

Acute sports injuries in Sweden and their possible prevention

an epidemiological study using insurance data

av

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Abstract:

Physical activity is an essential component of a healthy life, e.g. to prevent obesity, cardiovascular disease and premature death, of which sports can be an important part. Unfortunately, sports activities increase the risk of both overuse and acute injuries. Severe acute injuries may also lead to a permanent medical impairment (PMI), which may influence the ability to be physically active throughout life. However, sports injuries may be prevented, but a profound understanding of the injuries and how to prevent them is needed.

This doctoral thesis examine acute sports injuries reported by licensed athletes of all ages and level of sports nationwide in Sweden, by using national insurance data. Approximately 80% of all the Sports Federations (SF) had their mandatory accident insurance in the insurance company Folksam, and since there is no national sports injury surveillance system in Sweden, this is a unique database, able to be used in epidemiological studies on acute injuries occurring in organized sports in Sweden. The main aim of this thesis was to identify high-risk sports for acute injuries, the most common and the most severe injuries, especially in large sports with numerous licensed athletes, many injuries and injuries resulting in PMI. Based on the results, there will be recommendations regarding sports and body locations where injury prevention efforts should be focused to gain the greatest prevention effect at a national level in Sweden. Another aim was to evaluate the effectiveness of a neuromuscular knee control training program (KCP) that has been implemented nationwide to reduce knee and cruciate ligament injuries, among football players in Sweden.

After evaluating the validity and reliability of the information within the database based on international guidelines, acute injury data were examined and the results presented in four papers. These results showed that there is a need of injury prevention especially in motorcycle sports, team ball sports, and ice hockey. Particularly, knee injuries need to be prevented since they were both the most common injuries and leading to PMI. The severe head- and upper limb injuries also need attention. Sixty-nine percent of the PMI injured athletes, were younger than 25 years. The injury prevention training program, KCP can be considered partially implemented nationwide, since 21 out of 24 district SFs provided KCP educations. The incidence of knee and cruciate ligament injuries has decreased among football players in Sweden. A concerning aspect is that there is no national official policy regarding sports injury and injury prevention in Sweden, nor an official authority that has the explicit responsibility for these issues.

Keywords: permanent medical impairment, severe injuries, knee injury, dental, eye injury, football, handball, ice hockey, floorball, basketball, motorcycle, automobile sports, incidence of acute injury

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