

# Twin cohort for the study of (pre)clinical Inflammatory Bowel Disease in the Netherlands

## The TWIN-study

Gepubliceerd: 07-08-2017 Laatst bijgewerkt: 18-08-2022

Primary Objective: To gain insight in the disease mechanisms of IBD. Secondary Objective(s): To identify biomarkers and study functional and mechanistic properties of the mucosal immune system, gut and oral microbiome, epithelium, mucus barrier,...

<b>Ethische beoordeling</b>	Positief advies
<b>Status</b>	Werving gestart
<b>Type aandoening</b>	-
<b>Onderzoekstype</b>	Observationeel onderzoek, zonder invasieve metingen

## Samenvatting

### ID

NL-OMON23799

### Bron

NTR

### Verkorte titel

TWIN-IBD study

### Aandoening

Inflammatory Bowel Disease

IBD

M. Crohn

Crohn's disease

ziekte van Crohn

Ulcerative colitis

colitis ulcerosa

twin

tweeling

preklinisch

preclinical

## Ondersteuning

**Primaire sponsor:** University Medical Center Utrecht

**Overige ondersteuning:** This research is partially funded by a personal unrestricted grant from the Alexandre Suerman program for MD/PhD students of the University Medical Center Utrecht, the Netherlands.

## Onderzoeksproduct en/of interventie

## Uitkomstmaten

### Primaire uitkomstmaten

The association of the following factors with established and preclinical IBD will be studied:<br>

- Environmental factors <br>
- Early signs and symptoms of IBD development<br>
- Immunological phenotyping and function<br>
- Gut and oral microbiota analyses<br>
- Metabolome analyses<br>
- Mucus barrier analyses<br>
- Epithelium analyses<br>
- DNA-sequencing analyses

## Toelichting onderzoek

### Achtergrond van het onderzoek

Inflammatory Bowel Diseases (IBD), i.e. Crohn's Disease (CD) and Ulcerative Colitis (UC), are thought to arise in genetically susceptible individuals in the context of environmental triggers, with a potential dominant role for the interplay between the gut microbiota, and the mucosal immune system. However, the relative importance and the exact role of these factors in the pathogenesis of IBD is presently unknown. Interpretation of published research in this field is often hampered by reverse causation, and data generated in animal models cannot be directly extrapolated to the human condition. The disease is probably triggered

years before the occurrence of symptoms, but currently patients are only identified when clinical disease is established. The preclinical phase of IBD might hold the key to understanding the pathogenesis of IBD and could provide a huge window of opportunity of halting or even preventing disease development. At this time, data on this phase of the disease are virtually non-existent. What we do know is that unaffected twin-siblings of an IBD affected individual are at increased risk of developing IBD. Therefore, studying IBD-discordant, IBD-concordant and non-IBD-concordant twins or multiples gives the unique opportunity to 1) define mechanisms that underlie (the early development of) IBD and 2) identify markers of (pre)clinical IBD.

## **Doe**

Primary Objective: To gain insight in the disease mechanisms of IBD.

Secondary Objective(s): To identify biomarkers and study functional and mechanistic properties of the mucosal immune system, gut and oral microbiome, epithelium, mucus barrier, metabolome and nutritional factors in established and (pre)clinical IBD. Furthermore, we strive to identify symptoms and quality of life alterations associated with IBD.

## **Onderzoeksopzet**

Participants are invited for follow-up visits every 6 months during a period of 2 years. Afterwards the possible development of IBD will be assessed on a regular basis.

## **Onderzoeksproduct en/of interventie**

This is an observational cohort study, designed to explore factors possibly contributing to the pathogenesis of Inflammatory Bowel Disease.

From all participants the following data will be collected:

- Demographics
- Disease history
- Medication history
- Current medication use
- Risk factors
- Family history
- Quality of life
- Food frequency questionnaires

From all participants the following samples will be collected:

- Feces
- Pharyngeal swabs
- Urine
- Blood
- Rectal biopsies
- Colonic or ileal biopsies (in case of a colonoscopy for a clinical indication)

## Contactpersonen

### Publiek

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### Wetenschappelijk

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## Deelname eisen

## **Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)**

Inclusion criteria for IBD-discordant and IBD-concordant twins or multiples:

- Born as a sibling of, either a monozygous or dizygous, twin pair or multiplex
- One or more twin-siblings are affected with IBD, i.e. CD, UC or IBD unspecified (confirmed by clinical, endoscopic and histological features)
- Age: 16 years and older

Inclusion criteria for the unaffected controls (preferably twins or multiples):

- None of the siblings of the twin are affected with IBD, i.e. CD, UC or IBD unspecified
- Age: 16 years and older

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

- No consent to participate in the study.

## **Onderzoeksopzet**

### **Opzet**

Type:	Observationeel onderzoek, zonder invasieve metingen
Onderzoeksmodel:	Anders
Blinding:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

### **Deelname**

Nederland	
Status:	Werving gestart
(Verwachte) startdatum:	01-09-2017

Aantal proefpersonen: 444  
Type: Verwachte startdatum

## Ethische beoordeling

Positief advies  
Datum: 07-08-2017  
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	NL6187
NTR-old	NTR6681
Ander register	METC van het UMC Utrecht : 17-333

## Resultaten