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## ASSOCIATION BETWEEN CARDIOVASCULAR DISEASE RISK FACTORS AND OCCURRENCE OF VENOUS THROMBOEMBOLISM: A TIME-DEPENDENT ANALYSIS

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Authors: <u>Keattiyoat Wattanakit</u>, Pamela Lutsey, Elizabeth J. Bell, Heather Gornik, Mary Cushman, Susan Heckbert, Wayne Rosamond, Aaron Folsom, HeartCare Midwest, Peoria, IL, USA, University of Minnesota, Minneapolis, MN, USA

**Background:** Apart from obesity, it remains controversial whether atherosclerosis and its cardiovascular risk disease (CVD) factors are associated with risk of venous thromboembolism (VTE).

**Methods:** Using data from the Atherosclerosis Risk in Communities study (ARIC), we evaluated associations between CVD risk factors and incident VTE in a cohort of 15,340 participants who were free a history of VTE and/or anticoagulant use on enrollment. The CVD risk factors were updated during the follow-up period.

**Results:** Over a mean follow-up time of 15.5 years (237,375 person-years), 468 participants had VTE events. Adjusting for demographic variables and body mass index (BMI), current smokers were at greater risk [HR of 1.44 (95% CI: 1.12-1.86)] compared to non-smokers. There was a positive monotonic association between BMI and VTE risk. Individuals with a BMI > 35 kg/m2 had a HR for VTE of 3.09 (95%CI: 2.26-4.23) compared to those with normal BMI (<25 kg/m2). Greater physical activity was associated with lower VTE risk in a demographic adjusted model, however this association became nonsignificant following adjustment for BMI. Alcohol intake, diabetes, hypertension, HDL and LDL cholesterol, and triglycerides were not associated with VTE risk.

**Conclusion:** Among the well-established CVD risk factors, only current smoking and obesity were independently associated with VTE risk in this large cohort where risk factors were updated serially during follow-up. This finding corroborates that the pathogenesis of venous disease differs from that of atherosclerotic disease.