

1: [Circulation](#). 1980 Nov;62(4 Pt 2):IV70-6. [Links](#)

Cigarette smoking and plasma high-density lipoprotein cholesterol. The Lipid Research Clinics Program Prevalence Study.

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The relationship between cigarette smoking and high-density lipoprotein (HDL) cholesterol was examined in 2663 men and 2553 women ages 20-69 years in 10 North American populations. Men and women who were smokers had significantly ($p < 0.01$) lower HDL cholesterol levels than nonsmokers, and heavier smokers had lower HDL cholesterol levels than lighter smokers. Using multiple linear regression analysis to adjust for differences in age, obesity, alcohol consumption and regular exercise increased the differences in HDL cholesterol levels between smokers and nonsmokers. For men who smoked 20 or more cigarettes/day, adjusted values averaged 5.3 mg/dl (11%) lower than those for nonsmokers ($p < 0.01$). Women who used gonadal hormones were analyzed separately from those who did not. In both groups, women who smoked 20 or more cigarettes/day had lower HDL cholesterol levels than nonsmokers: 9.4 mg/dl (14%) lower in hormone users and 8.6 mg/dl (14%) lower in nonusers (both $p < 0.01$). These findings indicate that cigarette smoking is associated with substantially lower levels of HDL cholesterol. Further, this association appears to be dose-dependent and is consistent with other research, indicating a possible causal relationship between cigarette smoking and lower HDL cholesterol.

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