THE PREVALENCE OF SERIOUS KNEE INJURIES IN FREESTYLE WORLD CHAMPIONSHIP SKIERS.

Stig Heir1*, Tron Krosshaug2 and Arne Ekeland3.

1PhD student, Oslo Sport Trauma Research Center, Sognsv 220, N-0806 Oslo, Norway.
1Orthopaedic surgeon, Martina Hansens Hospital, Box 23, N-1306 Bærum, Norway.
2Biomechanist, Oslo Sport Trauma Research Center, Sognsv 220, N-0806 Oslo, Norway.
3Director and chief surgeon, Martina Hansens Hospital, N-1306 Bærum, Norway.

A serious knee injury often causes long-time absence from sports, and increases the risk of long-term effects – like abnormal joint dynamics and early onset of degenerative joint disease. The incidence of serious knee injuries among skiers has increased dramatically during the last two decades. Previous studies have disclosed that about 80% of top-ranked alpine skiers have suffered serious skiing injuries during their career, and 31% of Olympic alpine skiers have recovered from former ACL injuries. The purpose of the current study was to determine the prevalence of previous serious knee injuries among freestyle World Championship skiers. At the FIS Freestyle World Championship 2001 a questionnaire for each skier participating was handed out to the team leaders for each team. The skiers were asked to present information concerning their biographicals, whether they had sustained a former major knee injury, under what circumstances the injury happened, whether they had been through an MRI scan and/or arthroscopy, the findings and – given the ACL was torn, whether it was reconstructed.

Eighty skiers filled out and returned the forms. Thirty one of these 80 skiers (38.8%) reported to have had major knee injuries leaving them out of sports for at least 3 weeks. Nine of the women (31.0%) and 8 of the men (15.7%) reported to have a former ACL reconstruction in one or both knees (4/17). Three skiers (3.8%) reported to have had a cartilage injuries without an ACL injury, 4 skiers (5.0%) reported meniscal tears without ACL or cartilage injuries and 7 skiers (8.8%) reported isolated MCL injuries.

The high prevalence of previous serious knee injuries among freestyle World Championship skiers suggest that many skiers are able to return to the same level of top athlete performance despite the fact that they have suffered a major knee injury. The prevalence of ACL injuries were twice as high in the female as in the male skiers.