

# Psychosocial interventions and physical exercise

Read about DDRRC's research projects on psychosocial interventions and physical exercise.

## DemTool – supporting life with dementia

As part of the National Dementia Strategy 2025, Danish Dementia Research Centre has developed “DemTool – supporting life with dementia” – a multicomponent psychosocial support programme for people with dementia and their family caregivers.

The programme comprises interventions and tools designed to promote self-management, coping and quality of life of people with dementia and family caregivers.

The overall aim of this project is to develop a programme which can reinforce an equal standard of quality in counselling, education and support groups for people with dementia and caregivers, across municipalities and regions.

From 2017 to 2019 this conceptualised and manualised programme was first developed in close collaboration with people with dementia, family caregivers and dementia professionals. It was then pilot-tested and evaluated in seven municipalities and one memory clinic. Based on this, the programme was further adapted.

The project has received additional funding from the Danish Ministry of Health (2020-2023). In this part of the project, Danish Dementia Research Centre collaborated with 15 municipalities regarding the implementation of DemTool. Additionally, 20 municipalities participated in education and stakeholder knowledge sharing activities. As part of the project, a wide range of materials has been developed enabling the implementation of the intervention programme in Danish municipalities.

### Contact

Educational director Karen Tannebæk

[karen.tannebaek@regionh.dk](mailto:karen.tannebaek@regionh.dk) (Please note that this email service is not encrypted.)

## **Counseling and support for people with dementia and caregivers (DAISY)**

The Danish Alzheimer Intervention Study (DAISY) was conducted in 2003-2006. It was a multicenter randomised controlled trial involving 330 people with dementia and their family caregivers. The aim was to investigate the efficacy of a programme of counselling, education and support for this target group.

The study was conducted in memory clinics across Denmark, and afterwards it was adapted to be used in municipalities.

The DAISY study was supported by the Ministry of Social Affairs, the Ministry of Health, and the Danish Health Foundation, and it was conducted in collaboration with National Board of Social Services.

The ongoing DemTool project is inspired by the DAISY study.

### **Contact**

MD, DMSc, professor, senior neurologist Gunhild Waldemar

[gunhild.waldemar01@regionh.dk](mailto:gunhild.waldemar01@regionh.dk) (Please note that this email service is not encrypted.)

## The effect of physical exercise in Alzheimer's disease (ADEX)

ADEX is both a clinical trial investigating the effect of physical exercise in AD, and a research collaboration among leading memory clinics in Denmark that was born out of the trial.

Data collection in the trial took place 2012-2014 and the primary aim was to investigate the effect of moderate to high physical exercise in a randomized controlled trial on cognition, neuropsychiatric symptoms, and physical function in patients with mild AD. New findings are continuing to come out of the study, especially on the mechanisms related to improved function or decreased symptomatology.

The study was funded by Innovation Fund Denmark and collaborators include memory clinics in Svendborg, Odense, Aalborg, Aarhus, Slagelse, Copenhagen and Roskilde, and Institute of Sport Medicine at Bispebjerg Hospital, Danish Research Centre for Magnetic Resonance at Hvidovre Hospital and Danish Centre for Health Economics (DaCHE), University of Southern Denmark.

### Contact

Consultant neurologist, clinical professor, research director Steen Hasselbalch

[steen.gregers.hasselbalch@regionh.dk](mailto:steen.gregers.hasselbalch@regionh.dk) (Please note that this email service is not encrypted.)

#### Publications

[Jensen CS, Simonsen AH, Siersma V, et al. Patients with Alzheimer's disease who carry the APOE ε4 allele benefit more from physical exercise. \*Alzheimer's & dementia\* 2019; 5: 99-106.](#)

[Frederiksen KS, Madsen K, Andersen BB et al. Moderate- to high-intensity exercise does not modify cortical β-amyloid in Alzheimer's disease. \*Alzheimer's & dementia\* 2019; 5:208-215.](#)

[Sobol NA, Dall CH, Hogh P, et al. Change in Fitness and the Relation to Change in Cognition and Neuropsychiatric Symptoms After Aerobic Exercise in Patients with Mild Alzheimer's Disease. \*Journal of Alzheimer's disease : JAD\*. 2018;65\(1\):137-145.](#)

[Frederiksen KS, Larsen CT, Hasselbalch SG, et al. A 16-Week Aerobic Exercise Intervention Does Not Affect Hippocampal Volume and Cortical Thickness in Mild to Moderate Alzheimer's Disease. \*Frontiers in aging neuroscience\* 2018;10:293.](#)

[Van der Kleij LA, Petersen ET, Siebner HR et al. The effect of physical exercise on cerebral blood flow in Alzheimer's disease. \*NeuroImage. Clinical\* 2018; 20: 650-654.](#)

[Jensen CS, Portelius E, Hogh P et al. Effect of physical exercise on markers of neuronal dysfunction in cerebrospinal fluid in patients with Alzheimer's disease. \*Alzheimer's & dementia\* 2017;3\(2\):284-290.](#)

[Sopina E, Sørensen J, Beyer N et al. Cost-effectiveness of a randomised trial of physical activity in Alzheimer's disease: a secondary analysis exploring patient and proxy-reported health-related quality of life measures in Denmark. \*BMJ open\* 2017; 7\(6\): e015217.](#)

[Hoffmann K, Sobol N, Frederiksen KS, et al. Moderate-to-High Intensity Physical Exercise in Patients with Alzheimer's Disease: A Randomized Controlled Trial. \*Journal of Alzheimer's disease : JAD\* 2016;50\(2\): 443-53.](#)

[Sobol NA, Hoffmann K, Frederiksen KS, et al. Effect of aerobic exercise on physical performance in patients with Alzheimer's disease. \*Alzheimer's & dementia\* 2016;12:1207-1215.](#)

[Sobol NA, Hoffmann K, Vogel A et al. Associations between physical function, dual-task performance and cognition in patients with mild Alzheimer's disease. \*Aging & mental health\* 2016;20\(11\):1139-1146.](#)

[Frederiksen KS, Sobol N, Beyer N et al. Moderate-to-high intensity aerobic exercise in patients with mild to moderate Alzheimer's disease: a pilot study. \*International journal of geriatric psychiatry\* 2014;29\(12\):1242-8.](#)

[Hoffmann K, Frederiksen KS, Sobol NA et al. Preserving cognition, quality of life, physical health and functional ability in Alzheimer's disease: the effect of physical exercise \(ADEX trial\): rationale and design. \*Neuroepidemiology\* 2013;41\(3-4\):198-207.](#)

[Clemmensen FK, Hoffmann K, Siersma V, et al. The role of physical and cognitive function in performance of activities of daily living in patients with mild-to-moderate Alzheimer's disease - a cross-sectional study. \*BMC Geriatr\* 2020;20\(1\):513.](#)



Latest update: 10. December 2020