in developing and follows a pattern of insignificant chest wall ache, possibly leading to sharp pain, usually on the lateral chest wall.

Most rowers manage to obtain an early diagnosis of their injuries which leads to early appropriate treatment, perhaps also with a clear cross training programme. In this way the rower can try to keep their physiological fitness at the same level as their fellow squad rowers who are still training so enabling them to integrate back into the squad easier at a later stage post-injury. ■



If in doubt, get it checked out!