## Comparison of the incidence, nature and cause of injuries sustained on grass and new generation artificial turf by male and female football players. Part 2: training injuries.

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OBJECTIVE: To compare the incidence, nature, severity and cause of training injuries sustained on new generation artificial turf and grass by male and female footballers. METHODS: The National Collegiate Athletic Association Injury Surveillance System was used for a two-season (August to December) prospective study involving American college and university football teams (2005 season: men 52 teams, women 64 teams; 2006 season: men 54 teams, women 72 teams). Injury definitions and recording procedures were compliant with the international consensus statement for epidemiological studies of injuries in football. Athletic trainers recorded details of the playing surface and the location, diagnosis, severity and cause of all training injuries. The number of days lost from training and match play was used to define the severity of an injury. Training exposures (player hours) were recorded on a team basis. RESULTS: The overall incidence of training injuries for men was 3.34 injuries/1000 player hours on artificial turf and 3.01 on grass (incidence ratio 1.11; p = 0.21) and for women it was 2.60 injuries/1000 player hours on artificial turf and 2.79 on grass (incidence ratio 0.93; p = 0.46). For men, the mean severity of injuries that were not season ending injuries was 9.4 days (median 5) on artificial turf and 7.8 days (median 4) on grass and, for women, 10.5 days (median 4) on artificial turf and 10.0 days (median 5) on grass. Joint (non-bone)/ligament/cartilage and muscle/tendon injuries to the lower limbs were the most common general categories of injury on artificial turf and grass for both male and female players. Most training injuries were acute (men: artificial turf 2.92, grass 2.63, p = 0.24; women: artificial turf 1.94, grass 2.23, p = 0.21) and resulted from player-to-player contact (men: artificial turf 1.08, grass 0.85, p = 0.10; women: artificial turf 0.47, grass 0.56; p =0.45). CONCLUSIONS: There were no major differences between the incidence, severity, nature or cause of training injuries sustained on new generation artificial turf and on grass by either men or women.

PMID: 17646247 [PubMed - indexed for MEDLINE]