

# Frequent intense training in schools for teenagers

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| <b>Submission date</b><br>04/06/2024   | <b>Recruitment status</b><br>No longer recruiting | <input type="checkbox"/> Prospectively registered<br><input type="checkbox"/> Protocol                       |
| <b>Registration date</b><br>04/07/2024 | <b>Overall study status</b><br>Completed          | <input type="checkbox"/> Statistical analysis plan<br><input type="checkbox"/> Results                       |
| <b>Last Edited</b><br>10/09/2024       | <b>Condition category</b><br>Other                | <input type="checkbox"/> Individual participant data<br><input type="checkbox"/> 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](mailto:mnlarsen@health.sdu.dk)

# Contact information

## Type(s)

Public, Scientific, Principal investigator

## Contact name

Dr Malte Larsen

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# 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

## Study design

Cluster randomized controlled trial

## Primary study design

Interventional

## 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**

The data sharing plans for the current study are unknown and will be made available at a later date

**IPD sharing plan summary**

Data sharing statement to be made available at a later date