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Risk of injury in elite football played on artificial turf versus natural grass: a prospective two-cohort study.

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OBJECTIVE: To compare injury risk in elite football played on artificial turf compared with natural grass. DESIGN: Prospective two-cohort study. SETTING: Male European elite football leagues. PARTICIPANTS: 290 players from 10 elite European clubs that had installed third-generation artificial turf surfaces in 2003-4, and 202 players from the Swedish Premier League acting as a control group. MAIN OUTCOME MEASURE: Injury incidence. RESULTS: The incidence of injury during training and match play did not differ between surfaces for the teams in the artificial turf cohort: 2.42 v 2.94 injuries/1000 training hours and 19.60 v 21.48 injuries/1000 match hours for artificial turf and grass respectively. The risk of ankle sprain was increased in matches on artificial turf compared with grass (4.83 v 2.66 injuries/1000 match hours; rate ratio 1.81, 95% confidence interval 1.00 to 3.28). No difference in injury severity was seen between surfaces. Compared with the control cohort who played home games on natural grass, teams in the artificial turf cohort had a lower injury incidence during match play (15.26 v 23.08 injuries/1000 match hours; rate ratio 0.66, 95% confidence interval 0.48 to 0.91). CONCLUSIONS: No evidence of a greater risk of injury was found when football was played on artificial turf compared with natural grass. The higher incidence of ankle sprain on artificial turf warrants further attention, although this result should be interpreted with caution as the number of ankle sprains was low.

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