Heavy drinking is associated with poor blood pressure control in the REasons for Geographic and Racial Differences in Stroke (REGARDS) study.

Alcohol intake has been shown to have a J-shaped association with blood pressure (BP). However, this association has not been examined in mixed race populations or in people with diabetes where tighter blood pressure control is recommended. Participants in the REGARDS study who were 45 years or older (n = 30,239) were included. Medical history (including self-reported alcohol intake) was collected by telephone while blood collection and clinical measurements were done during an in-home visit. We defined diabetes as use of medications and/or fasting glucose ≥ 126 mg/dL and hypertension as use of blood pressure lowering medications and/or BP ≥ 140/90 mmHg or BP ≥ 130/80 mmHg in people with diabetes. After adjustment for confounders, heavy drinking was associated with an increased odds of hypertension (OR = 1.59; 95% CI = 1.37, 1.87). Diabetes and gender significantly modified (interaction P < 0.05 for both) the association between alcohol use and hypertension, although heavy drinking remained associated with increased odds of hypertension in sub-group analyses. We did not observe the previously described J-shaped relationship in any sub-group except white females. These data suggest heavy alcohol consumption is associated with poor BP control and that heavy drinkers may want to consider limiting alcohol intake in order to manage hypertension.

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