

The FIFA 11+ Programme is Effective in Preventing Injuries in Elite Male Basketballers: A Cluster Randomised Controlled Trial

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Summary:

The FIFA 11+ warm-up program is effective in reducing the rates of injuries in elite male basketballers.

Abstract:

Background:

Recently, structured training programs for sports injury prevention ("The 11" and "The 11+") have been validated in soccer. The FIFA 11+ program has not been evaluated in basketball.

Hypothesis:

The FIFA 11+ program is effective in reducing the rates of injury in male basketball players

Study Design:

Cluster Randomised Controlled Clinical Trial

Methods:

We randomised 11 teams of the same club. 7 teams were allocated to the intervention group [80 players, 13.5 (SD 2.3) years] and 4 teams were allocated to the control group [41 players, 15.2 (SD 4.6) years]. We conducted an injury surveillance program during a nine month season. The primary outcome was any injury to the athletes. The secondary outcome was any injury to the lower extremity (foot, ankle, lower leg, knee, thigh, groin, and hip). We included an analysis of the type of exposure (match or training), injury location in the body, and type of injury (acute or overuse).

Results:

During the nine month season, 23 (19%) of the 121 players included in the study sustained a total of 31 injuries (14 in the intervention group and 17 in the control group). In the intervention group, injury rates per 1000 athlete exposures were lower than those in the control group, with statistical significance, for overall injuries (0.95 vs 2.16, $P=0.0004$), training injuries (0.14 vs 0.76, $P=0.007$), lower extremity injuries (0.68 vs 1.4, $P=0.022$), acute injuries (0.61 vs 1.91, $P<0.0001$) and severe injuries (0 vs 0.51, $P=0.004$). The intervention group had also a statistically significant lower injury rates for trunk (0.07 vs 0.51, $P=0.013$), leg (0 vs 0.38, $P=0.007$), and hip and groin (0 vs 0.25, $P=0.023$) injuries as compared to the control group. There was no statistically significant difference in match injuries, knee injuries, ankle injuries and overuse injuries between two groups. The most frequent acute injury diagnoses were ligament sprains (0.41 and 0.38 in the intervention and control groups respectively, $P<0.006$) and contractures (0.76 and 0.07 in the control and intervention groups respectively, $P<0.003$).

Conclusions:

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