

# **Establishing the length of physical activity needed to improve cognitive performance in Dutch adolescents (11-14 years).**

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In this study we will investigate whether the effects of physical activity on cognitive performance are present after short (10 minutes), medium (20 minutes) or longer (30 minutes) bouts of moderate exercise in order to establish the feasibility of...

<b>Ethische beoordeling</b>	Positief advies
<b>Status</b>	Werving nog niet gestart
<b>Type aandoening</b>	-
<b>Onderzoekstype</b>	Interventie onderzoek

## **Samenvatting**

### **ID**

NL-OMON20170

### **Bron**

NTR

### **Aandoening**

Physical activity, exercise, cognitive performance, school grades, physical fitness, exercise intensity, exercise duration, gym, school, adolescents

Beweging, cognitieve prestatie, schoolcijfers, leren, school, adolescenten, bewegingsinspanning, bewegingsduur

### **Ondersteuning**

**Primaire sponsor:** VU University Medical Center (Performer)

**Overige ondersteuning:** NWO

### **Onderzoeksproduct en/of interventie**

## **Uitkomstmaten**

### **Primaire uitkomstmaten**

Cognitive performance on a task measuring selective attention and a task measuring working memory.

## **Toelichting onderzoek**

### **Achtergrond van het onderzoek**

Participation in physical activity (PA) has received particular attention in the scientific literature, not only for its beneficial effects on physical and emotional health, but also for its positive effects on cognitive functioning. A single bout of physical exercise has been found to increase performance on tasks measuring higher order cognitive processes, such as attention and working memory.

The majority of studies performed to investigate the relationship between PA and cognitive performance, implement exercise sessions of approximately 30 minutes at a moderate to vigorous level of intensity. Such long exercise sessions are difficult to implement in a school setting, as such, it is necessary to assess whether the effects of physical activity on cognitive performance are present after shorter bouts of exercise.

In this study, we investigate PA-related effects on cognitive performance after engaging in physical exercise at 10, 20 and 30 minutes.

### **Doel van het onderzoek**

In this study we will investigate whether the effects of physical activity on cognitive performance are present after short (10 minutes), medium (20 minutes) or longer (30 minutes) bouts of moderate exercise in order to establish the feasibility of implementing exercise programs in a school setting.

### **Onderzoeksopzet**

This is a cross-sectional study, therefore, the acute effects of physical activity will be measured at one timepoint per group.

### **Onderzoeksproduct en/of interventie**

Group 1) Acute effects of 10 minutes of physical activity at a moderate level of intensity.

Group 2) Acute effects of 20 minutes of physical activity at a moderate level of intensity.

Group 3) Acute effects of 30 minutes of physical activity at a moderate level of intensity.

Control conditions

Group 1) Reading, filling in questionnaires and solving puzzles for 10 minutes.

Group 2) Reading, filling in questionnaires and solving puzzles for 20 minutes.

Group 3) Reading, filling in questionnaires and solving puzzles for 30 minutes.

## Contactpersonen

### Publiek

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## Deelname eisen

### Belangrijkste voorwaarden om deel te mogen nemen

## **(Inclusiecriteria)**

Dutch adolescents following elementary and high school (11-14 years).

## **Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)**

-none-

## **Onderzoeksopzet**

### **Opzet**

Type:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Toewijzing:	Gerandomiseerd
Blinding:	Open / niet geblindeerd
Controle:	Geneesmiddel

### **Deelname**

Nederland	
Status:	Werving nog niet gestart
(Verwachte) startdatum:	04-11-2014
Aantal proefpersonen:	80
Type:	Verwachte startdatum

## **Ethische beoordeling**

Positief advies	
Datum:	30-10-2014
Soort:	Eerste indiening

# Registraties

## Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

## Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

## In overige registers

Register	ID
NTR-new	NL4758
NTR-old	NTR4886
Ander register	METc VUmc: 2014.363 : EMGO+ institute: WC2014-020

# Resultaten