

(77.5%) nor of guidelines for dealing with infected athletes (80.0%) or for return to sports after a coronavirus infection (88.6%). Preventive measures mentioned included basic hygiene, measures to reduce personal contacts or virus transmission, or to improve traceability. During confinement, higher age ( $p = 0.004$ ) and training in a club-setting ( $p < 0.001$ ) were associated with reduced sporting activity, while the availability of online training ( $p = 0.030$ ) was linked to increased extent and intensity levels. Lower age ( $p = 0.001$ ) and recreational sports level ( $p = 0.005$ ) were associated with decreased activity after confinement.

**Conclusions** While isolation is a necessary measure to protect public health, it also alters physical activity.

#### 434 THE EFFECTIVENESS OF A VOLLEYBALL INJURY PREVENTION PROGRAM TAILORED TO YOUTH PLAYERS

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**Background** In the Netherlands, volleyball is ranked among the top 5 sports with the highest number of injuries, and over 35% of these injuries are sustained by youth players.

**Objective** To assess the effectiveness of a volleyball specific youth injury prevention program on injury incidence, injury severity and injury burden.

**Design** Quasi-experimental study based on a prospective controlled design with a follow-up period of one volleyball season. Randomization was based on competition region (2 intervention regions, 2 control regions). Exposure data of youth volleyball players were collected by trainers on a weekly basis. In case of absence due to a volleyball related injury, injury details were obtained.

**Setting** Youth teams playing in the Dutch volleyball competition.

**Participants** Players aged under 17 years who train and compete in the Dutch volleyball. In total, 518 players were included in this study (286 intervention group, 232 control group).

**Intervention** A volleyball specific warming-up programme tailored to youth, aimed at increasing motor ability and neuromuscular control.

**Main Outcome Measurements** Injury incidence, injury severity and injury burden. Subgroup analyses for injury onset (acute or overuse) and injury location (upper extremity or lower extremity).

**Results** No overall effect of the intervention was reported for injury incidence, injury severity and injury burden. Subgroup analysis showed that upper extremity injury rate was reduced by ~60% (HR 0.41, 95%CI 0.20 – 0.83). A trend was found suggesting that the risk for an acute injury was reduced by ~40% (HR 0.61, 95%CI 0.36 – 1.02).

**Conclusions** No overall effect of the youth volleyball injury prevention program was found. The preventive program was, however, very effective in reducing upper extremity injury

rates in youth players. With respect to acute volleyball related injuries, results were promising.

#### 435 COMPLIANCE WITH AN INDIVIDUALIZED VS. THE FIFA 11+ INJURY PREVENTION PROGRAM

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**Background** Players' compliance with injury prevention programs (IPP) can significantly affect the effectiveness of such programs in injury reduction.

**Objective** To evaluate players' compliance with an individualized IPP to compared to the established FIFA 11+ IPP.

**Design** Cross-sectional study

**Setting** Semi-professional football. The data was obtained from a pilot study comparing the effectiveness of individualized vs. generalized (i. e. one-size-fits-all) IPPs.

**Participants** 72 semi-professional soccer players from 4 clubs (age:  $22.3 \pm 4.7$ ; weight:  $75 \pm 10$  kg; height:  $177 \pm 9$  cm) participated in the study and were divided into two groups of 1) Individualized and 2) FIFA 11+.

**Interventions** The individualized group completed 6 weeks of unsupervised, individualized IPP based on their functional movement screen scores. FIFA 11+ group completed 6 weeks of FIFA 11+. After the 6 weeks (18 sessions), the compliance with programs was assessed using an online questionnaire.

**Main Outcome Measurements** Compliance with the IPP defined as the players' self-assessment of how correctly they followed all instructions during all sessions. Players were classified based on their self-report as fully complied (carried out 16 and more successful sessions), partially complaint (8–15 sessions) and not complaint (less than 8 session).

**Results** A total of 29 (81%) players in the individualized PP group said they had fully complied during the 6 weeks of individualized IPP; 5 (14%) said they had been partially compliant and 2 (5%) classified as not compliant. In FIFA 11+ group 15 (41%) had fully complied; 14 (39%) said they had been partially compliant and 7 (20%) were classified as not compliant.

**Conclusions** The results indicate that an individualized IPP may be superior to 11+ IPP in terms of players' compliance. Further research needs to expand the sample size and to investigate the relationship between compliance and injury reduction effect of individualized IPPs.

#### 436 HOME-BASED INJURY PREVENTION PROGRAM DURING COVID-19 LOCKDOWN REDUCED INJURIES DURING THE REMAINING SEASON IN SEMI-PROFESSIONAL FOOTBALL PLAYERS

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**Background** The Covid-19 pandemic caused a forced lockdown longer than the normal annual season break in Iranian