

Brenda Penninx receives a ZonMW grant for research in alcohol use disorder (AUD)
"Identification of people at risk for alcohol abuse allows for early intervention"

Over ninety percent of people suffering from alcohol use disorder (AUD) do not receive appropriate treatment. For Brenda Penninx one of the reasons to initiate a large, prospective project into alcohol use disorder. Less than could be expected is known about prevalence and course of the disease, also the neurophysiological basis of alcohol addiction remains unclear. With a ZonMW grant - 700,000 euro's in five years - Penninx hopes to find answers to the many questions circling alcohol dependence. She will combine epidemiological cohort analyses with large-scale genetic analyses and selective fMRI measurements.

A key element of the project is the high prevalence of alcohol use disorder in people suffering from anxiety and depression. Preliminary data show depressed patients to have an almost sevenfold increased risk of alcohol disorders: alcohol dependence is 3.1% in healthy controls, but 19.8% in patients with depressive or anxiety disorders. Penninx: "Developmental trajectories of AUD are extremely complex. To study such trajectories, research should focus on a specific group or context in which the risk of AUD is substantially elevated. Adults with depression or anxiety disorders represent such a high-risk group."

Cornerstone of the project is the well known NESDA study (the Netherlands Study of Depression and Anxiety), an ongoing longitudinal study in which 2981 persons have been recruited and will be re-assessed 1, 2, 4 and 8 years after baseline. At study baseline, 812 persons have been identified with a diagnosis of AUD (consisting of 459 alcohol dependence disorders and 353 alcohol abuse disorders). Penninx aims to extend this database and she wants to conduct fMRI assessments on a subsample. A total of 80 respondents will be selected from the larger NESDA sample. 40 depressed or anxious patients with a current alcohol dependence disorder; 20 depressed or anxious patients without AUD; and 20 healthy controls without any psychiatric disorders.

Also, for all NESDA participants, DNA samples have been routinely collected and stored. Through a GAIN-grant from the foundation of the National Institutes of Health, Penninx is able to fund a genome wide assay for 1860 NESDA samples, 1700 with an affective disorder and 160 healthy controls. A total of 500,000 SNPs have been assessed.

The combination of epidemiological, clinical and neurophysiological data should boost the treatment of AUD. "There is a lot to gain in alcohol use disorder associated health care", Penninx states. "Alcohol abuse and dependence is common and has an enormous public health impact. Although effective treatment strategies are available, over ninety percent of AUD patients do not receive appropriate treatment. Being able to reliably predict which patients are at high risk to develop AUD would allow earlier intervention in those in need, while preventing unnecessary efforts to reach and treat those with a benign prognosis."

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