

The time trial performance of different food products in healthy volunteers.

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The aim of the study is to investigate the effects on time trial / cycle test performance after ingestion of Snelle Jelle 'kruidkoek' and water, banana and water, or only water.

Ethical review	Approved WMO
Status	Will not start
Health condition type	Other condition
Study type	Interventional

Summary

ID

NL-OMON40549

Source

ToetsingOnline

Brief title

TTP-CHO

Condition

- Other condition

Synonym

n/a

Health condition

n.v.t.

Research involving

Human

Sponsors and support

Primary sponsor: Universiteit Maastricht

Source(s) of monetary or material Support: Ministerie van OC&W,Peijnenburg,Student

internship grant van Peijnenburg (bedrijf; zie G2)

Intervention

Keyword: Carbohydrates, Performance, Time trial

Outcome measures

Primary outcome

Cycle test (time trial) performance (time to completion of a set workload)

after consumption of the test products (Snelle Jelle 'kruidkoek' or banana with water, or only water).

Secondary outcome

N/A

Study description

Background summary

Differences in food structure, nutrient composition and in available carbohydrate (CHOs) in foods lead to differences in the post-consumption glucose supply and consequently have an impact on the glycaemic response. Various studies have shown that the intake of carbohydrates shortly before the onset of exercise and subsequently during exercise, impact favorably on blood glucose and fatty acid levels, leading to a reduction of fatigue development and a higher power output/improved performance capacity towards the final stage of the exercise. This effect is especially favored by endurance performance athletes such as cyclists and triathletes.

Accordingly, in order to support endurance performance capacity, as well as immediate post exercise recovery of glycogen stores, endurance athletes ingest energy drinks and foods that supply rapidly available carbohydrates.

Many studies have been performed on the effect of carbohydrate drinks on exercise induced glucose oxidation rates whereas the impact of solid carbohydrate rich foods commonly consumed, such as banana, bars and cakes has been studied much less.

In the present study we address the effect of 2 types of food frequently consumed by endurance athletes in the Netherlands 1) banana, 2) kruidkoek

Study objective

2 - The time trial performance of different food products in healthy volunteers. 1-06-2025

The aim of the study is to investigate the effects on time trial / cycle test performance after ingestion of Snelle Jelle 'kruidkoek' and water, banana and water, or only water.

Study design

The current study will be executed conform a randomized, cross-over, reference-controlled, study design. During the test days a cycle test (time trial) of about 1 hour will be performed. Consumption of test products ('kruidkoek' or banana with water, or only water) will take place 15 min before (during warming up; 70 grams banana/kruidkoek) and 15-20 after (30 grams banana/kruidkoek) starting the time trial.

Intervention

Participants will perform the time trial under different conditions (conditions will be assigned at random):

1. Participants will receive a Snelle Jelle ('kruidkoek') and water before and during the time trial
2. Participants will receive a banana and water before and during the time trial
3. Participants will only receive water before and during the time trial (= control)

The effects of these interventions on time trial performance will be measured.

Study burden and risks

There are no risks associated with the current study. The burden associated with participation is minimal, participants will have to be at the department of Human Biology for a total of 8-9 hours during the course of the study.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adults (18-64 years)

Elderly (65 years and older)

Inclusion criteria

- Males
- Aged 18-50 years
- Blood pressure: diastolic blood pressure between 60 and 90 mmHg and a systolic blood pressure between 100 and 150 mmHg
- Body Mass Index (BMI; weight/length²) between 18 and 25 kg/m²
- Protein and glucose are not allowed to be present in urine that will be collected during screening.
- Subjects have to be healthy (self reported) and are not allowed to use medication that can interfere with the current study.
- Normal Dutch dietary eating habits (no vegan, vegetarian or macrobiotic lifestyle)
- Participants must be trained cyclists / triathletes and be in possession of a positive sports examination or a competition licence.

Exclusion criteria

- Having a history of medical or surgical events that may significantly affect the study outcome (gastro-intestinal diseases)
- Any current metabolic or endocrine disease
- Diabetes Mellitus (type I and II)
- More than 28 consumptions of alcohol a week (for men) and more than 21 consumptions of alcohol a week (for women)
- Reported intolerance for gluten
- Having regularly gastro-intestinal complaints (stomach upsets, diarrhea, constipation, wind, abdominal colic)
- Reported unexplained weight loss or gain of >2kg in the month prior to the pre-study

screening

- Reported slimming or medically prescribed diet
- Reported vegan, vegetarian or macrobiotic lifestyle
- Use of antibiotics during the last three months;
- The subject will be excluded from the study if he does not want to be informed about deviating findings / accidental findings concerning his health
- The following drugs are not allowed during the study:
 1. Anti-hypertensive drugs
 2. Lipid lowering-drugs
 3. Glucose-lowering agents.
 4. Anti-inflammatory agents
 5. Chronic oral or parenteral corticosteroids treatment (> 7 consecutive days of treatment).
 6. Laxatives or anti-diarrhea drugs

Study design

Design

Study type:	Interventional
Intervention model:	Crossover
Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Other

Recruitment

NL	
Recruitment status:	Will not start
Enrollment:	12
Type:	Anticipated

Ethics review

Approved WMO	
Date:	30-12-2013
Application type:	First submission
Review commission:	METC academisch ziekenhuis Maastricht/Universiteit Maastricht, METC azM/UM (Maastricht)

Approved WMO

Date: 16-06-2014

Application type: Amendment

Review commission: METC academisch ziekenhuis Maastricht/Universiteit Maastricht, METC azM/UM (Maastricht)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

ID: 25233

Source: Nationaal Trial Register

Title:

In other registers

Register ID

Other	het onderzoek/protocol is bij NTR aangemeld voor registratie, we hebben nog geen NTR nummer ontvangen, zodra we dit ontvangen brengen we jullie ervan op de hoogte
CCMO	NL45723.068.13
OMON	NL-OMON25233