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Frequent intense training in schools for teenagers

Submission date	Recruitment status	[_] Prospectively registered
04/06/2024	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
04/07/2024	Completed	[_] Results
Last Edited	**Condition category**	[_] Individual participant data
06/08/2026	Other	[X] Record updated in last year

Plain English summary of protocol

Background and study aims
This study plans to evaluate the effects of a 10-week FIT FIRST Teen (FFT) intervention on blood pressure, physical fitness and body composition of Danish adolescents aged 12-15 years old. The 10-week FFT training is expected to have beneficial effects on resting heart rate for Danish 12-15-year-olds, calling for further development and long-term evaluation of the program.

Who can participate?
Danish pupils aged 12 to 17 years old in 6th to 9th grade from 15 municipal schools

What does the study involve?
Participants will be randomly allocated to an intervention group or a usual practice control group. The FFT group will complete three weekly 40-minute FFT sessions with modified, motivating, involving, high-intensity sports-based activities. Before and after the 10-week intervention, resting heart rate and blood pressure, body composition (InBody270), postural balance, standing long jump and performance on the Yo-Yo intermittent recovery level 1 children's test (YYIR1C) will be measured.

What are the possible benefits and risks of participating?
The possible benefits are a better health profile and there are no risks of participating.

Where is the study run from?
University of Southern Denmark

When is the study starting and how long is it expected to run for?
August 2021 to December 2022

Who is funding the study?
1. Ole Kirk's Foundation
2. Novo Nordisk Foundation

Who is the main contact?
Dr Malte Larsen, mnlarsen@health.sdu.dk

Contact information

Type(s)
Public, Scientific, Principal investigator

Contact name
Dr Malte Larsen

Contact details
University of Southern Denmark, Campusvej 55
Odense
Denmark
5231
+45 40304689
mnlarsen@health.sdu.dk

Additional identifiers

Study information

Scientific Title
The physical health effects of frequent intense training in schools for teenagers

Acronym
FIT FIRST TEEN

Study objectives
Frequent intense training in schools for teenagers will improve their physical health status

Ethics approval required
Ethics approval not required

Ethics approval(s)
17/08/2021: The Scientific Ethics Committee 2 for Region Southern Denmark confirmed that the project is not subject to notification to the committee system, as the project does not fall within the definition of a health science research project; ref: 21/43086

Primary study design
Interventional

Study design
Cluster randomized controlled trial

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Prevention of lifestyle diseases

Interventions
Randomization will be performed on a school level by picking notes with school names from a bowl. Pupils will be randomly allocated to either the intervention group or a usual practice control group. The intervention uses a specific sports training concept (FIT FIRST), which the teachers in the school deliver 3 x 40 minutes per week for 10 weeks.

Intervention Type
Behavioural

Primary outcome(s)
Cardiorespiratory fitness measured using the Yoyo test at baseline and after 10 weeks

Key secondary outcome(s)
The following secondary outcome measures will be assessed at baseline and after 10 weeks:
1. Body composition measured using bioimpedance (InBody 270)
2. Resting heart rate and blood pressure measured using the Oscillometric method
3. Balance measured using the stork balance test
4. Muscle strength measured using the standing long jump test

Completion date
30/12/2022

Eligibility

Key inclusion criteria
Pupils at the recruited schools in 6th to 9th grade

Participant type(s)
Learner/student

Healthy volunteers allowed
No

Age group
Child

Lower age limit
12 Years

Upper age limit
17 Years

Sex
All

Total final enrolment
1355

Key exclusion criteria
Not meeting the participant inclusion criteria

Date of first enrolment
01/08/2022

Date of final enrolment
20/12/2022

Locations

Countries of recruitment
Denmark

Study participating centre
University of Southern Denmark
Campusvej 55
Odense
Denmark
5231

Sponsor information

Organisation
University of Southern Denmark

ROR
https://ror.org/03yrrjy16

Funder(s)

Funder type
Charity

Funder Name
Ole Kirk's Fond

Alternative Name(s)
Ole Kirk's Foundation, Ole Kirks Fond

Funding Body Type
Private sector organisation

Funding Body Subtype

Trusts, charities, foundations (both public and private)

Location
Denmark

Funder Name
Novo Nordisk Fonden

Alternative Name(s)
Novo Nordisk Foundation, Novo Nordic Foundation, NNF

Funding Body Type
Private sector organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
Denmark

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Other publications	Analysis of baseline data	08/09/2025	06/08/2026	Yes	No