

# The nursing home as a possible risk factor for a decrease in physical activity in elderly people with dementia: relation with cognitive function and quality of life.

Published: 27-08-2021

Last updated: 04-04-2024

Primary Objective: What is the effect of a transfer from home to a nursing home environment on the level of physical activity in the elderly with dementia over time? Secondary Objective(s): Is there a relationship between a possible change in the...

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|------------------------------|----------------------------|
| <b>Ethical review</b>        | Approved WMO               |
| <b>Status</b>                | Pending                    |
| <b>Health condition type</b> | Structural brain disorders |
| <b>Study type</b>            | Observational non invasive |

## Summary

### ID

NL-OMON54031

### Source

ToetsingOnline

### Brief title

Dementia and physical activity.

### Condition

- Structural brain disorders

### Synonym

brain disease, Dementia

### Research involving

Human

## Sponsors and support

**Primary sponsor:** Vrije Universiteit

**Source(s) of monetary or material Support:** Kennemerhart financiert het onderzoek

## Intervention

**Keyword:** Dementia, Nursing home, Physical activity

## Outcome measures

### Primary outcome

A change in the amount of physical activity in terms of intensity and duration (increase or decrease) after nursing home placement.

### Secondary outcome

The change in the development of executive functions, QoL and depressive and neuropsychiatric symptoms after nursing home placement and their relation with physical activity.

## Study description

### Background summary

There is still no cure for dementia. Right now improvement of quality of life and delay and prevention of further cognitive deterioration, are our best achievable goals on short term in practice. Currently more than 80 000 people suffering from dementia live in nursing or care homes in the Netherlands. Approximately 74% live at home. Both human brain imaging studies and invasive animal studies suggest that physical activity positively affects cognitive function through promotion of neuroplasticity, the ability of the human brain to adapt to dynamic needs through alteration of functional and structural properties. Elderly have poor levels of physical activity, which is particularly true for elderly living in an institution or nursing home with an impoverished environment. It is suggested that the environment is especially important for people with vulnerable and damaged brains, as seen in dementia. With this study we would like to investigate the effect of the nursing home environment on the development of physical activity in the elderly with dementia, to determine whether the nursing home environment can be considered a

risk factor for a decline in physical activity and to investigate its relationship with quality of life and cognitive development.

### **Study objective**

Primary Objective: What is the effect of a transfer from home to a nursing home environment on the level of physical activity in the elderly with dementia over time?

Secondary Objective(s): Is there a relationship between a possible change in the level of physical activity, cognitive function (executive function) and quality of life in the elderly with dementia who made a transfer from home to the nursing home?

### **Study design**

Prospective cohort study consisting of one group of elderly with dementia, initially home-dwelling and later institutionalized, for the study duration of approximately ten months. Study participants will be recruited within centres and home services of the organisation Kennemerhart (Haarlem).

### **Study burden and risks**

The assessments and tests have been selected with care, taking into account the stamina and energy levels of the fragile participants. The test taker(s) will be alert for symptoms of fatigue, discomfort and/or pain, and may interrupt the test. Nevertheless, the burden of the participants may lie in performing the physical strength test and in completing the battery of cognition tests. The test taker(s) will be alert for symptoms of fatigue, discomfort and/or pain and may interrupt the test, minimalizing this burden. By taking this measure the risk associated with participation can be considered negligible.

## **Contacts**

### **Public**

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## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

### Age

Elderly (65 years and older)

### Inclusion criteria

- $\geq 65$  Y/o
- Placed on the waiting list for a nursing home on the basis of dementia
- Home-dwelling and waiting for nursing home placement (waiting list)

### Exclusion criteria

- MMSE score  $\geq 21$  (at inclusion)
- Current major psychiatric illness (e.g. depression)
- Unable to move freely due to a medical condition
- Wheelchair bound
- Unable to speak and/or understand the Dutch language
- Unable to see clearly with or without optical aids
- Expected opposition to submission to the research assessments (anticipated behaviour).

## Study design

### Design

**Study type:** Observational non invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Health services research

## Recruitment

NL

Recruitment status: Pending

Start date (anticipated): 01-09-2022

Enrollment: 77

Type: Anticipated

## Ethics review

Approved WMO

Date: 27-08-2021

Application type: First submission

Review commission: METC Amsterdam UMC

Approved WMO

Date: 23-09-2022

Application type: Amendment

Review commission: METC Amsterdam UMC

Approved WMO

Date: 12-07-2023

Application type: Amendment

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 | ID             |
|----------|----------------|
| CCMO     | NL76329.029.21 |