Validation of the Tracmor, a tri-axial accelerometer, with the doubly labeled water method in children.

Published: 15-12-2009
Last updated: 04-05-2024

To compare the physical activitylevel during the daily activities, measured using the Tracmor 6, a tri-axial accelerometer and the doubly labeled water, in three year old children.

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

Summary

ID

NL-OMON33437

Source
ToetsingOnline

Brief title
Validation study; accelerometer against doubly labeled water in children

Condition

- Other condition

Synonym
energymetabolism, obesity

Health condition

Overgewicht en energiemetabolisme

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen
Source(s) of monetary or material Support: Ministerie van OC&W,Edgar Doncker Stichting

Intervention

Keyword: accelerometer, children, doubly labeled water, validation

Outcome measures

Primary outcome

Total Daily Energy Expenditure (TDEE) and Physical Activity Level

Secondary outcome

Not applicable

Study description

Background summary

The doubly labeled water method is regarded as the 'gold standard' for the measurement of physical activity. However labeled water is expensive, cannot be used in large groups and is nog able to measure the physcal activitypatterns. Accelerometers are, in adults, a good alternative for measurement of physical activity during the day.
To investigate the use of an accelerometer in three year old children, we are going to validate it against doubly labeled water.

Study objective

To compare the physical activitylevel during the daily activities, measured using the Tracmor 6, a tri-axial accelerometer and the doubly labeled water, in three year old children.

Study design

Non-invasive observational studie

The physical activity level (PAL) during the day can be measured by use of the accelerometer, Tracmor 6. The Total daily energy expenditure (TDEE) can be

measured using the doubly labled water method. In addition, the basal metabolic rate (BMR) was determined by the ventilated hood system (Delta Trac). With the TDEE and the BMR, the PAL measured with indirect calorimetrie, can be worked out.
By comparing these results, we will find out if a Tracmor 6 is a valid instrument to measure physical activity in three year old children.

Study burden and risks

There are no risks associated with the procedures.

The burden for the child is negligible small. The Tracmor 6 is not uncomfortable. The measurements are non-invasive en not hurtfull to the child. It cost the parents time to participate in this study. They are informed about this burden before they start.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Children (2-11 years)

Inclusion criteria

Participation in the GECKO Drenthe study
Born between September 2006 and June 2007
toilet-trained

Exclusion criteria

A medical conditon witch can restrict the physical activity

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-09-2009
Enrollment:	30
Type:	Anticipated

Medical products/devices used

Registration:	No

Ethics review

Approved WMO

Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

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	NL28881.042.09