A new method to assess daily energy intake using a seven day diary and camera-phone.

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON33434

Source
ToetsingOnline

Brief title
Energy intake registration

Condition

- Other condition

Synonym
obesity, overweight

Health condition

energiemetabolisme van de mens

Research involving
Human

Sponsors and support

Primary sponsor: Universiteit Maastricht
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: diary, energy expenditure, energy intake, photography

Outcome measures

Primary outcome

The main outcome is the difference in underreporting, underrecording and

undereating between the weighed food record and the food record in combination

with the camera-phone.

Secondary outcome

N/A

Study description

Background summary

Over the past decades, the prevalence of obesity has increased dramatically {Flegal, 2002; Visscher, 2002}. Overweight or obesity is caused by an imbalance between energy intake and energy expenditure where even the smallest imbalance can lead to large changes in body weight over time. To study causes and consequences of obesity and other diseases related to energy imbalance, accurate and precise techniques are needed to assess both food intake and physical activity, the latter being the most variable component of energy expenditure. Whereas these parameters can be accurately assessed under laboratory conditions, assessing food intake and physical activity in daily life is still a methodological challenge.
By comparing reported energy intake with measured total energy expenditure (TEE), misreporting becomes visible. The golden standard for the assessment of TEE under daily life conditions is doubly labeled water (DLW). Validation studies with DLW show that misreporting is mainly a matter of underreporting. On the other hand, overreporting can also occur in some populations, e.g. depleted patients, and might overestimate the health situation of these

patients.

Study objective

The aim of this project is to improve dietary intake assessment using a novel technique, compare it with the existing methodology and validate it against total energy expenditure.
a. Improve dietary intake assessment using a 7-day food record in combination with a camera-phone and compare it with the traditional weighed record.
b. Validate this new technique against total energy expenditure as assessed with a tri-axial accelerometer.

Study design

Subjects fill out a 7-day food record twice, once by means of a weighed food record and once a record without weighing in combination with a camera-phone. Hence, all measurements will be performed twice. The design will be a randomized crossover design with 1 week between the two trials.
Underreporting will be assessed by comparing energy intake with total energy expenditure (TEE) calculated from 7 days physical activity assessment with an accelerometer.
Underrecording and undereating, the two components of underreporting will be assessed by measuring water loss and body mass change respectively, a technique also previously developed at our laboratory {Goris, 2000}.
In summary, all measurements that will be performed are:
- the assessment of body weight and height
- the assessment of physical activity
- the assessment of water loss over a week interval
- the assessment of energy intake with a 7-day food diary (1 week a weighed food record, 1 week a food record in combination with a camera-phone)

Study burden and risks

The burden associated with participation is low. No risks are to be expected.

Contacts

Public
Universiteit Maastricht

PB616
6200MD Maastricht
Nederland
Scientific

Universiteit Maastricht

PB616
6200MD Maastricht
Nederland

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

Healthy adults, aged between 18 and 65 y.

Exclusion criteria

Non-Dutch speaking.

Study design

Design

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	07-10-2009
Enrollment:	18
Type:	Actual

Ethics review

Approved WMO

Date:	05-10-2009
Application type:	First submission
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

No registrations found.

In other registers

Register	ID
CCMO	NL29281.068.09