

## Press release

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### Basic information

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Department of: Public Health

Main supervisor: Daniel Rinse Witte & Marit Eika Jørgensen

Title of dissertation: Clustering of microvascular complications in type 1 diabetes

Date for defence: 16/01 2018 at (time of day): 11.30 Place: Samfundsmedicinsk Auditorium, bygning 1262, lokale 101, Bartholins Allé 4 8000 Aarhus C

Press release (Danish)

### Småarskomplikationer & type 1 diabetes

Diabetes-relaterede småarskomplikationer ses hos en stor andel af personer med type 1 diabetes og øger både sygeligheden og dødeligheden hos disse personer.

I et nyt ph.d.-projekt fra Aarhus Universitet, Health, og klinisk epidemiologisk afdeling ved Steno Diabetes Center Copenhagen er fordelingen og betydningen af småarskomplikationer undersøgt. I ph.d.-projektet er forekomst og udvikling af diabetisk nyresygdom, nervesygdom og øjensygdom undersøgt i en klinisk population af godt 3.800 personer med type 1 diabetes. Projektet beskriver desuden effekten af aktuelle niveau af kardiometaboliske risikofaktorer på yderligere komplikationsudvikling og undersøger dødeligheden baseret på den aktuelle småarskomplikationsbyrde.

Resultaterne fra projektet viser overordnet en væsentlig parvis sammenhæng mellem de undersøgte småarskomplikationer. Resultaterne viser også, at den aktuelle byrde af småarskomplikationer er en afgørende faktor for senere udvikling af småarskomplikationer og dødelighed. Både effekten af aktuelle niveau og udgangsniveau af undersøgte kardiometaboliske risikofaktorer kan spille en rolle for senere udvikling af småarskomplikationer.

Ph.d.-projektet er gennemført af læge Lasse Bjerg. Forsvaret af ph.d.-projektet er offentligt og finder sted den 16. januar 2019 kl. 11.30 i Samfundsmedicinsk Auditorium, lokale 101, bygning 1262, Bartholins Allé 4 8000 Aarhus C. Titlen på projektet er "Clustering of microvascular complications in type 1 diabetes". Yderligere oplysninger: Ph.d.-studerende Lasse Bjerg, e-mail: [lasse.bjerg@ph.au.dk](mailto:lasse.bjerg@ph.au.dk), telefon: +45 2443 4683.

Bedømmelsesudvalg:

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Press release (English)

### Clustering of microvascular complications in type 1 diabetes

Diabetes-related microvascular complications affect a great proportion of the population with type 1 diabetes and increase the morbidity and mortality.

The clustering of microvascular complications and the consequences of such clustering have been studied in a new PhD project at Aarhus University in collaboration with Steno Diabetes Center Copenhagen. This project studied the prevalence and incidence of diabetic kidney disease, neuropathy, and retinopathy in a population of 3,800 individuals with type 1 diabetes. Furthermore, the project investigated the effect of the current level of selected cardiometabolic risk factors on the development of further microvascular complications and investigated the mortality in relation to current microvascular complication burden.

The main findings from this PhD project are that a cross-sectional association exists between each pair of the microvascular complications. Concurrent microvascular complication burden is found to be a key determinant for subsequent development of complications and mortality. Both the effect of concurrent level and the effect of baseline level of cardiometabolic determinants are found to be associated with subsequent development of microvascular complications.

The project was carried out by Lasse Bjerg, MD. The public oral defense takes place on 16 January 2019 at 11:30 am in Samfundsmedicinsk Auditorium, lecture hall 101, building 1262, Bartholins Allé 4, 8000 Aarhus C. The project is entitled "Clustering of microvascular complications in type 1 diabetes". Further information: PhD student Lasse Bjerg, e-mail:lasse.bjerg@ph.au.dk, phone +452443 4683.

Assessment committee:

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