

## **Metabolic Syndrome, Gender Disparities and Vascular Risk: The Northern Manhattan Study**

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**Objective:** To examine the relationship between gender, metabolic syndrome (MetSyn), and vascular risk in an urban cohort.

**Background:** MetSyn constitutes a major public health problem with differences in prevalence by gender.

**Design/Methods:** As part of the Northern Manhattan Study, 3297 community residents (2077 women) were prospectively followed for a mean of 6.5 years. MetSyn was defined by ATP III. Cox models estimated hazard ratios (HR) and 95% CI) for vascular events (stroke, MI or vascular death). Population level attributable risk for MetSyn was calculated. Logistic regression explored the association between SES and MetSyn.

**Results:** Over 46% of women (mean 68 yrs) had MetSyn. MetSyn was significantly greater in women (W) than men (M): vascular risk [(W) 1.8, 95% CI 1.36, 2.38 vs. (M) 1.4, 95% CI 1.0-1.9] after adjustment for age, ethnicity, education, and risk factors and accounted for 27% of vascular events in W. We identified two subgroups: MetSyn1 - a combination of blood pressure, blood glucose, and HDL, and MetSyn2 – any other ATP III combination. After adjustment, the effect of MetSyn1 on vascular risk was similar for W [HR 2.9, 95% CI (1.7-4.8) and M [HR 2.0, 95% CI (1.1-3.6)]. MetSyn2, was only associated with vascular risk in W [HR 1.5, 95% CI (1.0-2.3) Women with MetSyn were significantly more likely be Hispanic [1.6, 95% CI 1.2-2.1], socially isolated [1.4, 95%CI 1.05-1.8], and inactive [1.3, 95%CI 1.0- 1.4].

**Conclusions:** Metabolic syndrome may be a more important risk factor for vascular events in women. Lack of social resources may contribute to the development of metabolic syndrome.