

IS THERE AN ASSOCIATION BETWEEN FLOOR TYPE AND ACL INJURY INCIDENCE IN TEAM HANDBALL?

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Introduction: The aim of the study was to examine the association between floor type and the incidence of ACL injuries in Norwegian team handball.

Methods: ACL injuries have been prospectively recorded during three periods: From the three upper divisions for men and women during the 1989-91 seasons, from the elite divisions for men and women during the 1993-96 seasons, and from the three upper divisions for women during the 1998-2000 seasons. A total of 174 ACL injuries have been recorded during the seven seasons studied, and of these 54 occurred in regular league matches. Injured players were interviewed based on a standard questionnaire, including information on floor type. All regular matches from the same seasons have been recorded retrospectively based on leagues schedules. A total of 6746 matches were played. The floor type was recorded for each match based on information from the Ministry of Cultural Affairs and the Norwegian Building Research Institute, and floor types were grouped in two groups: Wooden and artificial floors. Injury incidence (injuries/1000 h player hours) was compared between floor types using chi square statistics.

Results: A total of 42 injuries occurred during 4440 matches on artificial floors (0.67/1000 h) and 12 injuries occurred during 2296 matches on wooden floors (0.38/1000 h; OR: 1.80 (0.91-3.61, P=0.07). Among women 37 injuries occurred during 2682 matches on artificial floors (0.99/1000 h) and 8 injuries occurred during 1391 matches on wooden floors (0.41/1000 h; OR: 2.40 (1.07-5.59, P=0.02). Among women in the elite division 14 injuries occurred during 633 matches on artificial floors (1.58/1000 h) and 2 injuries occurred during 289 matches on wooden floors (0.49/1000 h; OR: 3.20 (0.69-20.5, P=0.08).

Conclusion: It appears that the risk of ACL injury is higher on artificial floor types than on wooden floors.