

This is the peer reviewed version of the following article:

Kragh MV; Hasselbalch R; Perez-Garcia CN; Kunkel J; Garcia-Lunar I; Eldrup N; Fuster J; Bottcher M; Iversen K; Kofoed K; Ibáñez B; Bundgaard H. Uptake of primary and secondary prevention against atherosclerotic disease in the Danish background population. ***Circulation***. 2025 Nov 4; 152(SUPPL_3). Meeting Abstract 4367883. doi: 10.1161/circ.152.suppl_3.4367883

which has been published in final form at:

https://doi.org/10.1161/circ.152.suppl_3.4367883

Abstract

Background: Atherosclerotic cardiovascular disease (ASCVD) remains the leading cause of mortality worldwide. Primary and secondary prevention are crucial to reduce morbidity and mortality. Statins, acetylsalicylic acid (ASA), and/or adenosine diphosphate receptor inhibitors (ADPi) are recommended to all with established ASCVD for secondary prevention, and statins are often used in primary prevention. However, adherence and prescription patterns can vary significantly with age, potentially affecting outcomes. As part of a global research effort, we aimed to investigate the extent of clinical and silent atherosclerosis in individuals aged 18–70 years—an age group selected to optimize early preventive strategies.

Purpose: To describe prescription patterns of ASA, ADPi, and statins for primary and secondary prevention across adult life, with a focus on disparities and potential adherence gaps by age.

Methods: We analyzed a representative sample (matched on age, sex, and socioeconomic status) of individuals aged 18–70 years in December 2024, based on national registries. We identified those with or without ASCVD (defined via ICD-10 and procedure codes for ischemic heart disease, stroke, and peripheral artery disease) and recorded if they had filled at least one prescription for ASA, ADPi, or statins.

Results: The sample included 160,000 individuals (50% female), median age 46 (range 18–70, IQR 33–58). ASCVD was found in 9,825 (6.1%), of whom 7,825 (79.6%) were on secondary prevention. Among 18–29-year-olds, only 20 (22.2%) with ASCVD had prescriptions, increasing to 5,310 (87.2%) in those aged 60–70, driven by ASA and statins.

For primary prevention, 19,327 individuals (12.9%) without ASCVD had collected prescriptions—primarily statins. In the youngest group (18–29 years), only 216 (0.7%) had received treatment, increasing to 10,200 (35.0%) in the oldest group.

Conclusion: This large, population-based study shows that young individuals with ASCVD have low adherence to recommended therapies. For primary prevention, use remained below 7.7% until age 50, rising to 35% in those aged 60–70. These findings underscore a significant potential for improved prevention of ASCVD, particularly among younger adults.

