# The impact of prolonged walking exercise on blood glucose levels in patients with type 1 diabetes: The Four Days Marches Study.

Gepubliceerd: 04-07-2013 Laatst bijgewerkt: 18-08-2022

We hypothesize that exogenous insulin requirements will be substantially reduced during the days with prolonged physical activity as opposed to the control condition. Moreover, we expect that these reduced insulin requirements will not be...

| | |
|---|---|
| **Ethische beoordeling** | Positief advies |
| **Status** | Werving gestopt |
| **Type aandoening** | - |
| **Onderzoekstype** | Observationeel onderzoek, zonder invasieve metingen |

## Samenvatting

### ID

NL-OMON28501

**Bron**
NTR

**Verkorte titel**
Diabetes and walking exercise

**Aandoening**

Type 1 diabetes, insulin depedent diabetes mellitus

### Ondersteuning

**Primaire sponsor:** UMC St Radboud
**Overige ondersteuning:** -No financial support
-Continuous glucose monitoring devices and glucose sensors provided by Medtronic

### Onderzoeksproduct en/of interventie

## Uitkomstmaten

### Primaire uitkomstmaten

-Twenty-four-hour blood glucose homeostasis as measured by continuous glucose monitoring (specifically: average 24-h glucose concentrations, glycemic variability, hyperglycaemia, hypoglycaemia).
<br><br>
-Dosing of exogenous insulin.

# Toelichting onderzoek

### Achtergrond van het onderzoek

Twenty-four-hour glycemic control will be assessed in 10 patients with type 1 diabetes. These patients will be monitored over the 2 days prior to and during the 'Four Days Marches Nijmegen' event. The 2 days prior to the Four Days Marches will provide a reference frame for patients’ 24-h glycemic control (non-exercise control period). The subsequent 4-day period will be used to assess changes in patients’ glycemic control (hyperglycemia, hypoglycemic, glycemic variability) and insulin administration in response to ultra-endurance exercise. The unique character of the Four Days Marches event will provide novel insight into patients’ glycemic response to ultra-endurance exercise.

### Doel van het onderzoek

We hypothesize that exogenous insulin requirements will be substantially reduced during the days with prolonged physical activity as opposed to the control condition. Moreover, we expect that these reduced insulin requirements will not be accompanied by an increased occurrence of hyperglycemic episodes.

### Onderzoeksopzet

Measurements are conducted over the 2 days prior to the marching event, and over the 4 subsequent days of the marching event.

### Onderzoeksproduct en/of interventie

Twenty-four-hour blood glucose homeostasis will be assessed by continuous glucose monitoring in type diabetic patients participating in the world’s largest marching event: The Four Days Marches Nijmegen.

Continuous glucose monitoring will be applied on the 2 days prior to (reference period), and during 4 subsequent of prolonged walking exercise.

# Contactpersonen

## Publiek

Jan-Willem Dijk, van
Maastricht
The Netherlands

## Wetenschappelijk

Jan-Willem Dijk, van
Maastricht
The Netherlands

# Deelname eisen

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

-Voluntary participation for the Four Days Marches, July 16-19, 2013

-Type 1 diabetes

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

-HbA1c >10%

# Onderzoeksopzet

## Opzet

Type: Observationeel onderzoek, zonder invasieve metingen

| | |
|---|---|
| Onderzoeksmodel: | Parallel |
| Toewijzing: | N.v.t. / één studie arm |
| Blindering: | Open / niet geblindeerd |
| Controle: | N.v.t. / onbekend |

### Deelname

Nederland

| | |
|---|---|
| Status: | Werving gestopt |
| (Verwachte) startdatum: | 01-07-2013 |
| Aantal proefpersonen: | 10 |
| Type: | Werkelijke startdatum |

## Ethische beoordeling

Positief advies

| | |
|---|---|
| Datum: | 04-07-2013 |
| 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 | NL3899 |
| NTR-old | NTR4061 |
| Ander register | : 2012/186/1 |
| ISRCTN | ISRCTN wordt niet meer aangevraagd. |

# Resultaten

**Samenvatting resultaten**
N/A