ball pass before and after a high-speed 180° pivot turn on the force plates.

Following variables were analysed

Peak vertical ground reaction force (N/kg), peak trunk lateral flexion angle (degree), peak knee flexion angle (degree), peak knee valgus angle (degree), peak knee flexion moment (Nm/kg), peak knee abduction moment (Nm/kg), and peak knee internal and external rotation moments (Nm/kg). Mean of three trials was used. Injuries and exposure were registered for 12 months.

Main Outcome Measurements New acute non-contact knee injury.

Results The complete data was obtained from 109 female and 149 male basketball (n=130) and floorball (n=128) players. A total of 18 new non-contact knee injuries were registered (0.3 injuries/1000 h of exposure). Female players sustained 14 knee injuries and male players 4. A higher rate of knee injuries was observed in females compared with males (incidence rate ratio 6.2, 95% CI 2.1–21.7). Eight ACL injuries were registered (all in female players). Females displayed significantly larger peak knee valgus angles compared with male (mean for female and male, respectively: 13.9 and 2.0 degree). No significant associations between biomechanical variables and knee injury risk were found.

Conclusions Female players were at increased risk of knee and ACL injury compared with males. Female players performed the 180-degree pivot turn with significantly larger knee valgus compared with male. However, none of the investigated variables were associated with knee injury risk in youth basketball and floorball players.

Main Outcome Measurements Inter-team comparisons were calculated using the following formula: 'Cumulative injury burden resulting from mandatory reportable injuries (24 days) per team-season/number of competitive matches per team-season'.

Results Every German professional handball player missed on average (cumulative) 28.7 days per season due to injuries. The total burden equaled 66,597 days of absence (HB: 31,247, HB2: 35,350). The mean injury burden per competitive match over the three observed seasons for all HB teams ranged from 12.5 to 14.2 days of absence with individual rates ranging from 4.3 to 28.8 (2014/2015), 2.1 to 27.5 (2015/2016) and 2.3 to 33.6 (2016/2017). For HB2 teams the mean burden ranged from 13.3 to 14.6 days of absence per competitive match, with individual rates ranging from 3.0 to 25.1 (2014/2015), 2.5 to 30.0 (2015/2016) and 0.9 to 35.7 (2016/2017).

Conclusions These wide ranges indicate that a reduction in the injury burden seems generally possible and that some teams and coaching staffs are more successful concerning their preventive (coach, medical and therapeutic specific) player support.

044 EVALUATION OF BODY CHECKING POLICY FOR INJURY PREVENTION IN NON-ELITE ADOLESCENT ICE HOCKEY PLAYERS

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Background Although high injury prevalences and incidences for professional handball were reported, longitudinal analysis of injury burden remain rare.

Objective Analysis of the injury data of the national statutory accident insurance (VBG) for the two highest divisions in German professional male handball over three consecutive seasons regarding interseason, inter-division and inter-team differences of injury burden.


Setting German professional male handball (Handball Bundesliga=HB, 2. Handball Bundesliga=B2).

Patients (or Participants) All first and second division handball players who played at least one competitive club match within the seasons 2014/15 (n=808), 2015/16 (n=757) and 2016/17 (n=758) were included.

Interventions (or Assessment of Risk Factors) Analysis of all injuries that were registered by clubs or physicians with the German statutory accident insurance for professional athletes (VBG) as part of occupational accident reporting and that led to time loss and/or to medical attention.
PERCEIVED BARRIERS AND FACILITATORS TOWARDS AN INJURY PREVENTION PROGRAM AMONG PROFESSIONAL MALE ICE HOCKEY PLAYERS AND STAFF MEMBERS

Background Lower extremity injury prevention programs are effective in team sport athletes. 

Objective This study identifies barriers to and facilitators for an injury prevention program in professional male ice hockey teams among players and staff members.

Design Cross-sectional survey.

Setting Professional male ice hockey teams.

Participants Eight Swiss National League A (NLA) teams and their staff members were invited to participate in the study and voluntarily completed the questionnaire. Inclusion criteria were the ability to understand German or English and signed informed consent. Six teams completed the questionnaire (148 players and 11 staff members).

Main outcome measurements Frequency of ratings related to knowledge, attitude, adherence and habits were analysed. Binary logistic regression analysis was applied to predict a relationship between players’ characteristics and positive attitude towards an injury prevention program.

Results Knowledge, perceived benefit and relevance of injury prevention as well as awareness of high risk of injuries in ice hockey were identified as important facilitators. Players’ habit of exercise performance was identified as a barrier. Program understanding of staff members was identified as a facilitator and barrier. No significant relationships were observed between a high/low perceived benefit of an injury prevention program and age (p = 0.85), nationality (p = 0.53), level of education (p = 0.63), National League experience (p = 0.50) or occurrence of lower extremity injuries in the previous season (p = 0.10).

Conclusion Identified barriers and facilitators should be addressed when developing and implementing an injury prevention program in a setting of professional ice hockey teams. An injury prevention program should be offered to and implemented in players of all ages, levels of education and experience in National League, irrespective of previous injuries.