

Sports Physiotherapy Master's Conference 2022

Written Q&A responses

Lynn Snyder-Mackler

Busting myths about ACL injuries and return to sport.

Is there a reason you delay athletes under 18years for 12months, instead of the 9months for adults? Is this based on the higher re-injury rates in this population because they are more likely to return to Lv1 sports? Would an adult returning to Lv 1 sport benefit from the same 12month delay?

A logical answer here might well be the >35% risk of symptomatic knee OA by the 10 year mark post ACLR. 28yo is pretty young to have symptomatic knee OA, and given the known 2-9y reduction in lifespan of knee OA, I think it's pretty good advice.

Are there any considerations for exercise selection/rationale with ipsilateral quads tendon graft and/or conservative healing ligament (Cross Brace method)?

Its 3 month protocol with 90 for a month progressing to full knee extension at 3 months.

Bridie Nicholson

Why do we strive for symmetry in rehabilitation of sports injuries?

Does this change if sport requires symmetry as part of the performance? For example dance/ballet where visual appearance matters versus purely force and velocity etc.

I also work with jaw patients and we tend to aim for symmetrical movement and function of the TMJ as a general rule.

From your 'when the good leg isnt good' slide, is there much data in para-athlete population?

Yes there is a great paper by Runciman P, 2015 which shows the significant asymmetries present in sprint cycling in paralympic athletes with cerebral palsy.

This has also been shown in a study by Bernadina et al in 2021 which showed significant asymmetries in movement in paralympic powerlifters.

So in this population- they recommend using baseline data, or needs analysis as LSI is not a valuable tool in these athletes and normative data is scarce.

Jacinta Carroll

Eccentric deceleration: Is it the golden ticket for ACL RTS battery?

The penultimate foot action and then acceleration looks like a lot like speed skating corner drills (require coach / peer to use resist body lean with harness / elastics). Could that be a handy drill?

Absolutely Andrew!!!! Hadn't thought of that!

Andrew uses that drill for most lower limb injuries - being a speed skater tragic.

Definitely, if on a field, not sure I would want my rehab patient on the ice :)

Why do you hypothesize contralateral ACL ruptures are so common after initial ACL tear. Is there any protocol or criteria to deter this and plan for RTS

I think there is a chance the lack of deceleration on the ACLR leg poses increased loading on the contralateral limb therefore placing it more at risk than pre ACLR when they could efficiently (*potentially) decelerate. In a sense of prevention, making sure we train both sides and decelerate efficiently off both. criteria.....none as such just yet.

Jacinta Carroll

Eccentric deceleration: Is it the golden ticket for ACL RTS battery?

For settings where there isnt access to force plates, what would you recommend as an alternative to get an idea of the athletes capacity?

The only alternative suggested so far is the use of phone analysis/iPad to measure ground contact times. Comparing contact times on the turning leg and matching this with qualitative analysis of technique will provide some indication of the athletes ability to RTP. Poor deceleration ability of the ACLR limb in the penultimate foot contact is likely to equate to longer ground contact times on the non injured limb when they are turning/pivoting.

Alex Downie

Articular cartilage lesions of the knee: Considerations for management.

Just curious how your case study patient is doing now? And if there's any ongoing maintenance/management?

This current case study is still fairly early in his rehabilitation so hopefully he does end up doing well!
He's 8 weeks post-op now. Back walking, doing his blood flow restriction exercises and just started some light squatting and leg press.
Hit me up in 6 months and I'll tell you how he's going.

What is the cause for his chondrites lesion? Could it be due to biomechanics?

Great question! These can be acute or overuse injuries. One case I've seen professionally had an MRI for a different reason showing grade 1 changes but then 3 months later had a full thickness lesion with an innocuous incident.

I don't believe there's any evidence saying biomechanics predisposes to this happening. However there is a lot of discussion about addressing biomechanics in surgery. I didn't talk much about this but if you have a varus or valgus deformity, or joint laxity or significant meniscal pathology and this is not addressed at the time of surgery then failure rates are much higher.

So it stands to reason that in our rehab reducing excessive biomechanical abnormalities would be advantageous

Tim Potter

Return to sport and exercise post COVID-19 infection: Implications for physiotherapists.

Is there any investigation on the bio/pathological differences between COVID19 and other "viral" diseases and why RTS takes significantly longer?

Hull et al (in 2021) "Clinical patterns, recovery time, and prolonged impact of COVID-19 illness in international athletes: the UK experience" is a good read that looks at athlete covid incidence and mentions a viral illness comparator.

Unfortunately the only specific information they provide for the comparator is "Respiratory Tract Infection" - which obviously doesn't give the best picture. These same authors note autonomic dysfunction associated with covid infection may be to blame, but otherwise it's difficult to comment on further.

James Grimm

Return to sport and exercise post COVID-19 infection: Implications for physiotherapists.

- 1) **What would you hypothesise might be the factors which cause figure skating, gymnastics, and diving to benefit from earlier specialisation?**
- 2) **Could those factors still be effectively targeted in the context of broad-spectrum/ non-specialised early athletic training?**

Based on your answer, could non-specialised training target mobility and motor adaptation?

I actually don't have an evidence based answer for you, although I think it depends on what components you are after. Ie - mobility, can potentially get this in other ways, however the task specific motor adaptation, I think you are unlikely to get this outside of the artistic sports, there may for example be cross over between moving from gymnastics to diving. As well as this, I would say there is a confidence and fear factor to attempting some of these tasks, which would be much less confronting in youths.