Effect of physical activity and other care interventions for people with dementia

This is an excerpt from the full technical report, which is written in Norwegian.

The excerpt provides the report's main messages in English

No. 27–2014

Review of systematic reviews

kunnskapssenteret

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Institution Norwegian Knowledge Centre for the Health Services
(Nasjonalt kunnskapssenter for helsetjenesten)
Magne Nylenna, *Director*
Authors Dahm, Kristin Thuve, *Project leader, Researcher*
Dalsbø, Therese Kristine, *Senior Advisor*
Håvelsrud, Kari, *Senior Advisor*
Reinar, Liv Merete, *Head of unit*

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Norwegian Knowledge Centre for the Health Services summarizes and disseminates evidence concerning the effect of treatments, methods, and interventions in health services, in addition to monitoring health service quality. Our goal is to support good decision making in order to provide patients in Norway with the best possible care. The Centre is organized under The Norwegian Directorate for Health, but is scientifically and professionally independent. The Centre has no authority to develop health policy or responsibility to implement policies.

We would like to thank all contributers for their expertise in this project. Norwegian Knowledge Centre for the Health Services assumes final responsibility for the content of this report.

Norwegian Knowledge Centre for the Health Services
Oslo, December 2014

Key messages (English)

About 70 000 people in Norway are afflicted by dementia. Dementia is a progressive disease and the incidence increases with the age. More than the half of people with dementia are living at home and about 80 percent of all residents in nursing homes have a dementia disorder.

We have critically appraised Cochrane-reviews and graded the available evidence about the efficacy of physical activity and other care interventions for people with dementia on the following outcomes; cognition, agitation, depression, anxiety, quality of life, activity of daily living and 24-hours care. The Norwegian Directorate of Health commissioned this work. The results will be used in the development of a new evidence-based guideline

We included seven Cochrane reviews: one about physical activity and six about other care interventions. The documentation shows that:

- Physical activity probably has little or no effect on depression, but might contribute to better cognitive function and daily activity level.
- Light therapy in the morning might contribute to slightly better daily activity level, but might have little or no effect on cognitive function, depression and challenging behavior.
- Conclusions could not be drawn about the effect of respite care, special care unit and massage and touch for people with dementia. There is lack of summarized research on interventions to prevent wandring.

There is a lack of research on several key-endpoints. We did not find Cochrane reviews for example about specific types of caregiver and residential care staff education and environmental interventions.

Title:
Effect of physical activity and other care interventions for people with dementia

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Type of publication:
Overview of systematic review Systematic review

A systematic review is a review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyze data from studies that are included in the review. Statistical methods (meta-analysis) may or may not be used to analyze and summarize the results of the included studies

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Doesn't answer everything:

Excludes studies that fall outside of the inclusion criteria
- No health economic evaluation
- No recommendations

Publisher:

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Last search for studies: April, 2014.

Peer review:

Anne Marie Mork Rokstad, researcher, Ageing and Health

Einar Braaten, District Medical Officer, Eiker

Executive summary (English)

Background

About 70 000 people in Norway are afflicted by dementia. Dementia is a progressive disease and the incidence increases with the age. More than the half of the people with dementia live at home and about 80 percent of all residents in nursing homes have a dementia disorder. If the incidence of dementia diseases remains at current levels, the number of people with dementia will be doubled to about 140 000 by 2040. A number of non-pharmacological interventions are recommended in a British guideline from 2014, including psychological interventions, physical activity and other care interventions.

Norwegian Knowledge Centre for Health Services was commissioned by the Ministry of Health and Care Services to summarize the available research on non-pharmacological interventions for people with dementia, defined as psychological interventions, physical activity and other care interventions. In this report the objective was to synthesize research about the effectiveness of physical activity and other care interventions for people with dementia. The results will be used in the development of a new evidence-based guideline.

Method

We prepared an overview of systematic reviews based on the method presented in the Cochrane handbook. We searched for systematic reviews in the Cochrane library and included Cochrane reviews of high quality.

Two authors independently assessed the reviews for inclusion and assessed the methodological quality by using a checklist for methodological quality of systematic reviews. The quality of the evidence was assessed using Grades of Recommendations Assessment, development and Evaluation (GRADE).

Results

We identified 242 citation in the search for systematic reviews, conducted in April 2014. We screened titles and abstracts, articles in full text and assessed the methodological quality. We included seven systematic reviews on the efficacy of physical activity and care for people with dementia. One systematic review examined the effect of physical activity and six reviews examined the different care interventions for people with dementia.

One systematic review with 12 studies relevant for our question, examined the effect of exercise program for people with dementia. Physical activity might contribute to better cognitive function (SMD 0.55, 95 % CI 0.0 to 1.09) ⊕⊕⊖⊖ and daily activity level (SMD 0.68, 95 % CI 0.08 to 1.27) ⊕⊕⊖⊖. We found that physical activity probably has little or no effect on depression (MD 0.14, 95 % CI -0.07 to 0.36) ⊕⊕⊕⊖.

Six systematic reviews (21 primary studies) examined the effect of different care interventions for people with dementia. The interventions were: respite care, one review (four RCT's); special care unit, one review (eight observational studies); light therapy, one review (eight RCT's); massage and touch, one review (one RCT) and interventions for wandering, two reviews (no included studies).

Light therapy in the morning might contribute to slightly better daily activity level (MD -5.00, 95 % CI -9.87 to -0.13) ⊕⊕⊖⊖, lower score indicting better level. Light therapy in the morning might have little or no effect on cognitive function (MD 1.20, 95 % CI -1.56 to 3.96) ⊕⊕⊖⊖. It probably also has little or no effect on depression (SMD 0.12, 95 % CI -1.06 to 1.30) and challenging behavior (SMD -0.02, 95 % CI -0.45 to 0.40) ⊕⊕⊕⊖.

Conclusions could not be drawn about the effect of massage and touch on challenge behavior, the effect of special care unit or the effect of respite care for people with dementia. There is a lack of research on interventions to reduce wandering.

Discussion

We included seven systematic reviews of high quality. We graded the quality of evidence for all relevant outcome as moderate, low and very low. None of the studies was conducted in Norway.

We included only Cochrane-reviews and there may be other systematic reviews of high quality. The searches in the included systematic reviews were performed from 2005 up to 2012. Newer primary studies can have been published after the literature search was completed. We believe that relevant studies have been carried out in this

field in the last years, since several of the reviews mentioned that ongoing studies are registered.

Several of the included primary studies had reported data in a way that they could not be used in the analysis. Although the review authors contacted the authors responsible for the primary studies, it was in most cases not possible to get better information

Considering a systematic review to be of high quality does not mean that all included primary studies necessarily are of high quality. For some of the comparisons and outcomes the quality of the evidence was low and very low. This does not mean that these interventions do not work, but indicate that we have little confidence in the effect estimates.

Conclusion

Physical activity probably has little or no effect on depression, but might contribute to better cognitive function and daily activity level. Light therapy in the morning might contribute to slightly better daily activity level, but might have little or no effect on cognitive function, depression and challenging behavior.

There is a lack of research on several key-endpoints, and there is a general lack of summarized research on 24-hours care.