Migraine and the Prevalence of Metabolic Syndrome among Women
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Objective:
To evaluate the association between migraine, including migraine subtypes, and prevalent metabolic syndrome among adult women.

Background: Although migraine has been associated with individual cardiovascular disease risk factors including hypertension and dyslipidemia, few studies have explored the association between migraine and dysregulation of these risk factors as captured by metabolic syndrome.

Design/Methods:
We examined the cross-sectional association between migraine and metabolic syndrome among 28,036 women enrolled in the Women’s Health Study. Women were classified as either having active migraine (including migraine with aura and without aura), past history of migraine, or no history of migraine. Metabolic syndrome was defined as three or more of the following characteristics at baseline: body mass index > 26.7 kg/m², HbA1c ≥ 5.7 or physician diagnosis of diabetes, high-density lipoprotein cholesterol < 50 mg/dL, hypertension (either blood pressure ≥ 130/85 mmHg, physician diagnosis of hypertension, or use of blood pressure lowering medications), or triglycerides ≥ 150 mg/dL. Logistic regression models were used to examine the association between migraine and prevalent metabolic syndrome.

Results: At baseline, 3638 women reported active migraine (1441 with aura and 2197 without aura) and 1529 reported a past history of migraine; 6887 women had prevalent metabolic syndrome. After multivariable adjustment, women with a past history of migraine had 1.22 times the odds of having metabolic syndrome compared to those with no history of migraine (95% CI: 1.08, 1.37). Women who experience active migraine had a non-significant increased odds of metabolic syndrome (OR=1.06; 95% CI: 0.98, 1.16). This association was primarily driven by women who experience active migraine without aura (OR=1.10; 95% CI: 0.99, 1.22). We observed no association between active migraine with aura and metabolic syndrome (OR=1.01; 95% CI: 0.89, 1.15).

Conclusions: The association between migraine and metabolic syndrome is limited to those with a past history of migraine and is not observed among those experiencing active migraine with aura.