

## IFSPT International Perspective

# Worldwide Sports Injury Prevention

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Keywords: physiotherapy, sports medicine, injury prevention

[10.26603/001c.18700](https://doi.org/10.26603/001c.18700)

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## International Journal of Sports Physical Therapy

Vol. 16, Issue 1, 2021

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### INTRODUCTION

The risk of injury is inherent in sports and injury is recognized as a major public health issue.<sup>1</sup> In addition to pain, physical disability and absenteeism, the financial costs involved in surgery, and rehabilitation should be considered.<sup>1</sup> As a consequence, injury prevention is imperative in order to decrease an athlete's risk of injury and reduce costs for the sports team and society.

The number one goal of the sports physical therapist is to make sure that the athlete is in optimal shape to perform, but with a minimal risk for developing an injury at the same time.<sup>2</sup> The aim of this International Federation of Sports Physical Therapy (IFSPT) Perspective is to raise awareness about the importance of contextual and behavioral factors when planning and implementing injury prevention. Also, it outlines the potential role of the IFSPT as a facilitator of data and information exchange among sports physical therapists worldwide.

### DIFFERENT COUNTRIES AND CONTEXTS FOR INJURY PREVENTION

Sports physical therapists implement injury prevention in different sports, contexts and countries, taking into account the different cultures.<sup>3</sup> One of the barriers to the effectiveness of a preventive program is lack of consideration regarding interrelations between physical, biological, economic and social aspects.<sup>3</sup> Following this reasoning, a study indicated why and how three states from the United States of America were able to facilitate the successful creation and adoption of heat acclimatization guidelines.<sup>4</sup> Each state had a different reason to change policies regarding heat stroke/heat related illness prevention. Arkansas' process was initiated due to the death of one high school-aged athlete from exertional heat stroke.<sup>4</sup> In Georgia, the

main reason was the high number of sudden deaths that occurred in sport in that state.<sup>4</sup> In New Jersey, the policy makers wanted to be proactive and created a policy to protect student-athletes and to protect the state from litigation.<sup>4</sup> Therefore, considering that differences among sport-teams, countries, and states influence injury risk and preventive actions, it is important to identify how sports injury prevention is being organized and implemented worldwide.

According to Van Mechelen's sequence of prevention, a standardized injury registration system is imperative for success of an evidence-based injury prevention approach.<sup>3</sup> Therefore, it can be expected that this applies to every club or team worldwide. However, this has not been investigated, and could be approached and organized differently among diverse countries and cultures around the world. Nevertheless, a profound insight into injury prevention is essential to be able to improve implementation and adherence strategies worldwide in order to contribute to the athlete's health and safety.

### ATHLETE'S BEHAVIOUR AND EFFECTIVE IMPLEMENTATION

When dealing with sports injury prevention, the athlete's behavior plays an important, but frequently forgotten, role. Cusimano et al<sup>5</sup> showed that a previous ankle injury did not significantly increase the odds of using an ankle support device, proposed as the most effective measure for the prevention of ankle sprains,<sup>6</sup> in basketball athletes. Interestingly, the largest barrier identified by Cusimano et al<sup>5</sup> to ankle support device use was a lack of aesthetic appeal. Similarly, other authors found major barriers for concussion registration among athletes, such as fear of losing current or future playing time, a misconception that concussive injury is not serious and a fear of letting one's team down.<sup>7</sup> Better knowledge regarding athletes' behaviors is fundamental

in the development and effective implementation of injury prevention programs and education.

## THE CHALLENGE OF IMPLEMENTATION AND ADHERENCE

Differences in injury prevention approaches between different sports and countries might contribute to different injury prevention outcomes. However, there is a lack of studies which investigate this issue. Thein-Nissenbaum and Brooks<sup>8</sup> found that female high school basketball players from Wisconsin had a very low adherence to a home-based injury prevention program. The reasons for this low adherence rate included, "I did not have time to do the program," followed by, "I forgot to do the program." Luckin et al<sup>9</sup> identified participants who did not complete strength training indicating that (1) perceived time constraints (53.1%), in addition to (2) lack of knowledge on exercise progression and form (52.5%) were prominent perceived barriers to strength training adherence. Thus, education and supervision during the prevention (training) process may be determinant to the success of the program. In this regard, joint engagement of the sports physical therapist, the strength-

conditioning coach, and head coach is essential for athlete adherence in prevention strategies.

## AN IFSPT ROLE IN WORLDWIDE SPORTS INJURY PREVENTION!

The IFSPT could be the source of information and guidance for the sports physical therapist in processes related to the athlete's health and safety. The IFSPT could collaborate with its member organizations or other groups to understand the athlete's behavior and inform injury prevention organization worldwide. With this information, the IFSPT could guide and facilitate the exchange of information between countries, allowing the past experiences of one member (or group) to enable others to successfully deal with barriers or challenges related to injury prevention they discover in their practice.

Submitted: December 01, 2020 CST, Accepted: January 01, 2021 CST



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## REFERENCES

1. Cumps E, Verhagen E, Annemans L, Meeusen R. Injury rate and socioeconomic costs resulting from sports injuries in Flanders: Data derived from sports insurance statistics 2003. *Br J Sports Med.* 2008;42(9):767-772. [doi:10.1136/bjsm.2007.037937](https://doi.org/10.1136/bjsm.2007.037937)
2. Grant ME, Steffen K, Glasgow P, Phillips N, et al. The role of sports physiotherapy at the London 2012 Olympic Games. *Br J Sports Med.* 2014;48(1):63-70.
3. Bolling C, van Mechelen W, Pasma HR, Verhagen E. Context Matters: Revisiting the First Step of the 'Sequence of Prevention' of Sports Injuries. *Sports Med.* 2018;48(10):2227-2234. [doi:10.1007/s40279-018-0953-x](https://doi.org/10.1007/s40279-018-0953-x)
4. Pagnotta KD, Mazerolle SM, Pitney WA, Burton LJ, Casa DJ. Implementing health and safety policy changes at the high school level from a leadership perspective. *J Athl Train.* 2016;51(4):291-302. [doi:10.4085/1062-6050-51.2.09](https://doi.org/10.4085/1062-6050-51.2.09)
5. Cusimano M, Faress A, Luong W, et al. Factors affecting ankle support device usage in young basketball players. *J Clin Med.* 2013;2(2):22-31. [doi:10.3390/jcm2020022](https://doi.org/10.3390/jcm2020022)
6. Vuurberg G, Hoorntje A, Wink LM, et al. Diagnosis, treatment and prevention of ankle sprains: Update of an evidence-based clinical guideline. *Br J Sports Med.* 2018;52(15):956. [doi:10.1136/bjsports-2017-098106](https://doi.org/10.1136/bjsports-2017-098106)
7. Clark R, Stanfill AG. A systematic review of barriers and facilitators for concussion reporting behavior among student athletes. *J Trauma Nurs.* 2019;26(6):297-311. [doi:10.1097/jtn.0000000000000468](https://doi.org/10.1097/jtn.0000000000000468)
8. Thein-Nissenbaum J, Brooks MA. Barriers to compliance in a home-based anterior cruciate ligament injury prevention program in female high school athletes. *WMJ.* 2016;115(1):37-42.
9. Luckin KM, Badenhorst CE, Cripps AJ, et al. Strength training in long-distance triathletes: Barriers and characteristics. *J Strength Cond Res.* 2018;4:1-8. [doi:10.1519/jsc.00000000000002716](https://doi.org/10.1519/jsc.00000000000002716)