

# Personality type linked to risk of death among individuals with peripheral artery disease

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A preliminary study suggests that a negative, inhibited personality type (type D personality) appears to predict an increased risk of death over four years among patients with peripheral arterial disease (PAD), according to a report in the August issue of *Archives of Surgery*.

Peripheral arterial disease occurs when plaque builds up in arteries that supply blood to body areas other than the heart and brain, such as the extremities. However, patients with PAD also have an increased risk of secondary events such as stroke, heart attack and death, according to background information in the article. "Preliminary evidence suggests that [personality traits](#) such as hostility may also be associated with the severity and progression of atherosclerosis [plaque buildup] in patients with PAD," the authors write. "Another potential individual risk factor in this context is the distressed personality type (type D). Type D refers to the joint tendency to experience [negative emotions](#) and to inhibit self-expression in [social interaction](#)."

Annelies E. Aquarius, Ph.D., of Tilburg University, Tilburg, the Netherlands, and colleagues studied 184 patients (average age 64.8) with peripheral arterial disease. The participants completed a personality questionnaire when they enrolled in the study, between 2001 and 2004. On the questionnaire, patients rated certain statements (such as 'I often find myself worrying about something' or 'I would rather keep people at a distance') as true or false on a scale of zero to four to assess their

negativity and social inhibition.

During four years of follow-up, 16 patients (8.7 percent) died, including seven who died of cancer and six of cardiovascular disease. After adjusting for age, sex, diabetes and [kidney disease](#), patients with type D personality had an increased odds of death.

Several physical and behavioral pathways may link type D personality and risk of adverse health outcomes, the authors note. The personality type has been associated with increased activation of the immune system and changes in the body's stress response system. In addition, "inadequate self-management of chronic disease is a potential behavioral mechanism that may explain the relation between type D personality and poor prognosis in cardiovascular disease," the authors write.

"Although patients with peripheral arterial disease typically have multiple cardiovascular risk factors that put them at high risk for cardiovascular events, research shows that patients with peripheral arterial disease receive suboptimal secondary prevention," they conclude. "In addition to improving awareness of the traditional medical risk factors in peripheral arterial disease, attention should be given to psychological factors that may have an adverse effect on the clinical course of [peripheral arterial disease](#). The present findings show that screening for type D personality may be especially important in this context."

More information: Arch Surg. 2009;144[8]:728-733.

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