Prevention of Coronary Artery Disease Should Start in the Young

To the Editor:

Coronary artery disease (CAD) is the leading cause of death in the United States. Autopsy studies of war casualties in Korea\(^1\) and Vietnam\(^2\) showed that subclinical atherosclerosis is evident in late adolescence and early adulthood.

The recent report from the Chicago Heart Association Detection Project in Industry study,\(^3\) one of the largest and longest cardiovascular disease studies, comprising 11,016 young men 18 to 39 years of age with 20 years of follow-up, showed that major CAD risk factors, many of which are modifiable, are strong contributors to prediction of future risk, even in young men. These findings strongly endorse the concept that coronary risk factors in men 18 to 39 years of age have a powerful effect on long-term risk for death from CAD.

In the Pathobiological Determinants of Atherosclerosis in Youth (PDAY) study,\(^4\) autopsies of young accident victims revealed that hyperlipidemia and cigarette smoking play a major role in the early development of atherosclerosis. The strong association between CAD and hyperlipidemia has often overshadowed the effects of the nonlipid risk factors—smoking, hypertension, obesity, and diabetes—and even has led to questioning the importance of these risk factors in the presence of a favorable lipoprotein profile. The latest report by McGill et al for the PDAY researchers,\(^5\) however, shows that, even in the presence of a favorable lipoprotein profile, these nonlipid risk factors substantially affect the extent and severity of coronary and aortic atherosclerosis.

CAD clearly begins early in life. Control of hyperlipidemia alone will undoubtedly retard the progression of atherosclerosis in the young, but there will remain a substantial atherogenic stimulus from smoking, hypertension, obesity, and diabetes. That was the reason why Paul D. White always preached that prevention of CAD should start the moment a person is born.

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Circulation. 2001;104:e107

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