

# EDITORIAL: SPECIAL ISSUE - PREVENTION PRACTICE WITH PREVENTION

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As the Canadian Associate Editor of *NAJSPT* it is a pleasure to have the opportunity to contribute to this first special issue of *NAJSPT* which focuses on *Prevention*. I hope the readership will consider the important and diverse impact we may have as physiotherapists from a prevention perspective. Prior to making my case for the importance of prevention and the role of physiotherapists, I want to take this opportunity to thank Dr. Bill Bandy (Editor-in-Chief-*NAJSPT*) for his vision, energy, and unrelenting commitment to the growth and future of this journal which is dedicated to sport physical therapists. In his lead, *NAJSPT* will no doubt enhance the way we deliver evidence-based clinical practice as clinicians in sport medicine.

In my clinical career as a physiotherapist, I have had the fortunate opportunity to work with clients across the lifespan. From pediatric patients in the intensive care unit (ICU) and orthopaedics in an acute care hospital setting early in my career to rehabilitation in sport medicine and orthopaedics, I have treated multiple individuals injured while participating in sport and recreational activities. In addition to the short-term consequences of injury, many individuals experience longer term sequelae related to disability, decreased levels of physical activity, and early development of osteoarthritis. For example, a young female 15 year old soccer player sustaining an anterior cruciate ligament injury is at 10 times the risk of developing osteoarthritis in that knee within 12-20 years, compared to other girls her age who have not sustained such an injury.<sup>1</sup> There is a significant public health cost associated with such injuries and the future development of osteoarthritis.<sup>2</sup>

The good news is that many sport and recreational injuries are both “predictable” and “preventable” and should not be simply considered “accidents” or “bad luck.” Over 10 years ago, van Mechelen et al<sup>3</sup>

presented a vision for future research in injury prevention in sport involving a four step approach. These steps included: 1. Establishing the magnitude of the injury problem (incidence and severity), 2. Identifying the risk factors and mechanism of injury, 3. Developing and introducing a prevention strategy, and 4. Evaluating the prevention strategy by repeating step 1. Meeuwisse<sup>4</sup> recognized the complexity of injury causation and presented a further model for research in injury prevention in sport. They developed a multifactorial model that permits the assessment of multiple risk factors which has led to greater success in predicting athletic injury and has helped guide the development and evaluation of effective prevention strategies in sport. Bahr and Krosshaug<sup>5</sup> further expanded this model to emphasize the need to use a comprehensive model which accounts additionally for the events leading to the injury (playing situation, player and opponent behavior) in addition to the biomechanical mechanism at the time of the injury. They recognized that the ability to develop sport-specific injury prevention strategies is limited by an incomplete understanding of the causes of injury.

Through my clinical experience, injury prevention has become a passion and the core of my research agenda. As an epidemiologist my research focuses on injury prevention in child and adolescent sport. Not a day goes by in clinic when I don't see a young athlete with an injury that may have been prevented; perhaps with appropriate sport-specific preparation, rehabilitation from a previous injury, preventative training strategies, rule adherence, or proper use of equipment. The strategies we utilize every day as physiotherapists in rehabilitation in a sport medicine setting (specifically in preparation for return to sport or activity) may not only reduce recurrence of injury, but may also be implemented in the context of primary prevention. For example, balance training and/or other sport-specific neuromuscular training strategies have not only been shown to be effective in reducing the risk of recurrence of injury, but also reduce the

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risk of injury in some elite athlete groups, adolescent athlete groups, and healthy adolescents.<sup>6-19</sup> Many of the components of these sport-specific injury prevention training strategies are frequently included in rehabilitation programs following injury.

In this special *Prevention* edition of *NAJSPT*, I have been fortunate to span a breadth of topics and athlete populations in the context of sport. Specifically, Brian Tovin presents an evidence-based approach to the treatment and prevention of swimmer's shoulder. Lorrie Maffey and I examine the rationale and evidence for the importance of a physiotherapist delivered preparticipation examination. Beyond injury, Kathleen Pantano demonstrates the critical relationship between the knowledge, perceptions, and behaviors of college coaches regarding the female athlete triad and makes recommendations for future treatment and prevention of this critical continuum which includes disordered eating, menstrual dysfunction, and osteoporosis. Finally, Diana Hopkins-Rosseel provides an evidenced-based perspective on cardiovascular prevention in a high risk sport, ice hockey, with specific attention to clinical applications in a wider sport physical therapy practice.

I hope that this special issue will facilitate an evidence-based approach to examining issues related to prevention of injury, preparticipation examination, the female athlete triad, and cardiovascular prevention in our clinical practice. I challenge you to consider the influence we, as physiotherapists, currently have on athletes in the capacity of rehabilitation and realize that it is imperative that we take it to the next step. We need to further expand our expertise in evidence-based prevention.

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