

Advances in Neurodegenerative Disease Epidemiology

Mini-symposium chair/corresponding organizer: Dr Susan Peters (University Medical Centre Utrecht, Utrecht University, NL)

Goal: Bring together researchers who are interested in neurodegenerative disease epidemiology.

Summary: Associations between occupational exposures and neurodegenerative disorders (including amyotrophic lateral sclerosis (ALS), Parkinson's and Alzheimer's diseases) have not been studied as extensively as cancer and respiratory diseases and their causes remain largely unknown. Due to complicated clinical diagnosis and lack of registries, case ascertainment is a limiting factor when studying neurodegenerative disorders. Case-control studies are best suited for inclusion of incident cases, but prone to recall bias. Studies on neurodegenerative disorders may additionally suffer from lack of recall because of disease characteristics. Cohort studies are free from recall bias and offer opportunities to study associations with occupational exposures. Moreover, baseline blood may be informative about exposures (e.g. lead) well before disease onset. Although occupational information collected in most cohorts is limited, successful studies in cancer and respiratory epidemiology have shown that occupational studies in general populations can be informative. Because each study design has its advantages and disadvantages, neurodegenerative disorders should be looked at more in a range of (occupational) studies to gain better understanding of the aetiology. Furthermore, advanced exposure assessment methods are essential to identify risk factors for neurodegenerative diseases.

Programme	Speaker	Topic
3 min	Susan Peters (UMC Utrecht, Utrecht University, NL)	Welcome – brief introduction
12 min + 2 min questions	Grace Chen (Massey University, NZ)	Self-report occupational exposures and MND in New Zealand
12 min + 2 min questions	Damien McElvenny (Institute of Occupational Medicine, UK)	Exposure assessment for a study of cognitive impairment in former professional footballers in England
12 min + 2 min questions	Neil Pearce (London School of Hygiene and Tropical Medicine, UK)	Can the multistage model be applied to amyotrophic lateral sclerosis (ALS)?
12 min + 2 min questions	Roel Vermeulen (Utrecht University, NL)	Metabolome and exposome profiling: new opportunities to study risk factors for PD
12 min + 2 min questions	Johnni Hansen (Danish Cancer Society, DK)	Occupation and risk of amyotrophic lateral sclerosis (ALS) in Denmark - using national registry data
12 min + 2 min questions	Susan Peters (UMC Utrecht, Utrecht University, NL)	Occupational exposures and ALS: international collaborations and new ways to identify risk factors
15 min	Panel of all speakers	General discussion and closure