Vitamin D Deficiency in children with disabilities: prevalence and determinants

Published: 26-11-2015 Last updated: 13-04-2024

The primary objectives of the study are to investigate the vitamin D status of Dutch children with motor disabilities attending a special needs school and to associate Vit D status to the level of physical functioning, other potential risk factors...

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

Summary

ID

NL-OMON41957

Source ToetsingOnline

Brief title Vit D deficiency in children with disabilities

Condition

- Other condition
- Muscle disorders
- Congenital and peripartum neurological conditions

Synonym

Vitamin D deficiency

Health condition

diverse andere aandoeningen die leiden tot motorische beperkingen (neoplasmata, NAH, syndromen

Research involving

Human

1 - Vitamin D Deficiency in children with disabilities: prevalence and determinants 14-05-2025

Sponsors and support

Primary sponsor: Academisch Medisch Centrum Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Child, Disability evaluation, Vitamin D Deficiency

Outcome measures

Primary outcome

Vitamin D status assessed from the serum 25-hydroxy vitamin D concentration.

Secondary outcome

Symptoms of pain in muscles, joints and/or bones and symptoms of fatigue,

adherence to supplementation advice. As potential risk factors for vitamin D

deficiency the following factors will be assessed: level of physical

functioning, diagnosis, wheelchair dependency, skin type, sun exposure, dietary

intake, comorbidity, medication use.

Study description

Background summary

Vitamin D is an essential pro-hormone for normal calcium homeostasis and bone metabolism and plays an important role in muscle function and the immune system. There is an increasing number of studies indicating that large numbers of children and adults have inadequate vitamin D levels. Among the risk groups for vitamin D deficiency are children with motor disabilities. It is well established that prolonged deficiency of vitamin D can lead to muscle weakness and muscle and bone pain and rickets. In 2012, the Dutch Health Council recommended for all children daily vitamin D supplementation. It is unknown whether parents of children with disabilities adhere to this advice and what the prevalence of Vitamin D deficiency is among children with (motor) disabilities. We hypothesize that children with (motor) disabilities are at risk for vitamin D deficiency due to lower level of physical functioning and reduced sun exposure due to less playing outside.

Study objective

The primary objectives of the study are to investigate the vitamin D status of Dutch children with motor disabilities attending a special needs school and to associate Vit D status to the level of physical functioning, other potential risk factors and symptoms.

Specific study aims are:

1. to investigate the prevalence of vitamin D insufficiecy and deficiency in children with motor disabilities attending a special needs school;

2. to investigate the factors (level of physical functioning, diagnosis, wheelchair dependency, skin type, dietary intake, comorbidity, medication use, sun exposure) associated with a vitamin D insufficiency in this group of children;

3. to investigate symptoms and complaints associated with a vitamin D insufficiency in this group of children;

Study design

Vitamine D status of children with motor disabilities will be assessed at the end of the winter season from blood sample obtained with a venipuncture (4ml). Serum 25hydroxyvitamin D concentration will be measured. A questionnaire on general health, complaints, medication use, skin type, dietary intake and playing outside will be administered twice (October 2015 and February 2016) to parents and children.

Study burden and risks

Children will undergo a venipuncture (superficial vein over the cubital fossa) once (time investment 15 min). Parents and children will fill in a short questionnaire twice (10 min each). Risks of venipuncture are pain due to puncture and haematoma.

Contacts

Public Academisch Medisch Centrum

Meibergdreef 9 Amsterdam 1105 AZ NL **Scientific** Academisch Medisch Centrum

3 - Vitamin D Deficiency in children with disabilities: prevalence and determinants 14-05-2025

Meibergdreef 9 Amsterdam 1105 AZ NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adolescents (12-15 years) Adolescents (16-17 years) Adults (18-64 years) Elderly (65 years and older)

Inclusion criteria

Children with disabilities attending a special needs school; Age 12-20 years

Exclusion criteria

geen

Study design

Design

Study type: Observational invasiveMasking:Open (masking not used)Control:UncontrolledPrimary purpose:Diagnostic

4 - Vitamin D Deficiency in children with disabilities: prevalence and determinants 14-05-2025

Recruitment

NL	
Recruitment status:	Recruitment stopped
Start date (anticipated):	04-02-2016
Enrollment:	150
Туре:	Actual

Ethics review

Approved WMO	
Date:	26-11-2015
Application type:	First submission
Review commission:	METC Amsterdam UMC

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 CCMO **ID** NL50414.018.15