

# Alcohol use among older adults

Population perspectives on prevalence, correlates, and consequences of drinking in Swedish 70-year-olds

Akademisk avhandling

Som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien, Göteborgs universitet kommer att offentligen försvaras i hörsal Arvid Carlsson, Medicinareg. 3, onsdagen den 17 maj 2023, klockan 9.00.

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## Avhandlingen baseras på följande delarbeten

- I. Rydberg Sterner T & Ahlner F, et al. The Gothenburg H70 Birth Cohort Study 2014-16: design, methods and study population. *European Journal of Epidemiology* 2019; 34(2): 191-209.
- II. Ahlner F, Sigström R, Rydberg Sterner T, Mellqvist Fässberg M, Kern S, Östling S, Waern M, Skoog I. Increased alcohol consumption among Swedish 70-year-olds 1976 to 2016: Analysis of data from The Gothenburg H70 Birth Cohort Studies, Sweden. *Alcoholism: Clinical and Experimental Research* 2018; 42(12): 2403-2412.
- III. Ahlner F, Falk Erhag H, Johansson L, Mellqvist Fässberg M, Rydberg Sterner T, Samuelsson J, Zettergren A, Waern M, Skoog I. Patterns of alcohol consumption and associated factors in a population-based sample of 70-year-olds: Data from the Gothenburg H70 Birth Cohort Study 2014-16. *International Journal of Environmental Research and Public Health* 2022; 19(14): 8248.
- IV. Ahlner F, Falk Erhag H, Johansson L, Samuelsson J, Wetterberg H, Mellqvist Fässberg M, Waern M, Skoog I. The effect of alcohol consumption on all-cause mortality in 70-year-olds in the context of other lifestyle risk factors: Results from The Gothenburg H70 Birth Cohort Study (*Submitted manuscript*)

**SAHLGRENSKA AKADEMIN**  
INSTITUTIONEN FÖR NEUROVETENSKAP OCH FYSIOLOGI



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### Abstract

**Background:** Alcohol consumption is a major contributor to global morbidity and mortality, as well as unintentional and intentional accidents and injuries. Older adults may be particularly susceptible to these negative consequences due to age-related factors that increase vulnerability to the adverse effects of alcohol. The aim of this thesis was to investigate alcohol consumption patterns in population-based samples of older adults.

**Method:** Data were obtained from the Gothenburg H70 Birth Cohort studies, and included Birth cohort 1906-07, 1922, 1930, and 1944, with a particular focus on Birth cohort 1944.

**Results:** *Paper I* outlined the methodology employed during the baseline examination of Birth cohort 1944 in 2014-16. *Paper II* examined changes in alcohol consumption among four birth cohorts of 70-year-olds examined across four decades, showing a significant upward trend in consumption rates, especially among women. Risk consumption increased from 7.4% (16.1% in men, 0.5% in women) in 1976-77 to 34.0% (45.3% in men, 24.3% in women) in 2014-16. In *Paper III*, substantial discrepancies in sociodemographic, social and health-related factors across different levels of consumption were revealed, with former drinking associated with the most unfavorable set of factors. Further, characteristics varied significantly among 70-year-olds who exceeded low-risk drinking guidelines for older adults. *Paper IV* investigated the impact of alcohol on all-cause mortality in individuals with a baseline age of 70 years over an 8-year follow-up period. The study also evaluated the combined effect of lifestyle factors on mortality risk using a 7-item risk score. The findings suggested that alcohol has no independent effect on all-cause mortality, but its impact was moderated by physical activity. Moreover, individuals fulfilling criteria for at least five lifestyle risk factors had up to four times higher risk of all-cause mortality.

**Conclusion:** The knowledge gained from this thesis could be used to inform public health policies and interventions aimed at reducing unhealthy alcohol consumption among this particular age group.

**Keywords:** septuagenarian, aged, alcohol consumption, drinking behavior, risk consumption, cohort studies, associated factors, longitudinal studies, public health, epidemiology