

# Low Dose Aspirin for Primary Prevention of Cardiovascular Disease: Use Patterns and Impact across Race in the Southern Community Cohort Study

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## INTRODUCTION

There are little data on the role of aspirin for primary prevention of cardiovascular disease (CVD) in racial groups.

## OBJECTIVES

To study the association between aspirin use patterns and CVD incidence by race in the Southern Community Cohort Study (SCCS).



## METHODS

- 44,177 adults
  - 52.2 ± 8.6 y.o.; 67% females
  - 67% blacks, 33% whites
  - Enrollment from 2002 through 2009
  - Median follow-up of 9.2 years
- At cohort entry
  - Simplified 10-y Framingham risk
  - Aspirin use and socioeconomic variables
- Statistical analysis:
  - Race-specific adjusted OR for aspirin use and HR for first MACE
  - Multivariate logistic and Cox regression

## RESULTS

- Blacks were less likely to take aspirin as compared to whites (aOR 0.80; 95% CI 0.76-0.84).
- Incidence rates of MACE were 8.23 (95% CI 7.73-8.75) vs. 6.85 (95% CI 6.55-7.17) per 1000 person-year in whites and blacks, respectively.

Table. Hazard ratios and 95% confidence intervals for first cardiovascular event (myocardial infarction/bypass or cardiac death) among participants in the Southern Community Cohort Study according to low dose aspirin use.

	White	White Women	White Man	Black	Black Women	Black Man
<b>All CV risk, all ages</b>	n= 14,415	n= 9,829	n= 4,586	n= 29,762	n= 19,609	n= 10,153
Low dose aspirin	1.15 (1.00-1.32)	1.17 (0.97-1.40)	1.10 (0.88-1.38)	1.26 (1.12-1.41)	1.29 (1.12-1.48)	1.20 (0.99-1.47)
No low dose aspirin	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
<b>High CV risk, all ages</b>	n= 9,185	n= 5,123	n= 4,062	n= 20,126	n= 10,992	n= 9,134
Low dose aspirin	1.09 (0.94-1.27)	1.13 (0.93-1.38)	1.04 (0.83-1.31)	1.26 (1.11-1.42)	1.28 (1.10-1.49)	1.22 (1.00-1.49)
No low dose aspirin	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
<b>High CV risk, 50-69 yr.</b>	n= 6,381	n= 3,779	n= 2,602	n= 12,299	n= 7,637	n= 4,662
Low dose aspirin	0.98 (0.82-1.18)	1.00 (0.79-1.28)	0.97 (0.73-1.29)	1.27 (1.10-1.47)	1.32 (1.10-1.58)	1.21 (0.95-1.54)
No low dose aspirin	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
<b>High CV risk, 50-59 yr.</b>	n= 3,734	n= 2,141	n= 1,593	n= 8,530	n= 5,040	n= 3,490
Low dose aspirin	0.96 (0.75-1.23)	0.97 (0.70-1.34)	0.96 (0.66-1.40)	1.44 (1.20-1.71)	1.53 (1.23-1.91)	1.30 (0.97-1.74)
No low dose aspirin	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.

Hazard ratios and 95% confidence intervals for first cardiovascular event (myocardial infarction/bypass or cardiac death) after stratified Cox proportional hazard models. All models were adjusted by Framingham risk score, age, diabetes mellitus, household income, and gender if otherwise were not considered as stratification variables. Results are presented for the overall study population (all risk, all ages), and in high risk (≥10% Framingham) participants by race both for any age or according to current guideline recommendations on low dose aspirin use for primary prevention of cardiovascular disease (50-59 and 50-69 years of age).

## CONCLUSIONS

- The present study suggests that the effect of low dose aspirin for the primary prevention of CVD may differ by race, and raises the possibility that blacks who use aspirin are at an increased risk of MACE.
- However, confounding by indication in these observational data cannot be ruled out, and the findings warrant confirmation in further studies.