

Mary Ganguli, MD, MPH  
Bo Fu, MS  
Beth E. Snitz, PhD  
Tiffany F. Hughes, PhD  
Chung-Chou H. Chang, PhD

Correspondence to  
Dr. Ganguli:  
[GanguliM@upmc.edu](mailto:GanguliM@upmc.edu)

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# Mild cognitive impairment

## Incidence and vascular risk factors in a population-based cohort

### ABSTRACT

**Objective:** We examined the incidence of mild cognitive impairment (MCI) and its potential vascular risk factors in a prospective population-based study.

**Methods:** An age-stratified random population-based cohort (baseline n 5 1,982), followed for up to 4 years, was annually assessed for cognitive and everyday functioning. Incidence rates were calculated for both cognitive (neuropsychological [NP]-MCI) and functional (Clinical Dementia Rating [CDR] 5 0.5) definitions of MCI. Several measures of vascular, metabolic, and inflammatory risk were assessed at baseline. Risk factor analyses used interval censoring survival models, followed by joint modeling of both MCI and attrition due to mortality and illness.

**Results:** Incidence rates for NP-MCI and CDR 5 0.5 were 95 and 55 per 1,000 person-years. In individual joint models, risk factors for NP-MCI were diabetes and adiposity (waist: hip ratio), while APOE e4 genotype and heart failure increased risk of attrition. Adiposity, stroke, heart failure, and diabetes were risk factors for nonamnestic MCI. For CDR 5 0.5, risk factors were stroke and heart failure; heart failure and adiposity increased risk of attrition. In multivariable joint models combining all risk factors, adiposity increased risk of NP-MCI, while stroke and heart failure increased risk for CDR 5 0.5. Current alcohol use appeared protective against all subtypes.

**Conclusion:** Incidence of MCI increased with age regardless of definition and did not vary by sex or education. Several vascular risk factors elevated the risk of incident MCI, whether defined cognitively or functionally, but most were associated with nonamnestic MCI and CDR 5 0.5. Controlling vascular risk may potentially reduce risk of MCI.

Neurology\_2013;80:2112–2120 .