

# The rate of perceived exertion during exercise in children with overweight or obesity.

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<b>Ethical review</b>	Approved WMO
<b>Status</b>	Recruitment stopped
<b>Health condition type</b>	Other condition
<b>Study type</b>	Observational non invasive

## Summary

### ID

NL-OMON33050

### Source

ToetsingOnline

### Brief title

Perceived exertion during exercise in obese children

### Condition

- Other condition

### Synonym

Overweight; obesity

### Health condition

Obesitas

### Research involving

Human

## Sponsors and support

**Primary sponsor:** Ziekenhuisvoorzieningen Gelderse Vallei

**Source(s) of monetary or material Support:** Alliantie Ziekenhuis Gelderse Vallei en Wageningen Universiteit

## Intervention

**Keyword:** Children, Health-related quality of life, Overweight or obesity, Perceived exertion during exercise

## Outcome measures

### Primary outcome

The primary study parameters are the HRQoL of the child reported by the parent and the child itself and the rate of perceived exertion during exercise.

### Secondary outcome

The secondary study parameters are physical activity and physical fitness.

## Study description

### Background summary

The prevalence of childhood obesity and overweight is high and increases. Physical activity is important in preventing and treating obesity and in reducing cardiovascular risk factors. Participation in physical activity by children has also an important role in reducing obesity in adulthood. To enhance physical activity it is important to know which factors influence this behaviour. Cognitive and emotional aspects play a part. The rate of perceived exertion during exercise is higher in obese children, but the Health Related Quality of Life (HRQoL) is lower in these children. It is unknown if this HRQoL is associated with the rate of perceived exertion and with physical fitness and the rate of physical activity in daily life. This is important because cognitive therapy has an increasing role in lifestyle-intervention programs, this therapy could focus on emotional and cognitive aspects to increase the HRQoL.

Our hypothesis is that a lower HRQoL is associated with a higher rate of perceived exertion during exercise.

### Study objective

The primary objective of this study is to determine the association between HRQoL and the rate of perceived exertion in children with overweight or obesity.

The secondary goals are 1) investigation of the association between physical activity, physical fitness and HRQoL and perceived exertion during exercise; 2) to determine the difference between the HRQoL of the child reported by the parent and reported by the child itself; and 3) to evaluate if the present intervention program increases the HRQoL and if this involves a better rate of perceived exertion during exercise.

## **Study design**

This study is an observational cohort study. Children (and their parents) who will start this fall with the obesity and overweight treatment program 'de Dikke vrienden Club' in hospital 'Gelderse Vallei' in Ede will be asked for participation. There will be two measurement periods. One at the start of the program and one after the intensive part of the treatment (3 months). Both measures include three parts: a questionnaire (for both parent and child), accelerometry and an exercise test (during this test the rate of perceived exertion will be measured also).

## **Study burden and risks**

The child and its parents are asked to participate in extra measurements for this study. These measurements are of a minimal burden.

The participants will be asked to wear an accelerometer during four days. The parents and children will be asked to fill in a questionnaire about the HRQoL of the child, this will take 20 minutes. The children will be asked to participate in an exercisetest, this will take ~ 45 minuten. During this test the heartrate and the oxygensaturation will be measured. The oxygen consumption will be measured by a facemask. These measurements won't hurt. After the exercisetest the child can experience tiredness.

These measurements are going to take place two times. Before the start of the present treatment and after the intensive part of this treatment (3 months).

These measurements will be linked to an already planned visit to the hospital.

The risks for the participants are minimal, these children are physically capable to exercise. On exhaustion they have the possibility to stop. The incidence of sudden death among Minnesota high school athletes was estimated to be 1 case/200,000 population per year. There is no documentation of sudden death among athletes who are overweight or obese. In fact, routine exercise has been well-documented to be beneficial for these conditions. To lower the risks there will be exclusion of children with a higher risk on sudden death based on their medical history or family history.

## Contacts

### Public

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NL

### Scientific

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## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

### Age

Adolescents (12-15 years)

Adolescents (16-17 years)

Children (2-11 years)

### Inclusion criteria

Participant of a programme for treating children age 8-12y with obesity or overweight, this programme is named 'Dikke Vrienden Club'

Informed consent

### Exclusion criteria

No informed consent

Based on patient's medical history or family history increased risk at sudden death in exercise

## Study design

### Design

**Study type:** Observational non invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Basic science

### Recruitment

NL

Recruitment status: Recruitment stopped

Start date (anticipated): 13-10-2009

Enrollment: 36

Type: Actual

## Ethics review

Approved WMO

Date: 18-09-2009

Application type: First submission

Review commission: METC Wageningen Universiteit (Wageningen)

## Study registrations

### Followed up by the following (possibly more current) registration

No registrations found.

### Other (possibly less up-to-date) registrations in this register

No registrations found.

**In other registers**

Register	ID
CCMO	NL28624.081.09