

TREATING PELVIC FLOOR DYSFUNCTION IN ELITE ATHLETES

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Sarah is a physiotherapist with dual interests in orthopedic and pelvic health physiotherapy.

Sarah worked with the National Alpine Ski team for five years through her affiliation with the Canadian Sport Institute (CSI). During her time as lead physiotherapist at CSI Calgary, Sarah gained extensive experience rehabilitating complex injuries

elite snow sport athlete populations. Highlights include working as a medical team member at the 2018 PyeongChang Winter Olympic Games and two FIS World Ski Championships. Sarah currently practices out of Marda Loop Physiotherapy and Evidence Sport and Spine South in Calgary.

As awareness of pelvic health physiotherapy increases, so does access to such therapy within the Canadian high-performance sport model. I am an orthopedic and pelvic health physiotherapist who spent five years working with winter National Sport

Organizations (NSOs). In this article, I will share some insight into the treatment of pelvic health conditions amongst elite athletes.

Within the sport world, I encountered many athletes with pelvic floor dysfunction, primarily in the form of pelvic floor muscle (PFM) overactivity. Some cases stemmed from pelvic organ pathology. For example, an athlete with a history of PFM hypertonicity who sustained a rectal prolapse after a weight lifting session. Another struggled with bowel dysfunction and pain aggravated by international travel to competitions. Other cases were orthopedic in nature, ranging from chronic low back or hip pain to persistent lower limb overuse injuries that were recalcitrant to focal treatments.

In both instances, the presence of subjective pelvic health complaints and injury chronicity compelled me to view each case through a pelvic health lens. This approach identified and addressed issues that previously hadn't been prioritized, such as nervous system downregulation and myofascial release treatments. Anecdotally, I found that once these treatments yielded improvements, traditional modalities like manual

therapy, therapeutic exercises, and incremental loading strategies were more effective.

KEY DIFFERENCES BETWEEN ELITE ATHLETES AND OTHER POPULATIONS

Training techniques are more rigid when working with athletes, as this population toes the line of optimal load. Perfecting training and sport specific technique minimizes bodily stressors among other benefits. Most athletes have a robust capacity for load tolerance and excellent movement strategies. However, I often find otherwise well-trained athletes lack pelvic girdle movement literacy. They adopt breath holding, over-bracing, and suboptimal trunk-pelvis kinematics as ways to cope with high loads, fatigue, and complex movement tasks.

Conversely, athletes absorb loads so great that typical movement patterns are neither realistic nor ideal in the most strenuous of situations. For example, an alpine skier reported that she pushed out a well fitted tampon over the course of a giant slalom run. Skiers absorb approximately three times their weight in ground reaction forces during a single giant slalom turn while travelling 90 km/hr. In this instance, we focused on improving her response to high intra-abdominal pressures during less complex tasks, while acknowledging this may not translate perfectly when she was maximally loaded.

RETURN TO SPORT GUIDELINES FOR ATHLETES WITH PFM DYSFUNCTION

When an orthopedic injury occurs, NSOs often utilize a framework to guide an athlete's return to sport (RTS) program. The three-tiered system differentiates rehabilitation, return to training, and finally RTS categories. Priority shifts from rehabilitation to sports performance when the medical teams clear the athlete to return to modified training. Once the athlete meets certain qualitative and quantitative milestone-based criteria, they gradually return to full training and competition. Quantitative assessment tools such as limb asymmetry indices obtained via dual force plates or arthrokinematic dynamometry assist with measuring these criteria. In athletes with pelvic floor dysfunction secondary to an orthopaedic issue, most RTS criteria is currently based on best practice guidelines for the primary injury. As such, RTS guidelines for athletes with PFM dysfunction remain largely undefined.

THE INTEGRATED SPORTS TEAM (IST)

Physiotherapy is one of many professions within a national IST. There are many benefits to working alongside a network of knowledgeable professionals. During the modified training RTS stage, physiotherapists and strength and conditioning coaches collaborate to progress rehabilitation goals while simultaneously improving global strength and fitness. Biopsychosocial inputs and nutrition are supported and augmented through sports

psychology and nutrition consults, respectively.

The downside of working with different professionals is that treatment goals are not always aligned. Not all coaches have the theoretical background that allows them to understand the rationale behind certain treatment modalities, especially in the biopsychosocial realm. Education is the first step towards cultivating a common goal and creating a strong team dynamic. Ultimately, successful rehabilitation of the athlete speaks for itself.

In summary, drawing from both an orthopedic and pelvic health background to treat injuries within the high-performance sport world has been highly valuable in rehabilitating patients. There is plenty of room for this sub-speciality to grow through improved pelvic health screening, treatment, and the development of RTS guidelines specific to this population.

