

## Press release

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### Basic information

Name: Morten Riemenschneider

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Department of: Public Health

Main supervisor: Professor, Ulrik Dalgas

Title of dissertation: Exercise therapy as a supplemental treatment strategy in early multiple sclerosis – the Early Multiple Sclerosis Exercise Study (EMSES)

Date for defence: 11/6/2021 at (time of day): 14.00 Place: Online / Dalgas Avenue 4 (8000)

Press release (Danish)

Fysisk træning som supplerende behandlingsstrategi tidligt i sygdomsforløbet med multipel sklerose

For første gang er potentialet af tidlig indsats med fysisk træning, som supplement til medicinsk behandling, blevet undersøgt hos patienter tidligt i sygdomsforløbet med multipel sklerose. Dette er undersøgt i et nyt Ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Morten Riemenschneider, der forsvarer det d. 11/06/2021.

Attakvis multipel sklerose (MS) er kendtegnet ved akutte neurologiske attacker og en accelereret atrofi af hjernevæv. Medicinske sygdomsmodificerende behandlinger har vist overlegen effekt når de igangsættes tidligt i sygdomsforløbet, snarere end senere. På trods af den positive effekt af medicinsk behandling, så oplever patienter stadig sygdomsaktivitet og fysiske såvel som kognitive forringelser akkumuleres derved over tid. Supplerende behandlingsstrategier er derfor efterspurgte. Fysisk træning er en af de mest lovende non-farmakologiske behandlingsformer der har vist positive effekter på fysisk funktion og en række MS-relaterede symptomer. Som en del af dette PhD projekt er det blevet vist, at der er et hidtil overset ”favorabelt behandlingsvindue” tidligt i sygdomsforløbet med MS for fysisk træning. Der er indikationer af at fysisk træning også kan have sygdomsmodificerende og neuroprotektive effekter, og med det i betragtning så er forskningsstudier med tidlig implementering af fysisk træning særligt interessante. Dette PhD studie havde derfor til formål at undersøge effekten af superviseret konditionstræning på sygdomsaktivitet, beskyttelse af nervevæv, og fysisk og kognitiv funktion.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 11/06/2021 kl. 14.00 i Sektion for Idræts auditorium, Aarhus Universitet, Dalgas Avenue 4, Aarhus for de nærmeste kollegaer og familie. Alle andre der måtte have interesse i at overvære forsvaret kan tilgå det online, via Zoom. I så fald skal man rette henvendelse til Ph.d.-studerende, Morten Riemenschneider, e-mail: mori@ph.au.dk.

Bedømmelsesudvalget består af:

Formand

Lektor, Mette Vinther Skriver

Institut for Folkesundhed - Sektion for Sundhedsfremme og Sundhedsvæsen. Aarhus Universitet, Danmark

Opponenter

Professor, John M. Saxton

Institut for Sport, Træning og Rehabilitering Department of Sport, Exercise and Rehabilitation, University of Northumbria, UK

Lektor, Jesper Lundbye-Jensen

Institut for Idræt og Ernæring, Københavns Universitet, Danmark

Press release (English)

Exercise therapy as a supplemental treatment strategy in early multiple sclerosis

For the first time, the potential of early supplemental exercise efforts, alongside conventional medical treatment, has been investigated in patients early in the disease course of multiple sclerosis. This Ph.d. project from Aarhus University, Health was carried out by Morten Riemenschneider, who is defending his dissertation on 11/06/2021..

The relapsing remitting type of multiple sclerosis (MS) is characterised by acute neurological relapses and accelerated brain atrophy. Medical disease-modifying treatments show superior efficacy when initiated early in the disease course. However, patients do still experience disease activity and physical and cognitive disabilities accumulate over time. Supplemental treatment strategies are therefore warranted. Exercise therapy is one of the most promising non-pharmacological approaches, showing beneficial effects on physical function and MS-related symptoms. The present PhD study however highlight an overlooked “window of opportunity” for exercise therapy early in the disease course of MS. Considering the indications of disease-modifying and neuroprotective effects of exercise therapy, early MS exercise studies are warranted. The present PhD study therefore aimed to investigate the efficacy of supervised aerobic exercise on measures of disease-modification, neuroprotection, and physical and cognitive function early in the disease course of MS.

The defence is public and takes place on 11/06/2021 at 14.00 at Section for Sports Sciene, Aarhus University, Dalgas Avenue 4, Aarhus for colleagues and family. All other, who may be interested, can access the defence online via Zoom upon request to Ph.d. candidate, Morten Riemenschneider, e-mail: mori@ph.au.dk.

Assessment committee:

Chair of the committee

Associate professor, Mette Vinther Skriver

Department of Health Services Research, Department of Public Health, Aarhus University, Denmark

Opponents

Professor, John M. Saxton

Department of Sport, Exercise and Rehabilitation, University of Northumbria, UK

Associate professor, Jesper Lundbye-Jensen

Department of Nutrition, Exercise & Sports, University of Copenhagen, Denmark

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