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Cover story

Beyond injury repair: The performance architect in sports physiotherapy

A D P Perera

Department of Physiotherapy, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka

Correspondence: dilani.perera@kdu.ac.lk

 <https://orcid.org/0000-0003-3826-4936>

Traditionally, sports physiotherapy has focused on treating injuries only. Today, physiotherapists play complementary roles in managing injuries and boosting performance simultaneously, using injury surveillance, conducting smart assessments, delivering criterion-based rehabilitation, and embedding prevention strategies directly into training. In doing so, they become performance architects, not just injury fixers. This approach is particularly valuable in low-resource settings like Sri Lanka, where sport science support is limited.

The cover image was generated using ChatGPT 3.0 (OpenAI, 2026) with the prompt "Performance architect sports physiotherapy illustration". Generated May 15, 2026

Adopting an injury surveillance system for tracking injuries

The fundamental of injury surveillance is systematic recording of type of injury, anatomical location, mechanisms, severity, time loss, and other relevant epidemiological data (1). This approach forms the cornerstones for reducing re-injuries and improving athletic performance. In elite sporting environments, injury surveillance is typically employed via digital databases. In contrast, low-resource settings can function effectively with a simple spreadsheet that records key variables including date, mechanism, tissue type, days lost, and recurrence. Both athletes and staff can be involved in designing and implementing the surveillance system, which helps track injuries for domestic or national teams (2). Sharing anonymized trends resulting from analyzing surveillance data with coaches, trainers and other counterparts in the multidisciplinary team shifts the focus from treating to preventing injuries.

Sports injury assessment in low-resource settings

Comprehensive assessment is essential in sports injury rehabilitation and is achievable with inexpensive equipment such as measuring tape, stopwatch, smartphone, and adequate clinical reasoning in low-resource settings. Proper history taking provides insight into the mechanism of injury, training load, injury recurrence, and performance goals. The objective examination includes range of motion, manual muscle testing, joint stability, and palpation, followed by a functional assessment relevant to the sport, which may differ according to the sport. Examples include hopping, landing, cutting, or throwing (3).

Recent validation studies support low-cost technology alternatives for assessing jump performance variables, making these methods valid options for field-based testing (4). Similarly, video

analysis using smartphones demonstrates valid outcomes without the need for expensive motion capture systems (4). Distance measured using tape measurements for single leg hop test, star excursion balance test and timed agility tests remain validated and cost-effective assessment tools. Crucially, assessment must identify not only what is injured but also what deficits will limit future performance.

Sports injury management and rehabilitation

The goal of rehabilitation is to transform the athlete for a successful return to practice. A recent review on return-to-performance pathway for soccer outlines six phases, progressing from reloading to unrestricted match exposure (5). In the early phase of rehabilitation, tissue loading is applied appropriately and progressively, with isometric strengthening of muscle, pain-free range of motion exercises and general fitness training. Recovery phase advances from general sport movements (e.g., squatting, lunging) to sport-specific actions (e.g., cutting, throwing). Performance phase of rehabilitation always includes testing batteries of power, strength, agility and other performance metrics using low-cost assessment tools. Athletes do not return until pain-free sport simulation and psychological readiness. Every exercise asks: Does this build performance capacity or merely resolve impairment?

Injury prevention for athlete performance

Prevention is not limited to a separate programme delivered before and after rehabilitation, it is a performance strategy which helps enhance athletic performance. Uninjured athletes train consistently leading to continued game participation and improved performance.

Effective injury prevention in low-resource settings focuses on high-yield, low-cost strategies. Few examples include, neuromuscular warm-ups reducing lower limb injury risk by (30–50%) (6),

eccentric hamstring strengthening (Nordic curls) preventing hamstring strain injury, the most common reinjury type, in field sports; balance and landing control exercises reducing ankle and knee injuries. In under-resourced communities, evidence-based prevention includes hip and quadriceps strengthening, load management, footwear, and education (7). Load monitoring using session rating of perceived exertion (RPE) identifies overtraining before injury occurs.

The sports physiotherapist integrates prevention into every aspect of sports, which includes rehabilitation sessions, team warm-ups, coaching education, etc. When prevention succeeds, the athlete's performance is never interrupted, the highest value a sports physiotherapist can deliver.

References

1. International Olympic Committee Injury and Illness Epidemiology Consensus Group; Bahr R, Clarsen B, Derman W, Dvorak J, Emery CA, Finch CF, et al. International Olympic Committee Consensus Statement: Methods for Recording and Reporting of Epidemiological Data on Injury and Illness in Sports 2020 (Including the STROBE Extension for Sports Injury and Illness Surveillance (STROBE-SIIS)). *Orthop J Sports Med.* 2020 Feb 18;8(2).
2. Vella, S. Co-designing a year-round injury surveillance system: longitudinal monitoring for a small-nation football team (PhD Academy Award). *British Journal of Sports Medicine*, 2026; 60(10), pp.754-756.
3. Skibski A, Onate J, Mangum LC. Suggestions and Considerations for Application of Movement Screens to Clinical Practice. *Int J Sports Phys Ther.* 2024 Mar 2;19(3):351-354.
4. Deysel G, van Aswegen M, Kramer M. Investigating the validity of low-cost technologies for the assessment of jumping-based



- performances in people with patellofemoral pain. *S Afr J Sports Med.* 2025 May 15;37(1).
5. Mitchell, A. and Gimpel, M. A return-to-performance pathway for professional soccer: A criteria-based approach to return injured professional players back to performance. *JOSPT Open*, 2024; 2(3), pp.166-178.
 6. Lutz D, van den Berg C, Räisänen AM, Shill IJ, Kim J, Vaandering K, Hayden A, Pasanen K, Schneider KJ, Emery CA, Owøye OBA. Best practices for the dissemination and implementation of neuromuscular training injury prevention warm-ups in youth team sport: a systematic review. *Br J Sports Med.* 2024 May 28;58(11):615-625.
 7. Kunene, S. Developing a Community-Based Exercise and Physical Programme for Runners With Patellofemoral Pain in Under-Resourced Communities: A Delphi Study. *Physiotherapy Canada*; 202577(3), pp.313-320.