Coffee consumption and glucose tolerance in humans.

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Intake of chlorogenic acid and trigonelline reduce postprandial glucose concentrations during an oral glucose tolerance test relative to placebo.

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON23240

Bron
Nationaal Trial Register

Verkorte titel
Koffiestudie

Aandoening

Diabetes Mellitus type 2 (DM type II)

Ondersteuning

Primaire sponsor: Vrije Universiteit (VU) Amsterdam, Institute for Health Sciences. The study will be executed at the Vrije Universiteit (VU) Medical Center, Amsterdam
Overige ondersteuning: Dutch Diabetes Research Foundation

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Glucose and insulin concentrations in blood

Toelichting onderzoek

Achtergrond van het onderzoek

High coffee consumption is associated with a lower risk of type 2 diabetes. Similar associations are observed for caffeinated and decaffeinated coffee, suggesting that coffee components other than caffeine have beneficial effects on glucose homeostasis. Chlorogenic acid and trigonelline are major components in coffee and may be partly responsible for improved glucose tolerance following coffee consumption. The objective of this study is to test whether chlorogenic acid and trigonelline ingestion acutely reduce postprandial glucose concentrations in humans. The study is a randomized cross-over trial in 20 overweight men including 4 treatments: decaffeinated coffee, chlorogenic acid, trigonelline, and placebo. Acute effects on glucose and insulin responses following an oral glucose tolerance test will be examined.

Doel van het onderzoek

Intake of chlorogenic acid and trigonelline reduce postprandial glucose concentrations during an oral glucose tolerance test relative to placebo.

Onderzoeksproduct en/of interventie

All participants will receive four treatments in random order, on four different days:

1. Decaffeinated coffee;

2. Chlorogenic acid.

3. Trigonelline.

4. Mannitol (placebo).

All treatments will be ingested before an oral glucose tolerance test. Blood samples will be taken on 7 occasions on each study day. Treatments will be double blind, except for the decaffeinated coffee treatment.

Contactpersonen

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

1. Apparently healthy males;
Acute effects of coffee and major coffee components on glucagon-like peptide 1 response and glucose tolerance in humans;

2. Age at screening: 18 years and above;

3. Body mass index (BMI) between 25.0 and 35.0 kg/m2;

4. Regular coffee consumer;

5. Willing to restrict coffee consumption during the study to max. 1 cup per day;

6. Voluntary participation;

7. Willing not to be blood or plasmaferese donor from 4 weeks before the start of the study until the end of study.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

1. Women;

2. Smokers;

3. Diabetics;

4. Blood sampling is considered too difficult (assessed during pre-study screening);

5. Any chronic or acute disease;

6. Hypertension criteria for moderate hypertension WHO 2003;

7. Medical history or surgical events known to interfere with the study;

8. Alcohol consumption > 28 consumptions per week;

9. Self reported weight loss or gain > 2 kg in the month prior to screening;

10. Any special diet;

11. Participation in any other intervention trial up to 3 months before and during this study;

12. Use of medication known to interfere with the study outcome;

13. Exercising more than 4 hours vigorously per week.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Blindering:	Dubbelblind
Controle:	Placebo

Deelname

Nederland

Status:	Werving gestart
(Verwachte) startdatum:	15-08-2007
Aantal proefpersonen:	20
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies

Datum:	06-09-2007
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	NL1020
NTR-old	NTR1051
Ander register	: 2006.11.020/2946308
ISRCTN	ISRCTN wordt niet meer aangevraagd

Resultaten