# Salivary cortisol response after exercise in prepubertal children with asthma

Published: 27-09-2011 Last updated: 29-04-2024

Comparison of the salivary cortisol response after a standardized exercise test between prepubertal heathy children and children with asthma.

Ethical review	Approved WMO	
Status	Recruitment stopped	
Health condition type	Adrenal gland disorders	
Study type	Interventional	

# **Summary**

## ID

NL-OMON36183

**Source** ToetsingOnline

**Brief title** Salivary cortisol response after exercise

# Condition

• Adrenal gland disorders

**Synonym** adrenal function, cortisol respons

**Research involving** Human

# **Sponsors and support**

**Primary sponsor:** Medisch Centrum Leeuwarden **Source(s) of monetary or material Support:** Stichting Pediatrie Leeuwarden en/of Wetenschapsfonds Medisch Centrum Leeuwarden

## Intervention

Keyword: asthma, exercise test, prepubertal, salivary cortisol respons

## **Outcome measures**

#### **Primary outcome**

Primary study parameter is the cortisol reponse (salivary cortisol level 15

minutes after cessation of the test minus pre exercise slaviary cortisol level)

of the children with asthma compared to the cortisol repsonse of the healthy

children

#### Secondary outcome

Secundary study parameter: correlation between mornong (basal) salivary

cortiosl level and cortisol repsons

# **Study description**

#### **Background summary**

We have demonstrated that children with asthma have a significantly lower salivary cortisol level than healthy prepubertal children. The clincial relevance of this finding is unknown. However, in healthy adults it was shown that short term treatment with inhaled corticosteroids blunted the cortisol response during acute exercise. To the best of our knowledge, the effect of inhaled corticosteroids on the cortisol response in children with asthma is unknown.

#### Study objective

Comparison of the salivary cortisol response after a standardized exercise test between prepubertal heathy children and children with asthma.

#### Study design

The children will perform a standardized running test (20 meter shuttle run). Before, immediately after, and 15 minutes after cessation of the test the children will perform a lungfunction test and subsequently collect saliva by

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chewing on a Salivette for one minute. The test will be repeated after a minimum of one week.

#### Intervention

The children will perform a standardized running test (20 meter shuttle run test) under supervison of a paediatric physiotherapist, and one of the investigators. The children will be instructed to run for as long as possible between two lines drawn 20 m apart at an increasing speed. A signal will indicate the required running speed. The speed will be set at 8 km per hour (km h\*1) and increased by 0.5 km h\*1 every minute. The children will be encouraged to continue running until exhaustion. The test is ended if the child cannot reach the line within the set time.

#### Study burden and risks

Omdat kinderen met stabiel astma in het dagelijks leven voortdurend lichamelijk inspanning verrichten denken wij dat het gerechtvaardigd is om de kinderen tijdens het onderzoek deze rentest te laten verrichten.

Children with stable asthma perform physical activities (sports, physical exercise at school)

# Contacts

#### Public

Medisch Centrum Leeuwarden

Henri Dunantweg 2 8934 AD NL **Scientific** Medisch Centrum Leeuwarden

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# **Trial sites**

# **Listed location countries**

Netherlands

# **Eligibility criteria**

**Age** Children (2-11 years)

## **Inclusion criteria**

prepubertal children with stable asthma

# **Exclusion criteria**

Unstable asthma (additional use of bronchodilator in previous month and/or oral setroids in previous 3 months)

# Study design

## Design

Study type: Interventional	
Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Diagnostic

# Recruitment

NL	
Recruitment status:	Recruitment stopped
Start date (anticipated):	28-11-2011
Enrollment:	20
Туре:	Actual

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# **Ethics review**

Approved WMO Date: Application type: Review commission:

27-09-2011 First submission CCMO: Centrale Commissie Mensgebonden Onderzoek (Den Haag)

# **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 CCMO ID NL37156.000.11