

1 Return to sport (RTS) outcomes after severe injury are consistently poor,^{1,2} Psychological factors are
2 important influences on returning to sport³, yet what it means to be psychologically ready to RTS is
3 unclear⁴. Rarely will an athlete be held back from RTS because he/she is not psychologically ready to
4 return. Psychological factors correlate with injury occurrence,⁵ therefore these factors should be
5 offered greater weighting in RTS decision making.

6 Characteristics of an athlete who is psychologically ready to RTS are multifaceted and
7 include, among others, realistic expectations, high levels of self-efficacy and low levels of anxiety.^{1,4}
8 ⁶ Psychological readiness to RTS is likely influenced by multiple social agents, personal and
9 contextual factors (e.g. coaches, sports medicine practitioners, personality traits, performance level).⁴
10 Consequently, RTS decisions should be made from an interdisciplinary perspective; with
11 multidimensional monitoring of psychological factors (e.g., concurrently monitoring self-efficacy and
12 re-injury anxiety levels).⁶

13 Psychological readiness to RTS is not commonly monitored in practice, despite specific
14 instruments being available (e.g.,⁷). Many practitioners feel under-prepared to work within this area,⁸
15 or might view evaluating psychological readiness to RTS as being outside their scope of their
16 practice. On the other hand sports medicine practitioners are ideally positioned to monitor athletes,
17 because of the strong working relationship developed throughout injury rehabilitation.

18 In this editorial we describe three key elements that practitioners can consider when
19 monitoring psychological readiness to RTS in preparation for RTS decision making.

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21 **3 KEY ELEMENTS IN PSYCHOLOGICAL READINESS TO RTS DECISION MAKING**

22 To facilitate effective RTS monitoring, practitioners should be empowered to confidently
23 consider the psychological aspects of RTS. An empowered practitioner is better able to appreciate the
24 role of psychology within severe injury, and use this knowledge to inform referrals to appropriate
25 professionals (e.g. accredited sport psychologist, mental health practitioner) when the limits of their
26 professional competency have been reached (see box 1.).

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1 Box 1: Examples of professional sports psychology associations

- 2 • British Psychological Society (BPS)
<http://www.bps.org.uk/>
- 3 • British Association of Sport and Exercise Sciences (BASES)
<http://www.bases.org.uk/>
- 4 • Australian Psychological Society (APS)
<http://www.psychology.org.au/>
- 5 • American Psychological Association (APA)
<http://www.apa.org/>
- 6 • North American Society for the Psychology of Sport and Physical Activity (NASPSPA)
<https://naspspa.com/>
- 7 • Association for Applied Sport Psychology (AASP)
<http://www.appliedsportpsych.org/>

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10 **Key element #1: How can the practitioner best monitor athletes?**

11 Box 2 identifies tools that practitioners might use to get to know the athlete and for
12 monitoring psychological readiness to RTS. These tools suggest thresholds to guide RTS decisions,
13 although their use as clinical measures requires further evaluation and validation. We are mindful that
14 no tool is perfect, and might have completion issues associated with social desirability to RTS at a
15 time when athlete's emotional integrity is poor.⁵ For example, athlete's inaccurately completing tools
16 when under pressure for premature RTS. One limitation of these tools is their unidimensional nature⁶
17 (e.g. focus on a specific injury, joint, or construct), therefore it is advantageous to use multiple tools to
18 compare and contrast findings.

19 Box2: Examples of tools (questionnaires and inventories) that may be used by practitioners to
20 monitor psychological readiness to RTS (formatted versions of the tools are available as on-line
resources)

- 21 • Re-injury Anxiety Inventory (RIAI)
<http://www.sciencedirect.com/science/article/pii/S1466853X09000996>
- 22 • Injury-Psychological Readiness to Return to Sport Questionnaire (i-PRRS)
<http://natajournals.org/doi/pdf/10.4085/1062-6050-44.2.185>
- 23 • Knee Self-Efficacy Scale (KSES)
<http://onlinelibrary.wiley.com/doi/10.1111/j.1600-0838.2005.00472.x/abstract>
- 24 • Tampa Scale of Kinesiophobia (TSK)
<http://www.ncbi.nlm.nih.gov/pubmed/16962238>
- 25 • ACL-Return to Sport after Injury Inventory (ACL-RSI)
<http://www.sciencedirect.com/science/article/pii/S1466853X07000971>

1 **Key element #2: Use working knowledge of the athlete**

2 We embrace the notion of ‘knowing your athlete’. Practitioners and athletes share significant
3 interactions prior to injury, and during phased return to participation. Knowledge, understanding, and
4 rapport develop through these interactions. For example, the practitioner might observe an athlete is
5 preoccupied with RTS concerns, is becoming withdrawn, or adapting performance of specific
6 movement patterns leading to subjective evaluations of RTS status. Clarifying the athlete’s
7 perceptions of support from coaches and team-mates may provide information on RTS stressors and
8 the collective RTS expectations. While tools may infer an athlete is psychologically ready to RTS,
9 working knowledge of the athlete might suggest otherwise, and vice versa. Monitoring athletes with
10 tools is useful, however, the practitioner should avoid being overly reliant on these as collectively
11 both forms of information (tools and subjective evaluations) require consideration when making
12 informed RTS decisions.

13 **Key element #3: Adopt an interdisciplinary, shared decision making approach**

14 Shared decision making, involving the key stakeholders, is central to quality RTS decisions.³
15 Historically, the sport medicine practitioner was the gate keeper of the RTS decision, relying
16 primarily on physical assessments. Now the consensus is that RTS decisions should be collaborative
17 and involve practitioners (sports medicine, sports psychology, and sports science team), coach(es),
18 parents or carers (in the case of children or vulnerable adults), and the athlete.³ Considering the
19 collective perspectives of all stakeholders provides a more robust picture of an athlete’s psychological
20 readiness to RTS. For example, coaches can provide information regarding the athlete’s intent and
21 engagement during technical practice (e.g., is there hesitance when anticipating contact?); family
22 members can provide valuable information about behaviours away from sport. Both perspectives help
23 build a picture of the athlete’s psychological readiness to RTS.

24 **SUMMARY**

25 When can the practitioner be sure that the athlete is psychologically ready to RTS? Perhaps
26 this is difficult to predict? Or at least more difficult than physical readiness, which is, at least in part,
27 dictated by tissue healing. As practitioners, we recognise and accept that biological scarring can have
28 a long-term effect on function and performance. Severe injury could imprint (metaphorically)

1 psychological scar tissue (e.g. athletes report that their injury will “never leave them”), and we should
2 consider this aspect of RTS equally alongside the physical aspect.

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