Tijdrit prestaties van verschillende voedingsproducten bij gezonde vrijwilligers.

No registrations found.

Ethical review	Not applicable
Status	Other
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON25233

Source
NTR

Brief title
TTP-CHO

Health condition

None. This research only includes healthy, but trained, male participants: participants without any health problems with a BMI within the normal range.

Sponsors and support

Primary sponsor: Maastricht University
Source(s) of monetary or material Support: Student internship grant from Peijnenburg NL

Intervention

Outcome measures

Primary outcome

Time trial performance after consumption of "Ontbijkoek" with water / banana with water or

just water.

Secondary outcome

None.

Study description

Background summary

Rationale: Differences in available carbohydrates (CHOs) in food products lead to differences in the glycaemic index (GI) of these foods. Furthermore, different studies show that the intake of low-GI meals before the onset of exercise induce a lower glucose and insulin response at rest, but higher blood glucose concentration and higher free fatty acids (FFA) concentration at the end of exercise. This eventually leads to a longer time to exhaustion after the intake of a low-GI meal in comparison to the intake of a high-GI meal. This effect is especially found in endurance athletes. During exercise, low-GI food intake has beneficial effects on performance in comparison to high-GI food intake. These effects can be addressed to the maintenance of blood glucose levels during exercise, increase of FFA concentrations and reducing exercise respiratory exchange ratio (RER) values. During the recovery stage, which occurs after exercise, the body restores homeostasis and this helps the body to adapt to physiological stress. It is important to enhance recovery after exercise much as possible. Part of the recovery phase includes the restoration of glycogen stores. The consumption of moderate or high-GI CHOs has shown to induce a greater effect on glycogen restoration compared to low-GI CHO ingestion.

Objective: To study the effect of 2 different CHO sources (Snelle Jelle – a grain based food product – and a banana), which are expected to have different GIs, and water on time trial performance of healthy, male, trained cyclists.

Study design: The study will be executed conform a randomized; cross-over, reference-controlled study design.

Study population: 11 healthy trained male cyclists/triathletes, aged 18-40 years, will be recruited.

Intervention: Participants will either receive Snelle Jelle ‘Ontbijtkoek’ or a banana accompanied with a glass of water or only water, randomly on 3 separate test days.

Main study parameters/endpoints: The main study parameter is the time trial performance in response to the test products.

Study objective

The hypothesis is that the test food with the lower glycemic response exerts a more positive effect on exercise performance than the test food with a higher glycemic response.

Study design

Participants are required to complete a time trial test of 1 hour on each test day. They will be asked to consume one of 3 test products (a different product at random on each test day, 3 test days in total) at -30, 30 and 45 minutes relative to the start of the time trial test.

Intervention

Participants will receive a "Ontbijtkoek" (with water), banana (with water) or water alone (control condition) randomly on 3 separate test days.

Contacts

Public
Department of Human Biology
Maastricht University Medical Centre+ (MUMC+)
PO Box 616

Denise Hofman
Maastricht 6200 MD
The Netherlands
+31 (0)629404042
Scientific
Department of Human Biology
Maastricht University Medical Centre+ (MUMC+)
PO Box 616

Denise Hofman
Maastricht 6200 MD
The Netherlands
+31 (0)629404042

Eligibility criteria

Inclusion criteria

Measured during screening:

• 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

• Subjects have to be healthy (self reported) and are not allowed to use medication that can interfere with the current study (drugs that are not allowed during the study are listed in section 4.3 Exclusion criteria).

• Participants must be trained cyclists / triathletes and be in possession of a positive sports examination or a competition licence.

Furthermore, the subjects must have:

• Normal Dutch dietary eating habits (no vegetarian, vegan or macrobiotic lifestyle)

• To participate voluntary (give written informed consent)

• To be willing to comply with the study procedures

• To be willing to accept use and storage of all data, publication of nameless data

• To be willing to accept the disclosure of the financial benefit to participation in the study to the authorities concerned.

Exclusion criteria

• Recent participation in any clinical trial (<30 days)

• 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

• Smoking

• Pregnant or lactating or wishing to become pregnant in the period of the study

• Not having a general practitioner

• Not willing to accept information-transfer concerning participation in the study, or information regarding health of the subject, like findings at anamnesis or physical examination and eventual adverse events to and from general practitioner

• The subject will be excluded from the study if he / she does not want to be informed about deviating findings / accidental findings concerning his / her 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
Allocation:	Randomized controlled trial
Masking:	Open (masking not used)
Control:	N/A , unknown

Recruitment

NL

Recruitment status:	Other
Start date (anticipated):	01-12-2013
Enrollment:	11
Type:	Unknown

Ethics review

Not applicable

Application type:	Not applicable

Study registrations

Followed up by the following (possibly more current) registration

ID: 40549
Bron: ToetsingOnline
Titel:

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

No registrations found.

In other registers

Register	ID
NTR-new	NL4038
NTR-old	NTR4204
CCMO	NL45723.068.13
ISRCTN	ISRCTN wordt niet meer aangevraagd.
OMON	NL-OMON40549

Study results

Summary results
N/A