

# Interoceptive abilities in adolescents with anorexia nervosa

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**Objective:** The primary objective of this study is to investigate interoceptive abilities in adolescents with AN. To capture the multidimensional perspective, interoceptive abilities will be studied on an accuracy, sensibility and awareness level....

<b>Ethical review</b>	Approved WMO
<b>Status</b>	Pending
<b>Health condition type</b>	Eating disorders and disturbances
<b>Study type</b>	Observational non invasive

## Summary

### ID

NL-OMON50276

### Source

ToetsingOnline

### Brief title

Innerbody

### Condition

- Eating disorders and disturbances

### Synonym

anorexia nervosa eating disorder

### Research involving

Human

### Sponsors and support

**Primary sponsor:** Universiteit Utrecht

**Source(s) of monetary or material Support:** Ministerie van OC&W

## Intervention

**Keyword:** adolescents, anorexia nervosa, Body image disturbances, Interoceptive abilities

## Outcome measures

### Primary outcome

Main study parameters/endpoints: The main study parameters of the current study are the differences in levels of interoceptive abilities in adolescent girls with and without AN, based on experimental tasks and self-report measures. These measures allow us to test whether adolescents with AN display more disturbances in interoceptive abilities compared to adolescents without AN.

The main endpoint of interoceptive accuracy.

Heart Rate Discrimination Task (HRD):

For the interoceptive condition, the difference between the true frequency of the heart rate, as attended to by the participant, and the estimated cardiac frequency by the participant will be calculated in beats per minute. A negative result indicates the degree to which participants underestimate their cardiac frequency while a positive result indicates an overestimation. This will be the first time that this task will be executed in a AN population. However, we know from a recent study in a healthy adult population that individuals underestimated their heartbeat with 7 beats on average (Legrand et al., 2021), it is unknown what performance on this task to expect within a clinical adolescent population. Therefore, it is impossible even to make exploratively expectations regarding hypothesis.

The main endpoint of interoceptive sensibility; will be measured using the VAS scale that is included in the HRD task. After the presentation of the interoceptive as well as for the exteroceptive condition and the decision of the participant whether the presentation of the tone was faster or slower, the participant is asked to provide a subjective confidence rating from 0 (uncertain) to 100 (certain). It is expected that adolescent girls with AN will have lower scores on interoceptive sensibility measured by the VAS scale of the HRD when compared to adolescent girls without AN (Legrand et al., 2019).

The main endpoint of the interoceptive awareness: all 37 items of the MAIA-II summed up and averaged (Mehling et al., 2012).

### **Secondary outcome**

Following the objectives of our study, there are three secondary study parameters. The second study parameters include the covarying effects of three components of body image: perceptual, cognitive-affective (body dissatisfaction) and behavioral component (body checking and body avoidance) on interoceptive abilities in adolescent girls with and without AN. Experimental and self-report measures will be used and will be described in more detail below.

The main endpoint of the perceptual component of body image disturbances: the percentage of misestimations on the Tactile Estimation Test where a higher percentage indicates a larger overestimation.

The main endpoint of the cognitive-affective component of body image

disturbances: all scores of all 20 items of the LAV summed up.

The main endpoint of the behavioral component of body image disturbances:

scores on all 27 items of the BCAQ summed up.

## Study description

### Background summary

One of the main symptoms of anorexia nervosa (AN) is a disturbed body image. Poor interoception has been associated with body image concerns and a number of empirical findings converge to suggest potential disturbances in the processing of interoceptive signals in individuals with AN. Despite the fact that the age of onset in AN is usually within the adolescent trajectory, studies on interoceptive abilities in adolescents with AN are scarce. In addition, interoceptive abilities are understudied and getting a better understanding of these abilities might help to improve the effectiveness of interventions for adolescent AN. We expect adolescents with AN to have more difficulties processing their interoceptive abilities than adolescents without AN.

### Study objective

Objective: The primary objective of this study is to investigate interoceptive abilities in adolescents with AN. To capture the multidimensional perspective, interoceptive abilities will be studied on an accuracy, sensibility and awareness level. Results will be compared to those from adolescents without AN.

### Study design

The study has a quasi-experimental design.

### Study burden and risks

Nature and extent of the burden and risks associated with participation, benefit and group relatedness: Participants may experience negative emotions during the study, although the used methods are low on invasiveness. The knowledge gained with the present research has implications for improving treatment approaches: The benefits clearly outweigh the costs.

## Contacts

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## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

### **Age**

Adolescents (12-15 years)

Adolescents (16-17 years)

### Inclusion criteria

Meeting criteria for anorexia nervosa (DSM-V), both subtypes binge purge and restrictive

Within age group 14-18

Female

### Exclusion criteria

For the healthy control group: no current or lifetime eating disorder

## Study design

### Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Basic science

### Recruitment

NL	
Recruitment status:	Pending
Start date (anticipated):	01-04-2022
Enrollment:	68
Type:	Anticipated

## Ethics review

Approved WMO	
Date:	04-02-2022
Application type:	First submission
Review commission:	METC NedMec

## 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

NL79331.041.21