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Training load management to reduce injuries in elite youth football

Submission date
21/12/2017

Recruitment status
No longer recruiting

Registration date
16/02/2018

Overall study status
Completed

Last Edited
14/10/2020

Condition category
Injury, Occupational Diseases, Poisoning

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Youth football has similar injury problems to adult football, and injuries should therefore be considered a problem. An injury to a youth footballer could be detrimental to their ambitions and even worse, make them drop out of organized sports. However, research has shown that it is possible to reduce the rate of injuries in youth football. For example, the FIFA 11+ has shown a large reduction in overall injuries. However, prevention interventions in football have to date focused almost exclusively on interventions designed to alter intrinsic modifiable risk factors, for example through a structured warm up. Although training load seems to be highly associated with injury risk, no intervention has to date investigated training load management. The aim of this study is to investigate the effect of a training load progression model on injuries in elite youth footballers.

Who can participate?
Male and female footballers aged 15-19 from one of the top three tiers in Norwegian Junior football

What does the study involve?
The participating teams are randomly allocated to either the intervention group or the control group. Teams in the intervention group conduct training based on a load progression model. The control group is asked to continue normal training activity.

What are the possible benefits and risks of participating?
The knowledge gained will be of use to researchers, doctors and coaching staff working with all team sports. This program have no side effects and there is no potential risk involved in participating in the study. The total duration of intervention and follow-up is 11 months. The percentage of players reporting a health issue is measured using a questionnaire via text message on the last Sunday of each month.

Where is the study run from?
Oslo Sports Trauma Research Center (Norway)

When is the study starting and how long is it expected to run for?
January 2018 to November 2018

Who is funding the study?
Oslo Sports Trauma Research Center (Norway)

Who is the main contact?
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Contact information

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Public

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Additional identifiers

Protocol serial number
93841844

Study information

Scientific Title
Training load management to reduce injuries in elite youth football: a cluster randomised controlled trial

Study objectives
Individual training load management can reduce risk of injuries among elite youth footballers.

Ethics approval required
Old ethics approval format

Ethics approval(s)
The Norwegian School of Sciences Ethics Board, 21/12/2017, ref: 39-191217

Study design
Single-center cluster randomized controlled trial

Primary study design
Interventional

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Risk of injuries among elite youth footballers

Interventions
The trialists will cluster randomise on a team level. A computer-generated block randomisation will be performed, with block sizes of 4 and 6 in random order. After a team agrees to participate, the principal investigator will open a sealed envelope revealing their group assignment.

The teams will be randomly allocated to either the intervention group (18 teams, 300 players) or the control group (18 teams, 300 players). Intervention group coaches will be given access to a digital tool for training load management. The coaches will plan their player's training weeks based on a progression model. The control group is asked to continue normal training activity. The total duration of intervention and follow-up is 11 months.

Intervention Type
Other

Primary outcome(s)
Prevalence of health problems (percentage of players reporting a health issue), collected using the Oslo Sports Trauma Research Center Questionnaire via an SMS system on the last Sunday of each month

Key secondary outcome(s))
Incidence of injuries, collected through previously reported method (https://www.ncbi.nlm.nih.gov/pubmed/27034126) where the teams provide all time-loss injuries and illnesses

Completion date
30/11/2018

Eligibility

Key inclusion criteria
1. Elite youth footballers competing in one of the three highest levels
2. Both genders
3. Aged 15-19

Participant type(s)
Healthy volunteer

Healthy volunteers allowed
No

Age group
Other

Sex
All

Total final enrolment
482

Key exclusion criteria
Unable to communicate in Scandinavian language

Date of first enrolment
15/01/2018

Date of final enrolment
25/01/2018

Locations

Countries of recruitment
Norway

Study participating centre
Norwegian School of Sports Sciences
Norway
0863

Sponsor information

Organisation
Norwegian School of Sport Sciences

ROR

https://ror.org/045016w83

Funder(s)

Funder type
Research organisation

Funder Name
Oslo Sports Trauma Research Center

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and analysed during the current study are available upon request from Torstein Dalen-Lorentsen (Torstein.dalen@nih.no). All data is non-identifiable.

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/01/2021	13/10/2020	Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes