

Invitation to the public oral defence of the PhD dissertation entitled

# DIABETIC NEUROPATHY AND TYPE 2 DIABETES

by

**Signe Toft Andersen, MD**

**Monday, 3 December 2018 at 2 pm**

Eduard Biermann Auditorium (Søauditorierne), lecture hall 204, building 1252  
Bartholins Allé 3, Aarhus University, 8000 Aarhus C

**Assessment Committee:**

Professor Bjørn Richelsen, Department of Endocrinology, Aarhus University Hospital, Aarhus, Denmark (Chairman)

Professor Andrew JM Boulton, University of Manchester, Manchester Royal Infirmary, UK

Associate Professor Peter Gæde, Department of Cardiology and Endocrinology, Slagelse Hospital, University of Southern Denmark, Denmark

**Supervisors:**

Professor Torsten Lauritzen, MD, DMSc

Morten Haaning Charles, MD, PhD

Professor Daniel Rinse Witte, MD, PhD

Professor Henning Andersen, MD, DMSc

The PhD dissertation will be available in a hard-copy version at the oral defence.

Lecture and viva examination will be held in English. Everyone is welcome.

After the PhD defence, the Department of Public Health will host a small reception in room 1.18, building 1261 at the Department of Public Health, Aarhus University.

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## Project summary

### **Diabetic Neuropathy and Type 2 Diabetes**

People with diabetes suffer from excess morbidity and mortality, which is mainly explained by late complications of this disease. The most common complication of diabetes is diabetic neuropathy (DN), and no treatment currently exists for DN.

The effect of potential risk factors of DN has been studied in a new PhD project from Aarhus University. This project studied the two most common subtypes of DN: diabetic polyneuropathy (DPN) and cardiovascular autonomic neuropathy (CAN). It describes effects of potential risk factors for the presence and the progression of DPN and CAN in around 1500 people with type 2 diabetes detected by screening and followed during 13 years (the ADDITION-Denmark study).

The main findings from this PhD project are a much lower presence and progression of both DPN and CAN compared with previous studies of cohorts of people with type 2 diabetes. Moreover, the project confirms already known risk factors of DN: hyperglycaemia and obesity. Importantly, this is done using longitudinal study designs.

## Projekt resumé

### **Diabetisk Neuropati og Type 2 Diabetes**

Diabetes er forbundet med øget sygelighed og øget dødelighed, hvilket primært skyldes udvikling af diabetiske senkomplikationer. Den mest udbredte senkomplikation er diabetisk nervebetændelse eller diabetisk neuropati (DN), og der findes ingen behandling for denne lidelse.

Betydningen af potentielle risikofaktorer for DN er undersøgt i et nyt ph.d.-projekt fra Aarhus Universitet. I ph.d.-projektet er de to mest udbredte former for DN undersøgt (diabetisk polyneuropati (DPN) og kardiovaskulær autonom neuropati (KAN)). Projektet beskriver betydningen af potentielle risikofaktorer for tilstedeværelsen og udviklingen af DPN og KAN hos godt 1500 personer med type 2 diabetes opdaget ved screening og fulgt igennem 13 år (ADDITION-Danmark studiet).

Hovedfundene i ph.d.-projektet er en væsentlig mindre tilstedeværelse og udvikling af både DPN og KAN sammenlignet med fund fra tidligere studier af grupper af personer med type 2 diabetes. Projektet bekræfter allerede kendte risikofaktorer for DN: hyperglykæmi og fedme med den væsentlige styrke, at projektet bygger på longitudinelle studier.