

The importance of sports medicine for the Vancouver Olympic Games

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I remember Turin well. As the head doctor for Norway I witnessed our best alpine skier injure his knee at the very first vertical in the downhill race. The injury probably prevented him from winning a medal that day. However, he managed to recover incredibly fast and won the Gold medal in Super-G 1 week later. Many have not been as lucky as this! In the current edition of *IPHP*, Flørenes *et al* describe the injury incidence among World Cup alpine skiers, and their injury rate is indeed high!¹ (*see page 973*) This is the first large cohort study to examine the overall injury risk and detailed injury patterns among World Cup alpine skiers during the competitive season. The main findings reveal that the injury incidence for elite alpine skiers was higher than reported previously, in general higher for men than women, and that the injury rate increased with skiing speed. The knee was the most commonly injured body part, with a majority of severe injuries. Notably, as many as 38% of all time-loss injuries caused an absence of more than 1 month (more than 28 days).

The entire project is funded by the International Skiing Federation (FIS), who are to be commended for their proactive work in injury prevention. They have put in place a comprehensive register of injuries in all FIS World Cup disciplines, which will form the basis for their injury prevention work in the future.² Based on the van Mechelen model,³ FIS has now carried out the first step in the prevention hierarchy; the magnitude of the problem, the injury incidence, is known. For the next steps towards effective preventive measures, research into studying injury mechanisms and risk factors is ongoing, and soon, finally, they should be able to carry out controlled prevention studies.

There are several other international federations putting a lot of effort into this work: the International Athletic

Federation (IAAF), the International Swimming Federation (FINA), the International Ice Hockey Federation (IIHF) and the International Football Federation (FIFA). However, there are still many major federations which have elected not to play a role in this field.

The role of the IOC will be to establish evidence-based knowledge, support research and disseminate the knowledge throughout the world of sports in cooperation with the international federations. An important step in this direction was the paper on injury surveillance during the Beijing Olympics.⁵

But Vancouver represents much more than injuries. Evolution of new sports and equipment, for example boots, helmets and skis, drives the sports forward, oftentimes to be curbed by subsequent rule changes. In his paper on rule changes in ski jumping, Wolfram Mueller describes how this sport was on the way towards serious difficulties due to low weight amongst its athletes.⁶ (*see page 1013*) Thanks to excellent work by the FIS, who supported Dr Mueller's research group, new rules were adopted. No longer would low body weight lead to an advance; no longer would the skinniest win due to their light weight. To us, this is just one good example of how scientific knowledge can be implemented into practice used to protect the athletes' health, an approach which is to be commended.

The chapter on the value of practical implication is, however, not closed, and more research is needed, as can be seen by the short note from Dr Mountjoy on the new swimming suits worn by the majority of athletes in the FINA World Championship in Rome this summer.⁷ (*see page 979*)

The new suits pose challenges for the swimmer. Costume malfunction or tearing of these expensive swimsuits is common. Due to the properties of the polyurethane, the extreme tight fit and the fragility of the material, dressing into the new swimsuit poses a unique challenge for athletes. On average, it takes the

swimmer 30–45 minutes to dress for a race with the aid of at least one or two assistants. This time-consuming exercise of dressing in the swimsuit has resulted in a newly manifested medical issue facing elite level swimmers: blistering and subsequent ulceration of the fingertips and the dorsum of the distal inter-phalangeal joints. The prevalence of the blisters during the 13th FINA World Championships ranged from 50% to 80% amongst the larger teams. Many of these blisters were extensive, inflamed and irritated, requiring medical attention for symptom control. This clearly poses some medical and ethical questions!

One of the hot issues in the Vancouver Paralympics will be the athletes' pre-competition classification. Beckman and Tweedy have an evidence-based approach to this challenge.⁸ (*see page 1067*) Will this change the rules? Taken together with the two other reports from the Paralympics, one on technology and one on medication during the Athens 2004 games, this will give you excellent insight and knowledge of the challenges the athletes and the medical personnel are met with this winter.

Finally, we introduce a long awaited methodological paper on the epidemiology of overuse injuries.⁹ (*see page 966*) New evidence suggests that overuse injuries may represent as much of a problem as do acute injuries in many sports. By definition, overuse injuries have a gradual onset and cannot be attributed to a specific inciting event; nor — or seldom — do they lead directly to time-loss, illustrating that the magnitude of overuse problems is often not detected in surveys. However, we all know that an overuse injury can result in significantly decreased performance by an athlete and eventually result in a major injury. Hence, new methods are needed to capture overuse injuries during surveillance, and this paper offers you a suggestion. Read, learn and try it out!

Have a wonderful Vancouver Olympics!

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Warm up

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