

Infographic

Infographic. Pain or injury? Why differentiation matters in exercise and sports medicine

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‘Pain’ and ‘injury’ are not, and should not, be considered synonymous

Successful management of tissue injury cannot rely solely on pain responses because tissue healing is not directly related to pain. Pain without identifiable pathology is common in athletes,¹ and as a result medical labelling remains an ongoing challenge. Therefore, we argue that, for the benefit of athletes, there is an urgent need for a clear distinction between pain and injury (see Infographic).

Synonymous use of pain and injury in research and clinical practice may negatively impact clinical management. First, benign and normal fluctuations in pain may be seen as signs of sports-related injury, which could impact performance negatively. Second, viewing all pain as a direct sign of tissue injury may lead to underprioritising of psychological and social aspects of return-to-sport. Third, athletes being told they are ‘injured’ can lead to unnecessary assessment and interventions,² particularly when a clear clinical diagnosis is lacking yet the reports of pain remain severe. Last, when pain is linked to unconfirmed injury, fear and anxiety may be heightened. Indeed, current evidence shows fear avoidance, fear of reinjury and pain catastrophising are common in response to an injury in athletes.³ Thus, a clearer distinction between pain and injury, paired with a person-centred and educational approach, seems necessary.

New terminology

Given that (1) tissue injury is nearly always accompanied by pain (ie, consistent with injury models)⁴ and (2) pain is not always accompanied by evidence of tissue injury (ie, consistent with contemporary science models of pain as a

marker of protection or nociplasticity),⁵ we propose two new semantic entities that may co-occur, yet also be operational for both clinical and research purposes: *Sports-related injury* and *sports-related pain* (see Infographic).

Sports-related pain or injury: a spectrum, not a dichotomy

Here, we propose three stereotypical cases, representing different aspects of the spectrum: (1) anterior cruciate ligament tear (confirmed *sports-related injury* with *sports-related pain*), (2) patellofemoral pain (*sports-related pain* during certain activities in the absence of definable sports-related injury) and (3) patella tendinopathy (*sports-related pain* and clinical evidence of *sports-related injury*). For all three cases, individually tailored information and management strategies targeted to the findings are essential for optimal outcomes and return-to-sport.

Differentiating between sports-related *injury* and *pain*, and carefully considering the contribution of each, may lead to better care for all stakeholders (ie, athletes, clinicians, and researchers) in the sports medicine community.