

EDITORIAL COMMENT

Diet and Exercise for Perimenopausal Women

Lifestyle Interventions Can Decrease Cardiovascular Risk*

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Earlier this year, the American Heart Association and multiple partner professional organizations published evidence-based guidelines for the prevention of cardiovascular disease in women (1). These guidelines highlight the top priority of incorporating into clinical practice the advocacy of lifestyle modifications both for preventing the development of coronary risk factors and for decreasing the risk of coronary heart disease. Such interventions include smoking cessation, regular physical activity, a heart-healthy diet, and weight maintenance/reduction. Although coronary heart disease is the predominant cause of mortality for adult women in the U.S., screening for coronary risk factors and coronary risk reduction interventions remains underused in women. A recent survey (2) identified that most U.S. women are unaware of their cholesterol levels and that few personally perceive themselves as at risk for cardiovascular events.

See page 579

In this issue of the *Journal*, a randomized controlled trial of a dietary and exercise intervention depicts its efficacy for perimenopausal women in slowing the progression of atherosclerosis, as ascertained by a noninvasive measurement of carotid intima-media thickness (3). These data from the Women's Healthy Lifestyle Project suggest that perimenopause offers the unique opportunity for coronary risk reduction in women. The recent persuasive evidence from randomized controlled clinical trials (4–6), that the use of menopausal hormone therapy by both healthy women and women with established heart disease failed to prevent cardiovascular events and rather entailed cardiovascular and other risks, has refocused attention on interventions of documented efficacy in preventing cardiovascular disease in women. Of note is that menopausal hormone use initiated by small numbers of women in the Women's Healthy Lifestyle Project between the baseline visit and study end did not alter the effect of the diet and exercise intervention.

As appropriately cited by the authors, research is requisite to delineate whether a comparable diet and exercise intervention initiated later after menopause would provide similar benefit.

In the U.S., physical inactivity is more prevalent among women than men and is more likely to be present among older than younger women, among the less affluent, and among women of racial or ethnic minorities. Contemporary reports confirm that one third of Caucasian women are physically inactive, in contrast to more than one half of black and Hispanic women. More than half of Caucasian women are overweight or obese, compared with about three fourths of black and Mexican-American women (7).

Weight reduction is associated with an improvement in insulin resistance, in inflammatory markers such as C-reactive protein, in systolic and diastolic blood pressures, and in the lipid profile (8). Regular exercise such as 30 min of jogging, swimming, or brisk walking daily can lower levels of total cholesterol, low-density lipoprotein, and triglycerides and raise high-density lipoprotein concentrations. Exercise has been documented to decrease the risk of coronary heart disease by 40%, stroke by 30%, and the development of type II diabetes by 30% (9).

An earlier report from the Women's Healthy Lifestyle Project (10) clinical trial established that the modest and attainable dietary and physical activity intervention prevented weight gain and was associated with significant reductions in total cholesterol and triglyceride levels, waist circumference, systolic and diastolic blood pressures, and glucose levels. The intervention was designed to reduce dietary fat intake to 25% of daily calories, lower saturated fat intake to 7% of calories, and decrease dietary cholesterol to 100 mg daily. A reduction in caloric intake to 1,300 kcal daily and an increase in leisure time physical activity of 1,000 to 1,500 kcal energy expenditure weekly were used to facilitate weight loss/control. The study design involved intensive group programs for the initial 6 months and individual and group sessions during months 6 through 54. The current documentation of a favorable effect on a subclinical measure of atherosclerosis, carotid intima-media thickness, is concordant with the hypothesis that risk reduction favorably impacts the pathophysiologic alterations of atherosclerosis.

Unanswered, pivotal questions remain as to whether the physiologic changes of menopause per se trigger an increase in traditional coronary risk factors, whether menopause and/or its hormonal milieu increase concentrations of novel or as yet-unidentified risk factors that increase coronary risk, whether lifestyle attributes of menopausal women (including weight gain and physical inactivity) increase coronary risk, whether any of these represent a continuum of risk associated with aging without an abrupt increase at menopause, and/or whether these variables differ in subpopulations of women.

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