

## Press release

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### Basic information

Name: Peter Preben Eggertsen

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Department of: Clinical Medicine

Main supervisor: Jørgen Feldbæk Nielsen

Title of dissertation: "Exploring Persistent Post-Concussion Symptoms: An Epidemiological, Biomedical, and Psychosocial Approach"

Date for defence: August 19, 2024 at (time of day): 14.00 Place: Meeting Room 3, Hammel Neurorehabilitation Centre and University Research Clinic, Voldbyvej 15, 8450 Hammel.

Press release (Danish)

Invitation til ph.d.-forsvar om senfølger efter hjernerystelse

Et ph.d.-projekt fra Aarhus Universitet, Health, giver nye indsigter i senfølger efter hjernerystelse. Projektet er gennemført af Peter Preben Eggertsen, læge og ph.d.-studerende, som forsvarer sin afhandling d. 19. august 2024 klokken 14.00 ved Hammel Neurocenter.

Baggrund:

Hjernerystelse er en af de hyppigste årsager til at komme på skadestuen i Danmark og globalt. Selvom de fleste kommer sig uden mén, udvikler ca. 30% af de ramte senfølger som hovedpine og koncentrationsbesvær. Disse senfølger kan vare i flere måneder eller år og kan være invaliderende for den enkelte. Trods problemets omfang er der ikke enighed om behandlingstilbud i Danmark.

Årsagerne til dette er blandt andet:

1. Mangel på viden om hyppigheden af hjernerystelser og senfølger.
2. Ukendte årsager til hvorfor sygdommen opstår.
3. Manglende viden om hvilke faktorer de ramte borgere finder vigtige i den nuværende behandlingstilgang.

For at få viden om disse tre underbelyste områder blev en tværfaglig tilgang benyttet. Ph.d.-projektet bestod derfor af tre dele:

En befolkningsundersøgelse: Hyppigheden af hjernerystelse blev undersøgt ved at analysere data fra skadestuer fra alle danske sygehuse.

To laboratoriestudier: Årsager til senfølger efter hjernerystelse blev undersøgt ved at måle biomarkører i blodet hos borgere med senfølger efter hjernerystelse.

En interviewundersøgelse: Borgere, der havde været igennem en ny ikke-medicinsk behandlingsstrategi ("GAIN 2.0"), blev interviewet for at identificere nøglefaktorer i behandlingen af senfølger.

Projektet giver ny viden, som potentielt kan bruges til at forbedre den nuværende behandlingstilgang samt til at overbevise beslutningstagere om, at der bør laves ensrettet behandlingstilbud i Danmark.

Forsvaret af ph.d.-projektet er offentligt, foregår på engelsk og finder sted:

- Dato: 19. august 2024
- Tid: Kl. 14.00, og det forventes at vare ca. 2 timer

- Hammel Sted: Mødelokale 3, Regionshospitalet Hammel Neurocenter, Voldbyvej 15, 8450

Efter forsvaret vil der være en reception.

Der er mulighed for online deltagelse på følgende link:

<https://rooms.rm.dk/webapp2/conference?callType=video&conference=meet.hammelneuro@rooms.rm.dk>

Originaltitlen på projektet er: "Exploring Persistent Post-Concussion Symptoms: An Epidemiological, Biomedical, and Psychosocial Approach".

For yderligere oplysninger kan ph.d.-studerende, Peter Preben Eggertsen, kontaktes på email peter.eggertsen@rm.dk.

Bedømmelsesudvalg:

Jakob Christensen, læge, ph.d. og klinisk professor  
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Jonas Bergquist, læge, ph.d. og professor

Institutionen för kemi - BMC; Analytisk kemi; Bergquist grupp, Uppsala Universitet

Vejledergruppe:

Jørgen Feldbæk Nielsen (hovedvejleder), professor, dr.med.

Rikke Katrine Jentoft Olsen, lektor, ph.d.

Johan Palmfeldt, lektor, ph.d.

Søren Paaske Johnsen, professor, ph.d.

Pia Cordsen, biofysiker og statistiker, ph.d.

Hanne Pallesen, lektor emerita, ph.d.

Lena Aadal, lektor, ph.d.

Press release (English)

### Invitation to PhD Defense on Persistent Symptoms After a Concussion

A new PhD project from Aarhus University, Health, presents new insights into persistent symptoms after a concussion. The project has been conducted by Peter Preben Eggertsen, MD and PhD student, who will defend his dissertation on August 19, 2024.

Background:

Concussion is one of the most common reasons for emergency room visits in Denmark and globally. Although most people recover swiftly, about 30% of those affected develop persistent symptoms such as headaches and concentration difficulties lasting several months or even years. There is no agreed-upon treatment for these debilitating symptoms in Denmark or worldwide. The reasons for this include:

1. Lack of knowledge about the frequency of concussions and persistent symptoms.
2. Unknown reasons for why the condition occurs.
3. Lack of knowledge about which factors affected individuals consider important in the current treatment approach.

A multidisciplinary approach was used to gain knowledge on these three under-researched areas. The PhD project consisted of three parts:

A population study: The concussion frequency was investigated by analyzing data from emergency rooms across all Danish hospitals.

Two laboratory studies: Causes of persistent symptoms after a concussion were investigated by measuring biomarkers in the blood of individuals with persistent symptoms after a concussion.

An interview study: Individuals who had undergone a new non-medical treatment strategy ("GAIN 2.0") were interviewed to identify key factors in treating persistent symptoms.

The project provides new knowledge that can potentially be used to improve the current treatment approach and convince decision-makers that standardized treatment options for persistent post-concussion symptoms should be established in Denmark.

The PhD defense is public and will take place:

- Date: August 19, 2024
- Time: 14:00 and is expected to last for approximately two hours
- Place: Meeting Room 3, Hammel Neurorehabilitation Centre and University Research Clinic, Voldbyvej 15, 8450 Hammel.

After the defense, there will be a reception.

There is an option for online participation at the following link:

<https://rooms.rm.dk/webapp2/conference?callType=video&conference=meet.hammelneuro@rooms.rm.dk>

The original title of the project is: "Exploring Persistent Post-Concussion Symptoms: An Epidemiological, Biomedical, and Psychosocial Approach".

For further information, please contact PhD student Peter Preben Eggertsen via email (peter.eggertsen@rm.dk).

Assessment committee:

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