Low Levels of Physical Activity in Women: Risks, Costs and Solutions

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Physical inactivity is a complex and growing problem facing the health status of American women, and its solution remains elusive. Nationally, rates of physical inactivity in women are unacceptably high with the highest rates found in women of color. Physical inactivity is associated with obesity, heart disease and stroke, other chronic diseases and premature mortality.1-3 In addition to its impact on health, a sedentary lifestyle accounts for a significant economic burden. Despite these risks, it remains difficult to motivate women to exercise regularly because of multiple and varying obstacles. In order to design and implement effective campaigns promoting fitness, the barriers to and the facilitators of physical activity need to be identified for a variety of racial/ethnic groups of women.

Prevalence

Women have higher rates of inactivity than men. Nationally, physical inactivity rates in women range from 23-57%.4,5 Among women, 23% of non-Hispanic whites reported no leisure-time physical activity, and even higher rates were reported in minority women.4 Non-Hispanic black women and Latinas have rates of inactivity of 36% and 40%, respectively.4 The high prevalence of inactivity places women, particularly minority women, at greatest risk for illnesses related to a sedentary lifestyle.

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Health burden of inactivity

Physical inactivity is linked with a multitude of health conditions and ailments. While inactivity may not be causally related to obesity, the two are surely entwined. In addition to inactivity, rates of obesity are higher in women than men, with a third of American women weighing in as obese. Similar to inactivity rates, rates of obesity are highest in black and Hispanic women at a staggering 50% and 40%, respectively. Epidemiological studies lend further evidence to the close relation between inactivity and obesity by consistently reporting lower body weight and a more favorable distribution of body fat with higher levels of physical activity. Inactivity and obesity place women at risk for a similar constellation of health risks, but inactivity contributes to mortality independent of adiposity.

Inactivity is also a major risk factor for cardiovascular disease, comparable to that imparted by hypercholesterolemia, hypertension and cigarette smoking, and it also plays a prominent role in the causal factors leading up to heart disease. Not only do women have higher rates of inactivity than men, they also suffer higher rates of morbidity and mortality from heart disease. A host of epidemiologic and experimental data show regular physical activity is protective against coronary heart disease and stroke, and their risk factors, namely hypertension, unfavorable cholesterol profiles and diabetes. A minimal physical effort is required to receive health benefits. For example, Manson and colleagues demonstrated a nearly 30% reduced risk of heart disease for women who simply walked at a moderate pace for at least 2.5-3 hours per week. A health benefit was gained regardless of body mass index, age, or race/ethnicity. Similarly, Kraus, et al. showed that walking or jogging 12 miles per week resulted in a more favorable cholesterol profile. Improvements in insulin sensitivity, cholesterol levels, stroke and heart disease risk all show a dose-response relationship with increasing levels of physical activity.

In physically capable older adults, physical activity may also reduce the risk of functional decline and mortality. Blair and colleagues reported lower death rates for women who were more physically fit. For categories of low, moderate and high physical fitness, death rates were 40, 16, and 7 per 10,000 person-years, respectively. Osteoporosis and psychological ailments, other conditions contributing to a woman's morbidity and mortality, are also reduced with higher levels of physical activity.

Economic impact

The morbidity and mortality associated with physical inactivity greatly contributes to U.S. healthcare expenditures. Approximately 2.4% of all U.S. health dollars spent, or $24 billion annually, are attributed to direct costs due to a sedentary lifestyle. Adding the cost of obesity-related morbidity raises the total to $94 billion in 1995 dollars. Keeler and colleagues estimated that an individual's cost borne to subsidize persons with a sedentary lifestyle is $1900. Furthermore, Jones and Easton predicted an annual savings of $5.6 billion if only 10% of adults at risk for coronary heart disease began a regular walking program. These figures substan-
tiate the allocation of resources to support employer and community-based exercise efforts, recreational facilities and physical activity campaigns on a national and local level in order to increase physical activity nationwide. Physical activity programs need to target those at greatest risk of a sedentary lifestyle and its associated conditions. However, in order to create these, the barriers and facilitators that influence physical activity must first be recognized.

Barriers and Facilitators

Several factors are consistently associated with physical activity levels in women. Those who report the lowest levels of activity are minority women, those with lower levels of education and socioeconomic status and women over the age of 40.6,27,28 Although older women report higher levels of inactivity, sedentary habits start early on. Kimm and colleagues found that by the age 17, one half of black girls and one third of white girls reported no habitual leisure-time physical activity.29 Predictors of decline in activity of adolescent girls were higher body-mass index, cigarette smoking and pregnancy.29

Community and regional differences may also affect physical activity levels between and among various groups of women. One study described rates of inactivity in urban women and found marked differences among white (54%) and minority women, African-American and Hispanic (62%).28 Among urban Latinas, inactivity ranged from 11% to 23% when comparing women living in Chicago versus Baltimore. Similarly, lack of leisure-time physical activity ranged from 9% to 18% in urban African-American women from Chicago and Baltimore, respectively.30

Number of children can influence physical activity in a complex manner. The Women’s Cardiovascular Health Network Project found that African-American women who had no children were less likely to be physically active than those with two or more children.30 In contrast, rural white women with fewer children were more active than those with two or more children.30

More individualized factors may affect a predisposition toward a sedentary lifestyle. Women who suffer from urinary incontinence and mood disorders may have decreased participation in physical activities due to discomfort, embarrassment or decreased access to care.31 Self-efficacy, overall health status, knowing people who exercise, attending religious services and living in an environment safe from crime all positively affect amount of physical activity.30

Additionally, women have espoused community-group programs for support and motivation in order to promote regular exercise.30 Since walking is the most popular leisure-time activity,28,32 exercise programs incorporating similarly accepted and accessible behaviors will likely be successful. Moreover, local programs should be targeted at their respective and unique communities; race/ethnicity, urban vs. rural, age, and local customs should all be considered.

Efforts and Recommendations

A host of agencies all call for an increase
in physical activity as a means to decrease cardiovascular disease and stroke, diabetes, obesity and cancer. The American Heart Association, American Diabetes Association, American Cancer Society, and Centers for Disease Control and Prevention advocate 30 minutes of moderate physical activity on most, if not all days of the week. Furthermore, part of the U.S. Department of Health and Human Services’ goals of their Healthy People 2010 campaign include increasing physical activity in U.S. adults from 15 to 20% and decreasing physical inactivity by 20%.

Since 2001, only nine bills in eight states have been enacted promoting increased physical activity and related education efforts. Most of these are school-based programs or initiatives targeting children and adolescents. Equally important is to reach those at greatest risk of a sedentary lifestyle, namely women, minority women and those with lower levels of education and economic achievement.

The U.S. Preventive Services Task Force (USPSTF) concluded that there was insufficient evidence to impart behavioral counseling promoting physical activity in a primary care setting. Rather, it has been recommended that state and local public health departments promote physical activity by using the following evidence-based strategies: 1) community campaigns, 2) signs near elevators and escalators encouraging stair use, 3) individualized health-behavior change programs, 4) physical education in schools, 5) community-wide social support interventions, and 6) enhanced access to physical activity sites combined with informational outreach.

Conclusion

Nearly a third of American women report no physical activity, contributing to their susceptibility toward obesity, heart disease and stroke, chronic diseases and mortality. A simple preventive measure, such as walking at a moderate pace for three hours a week, could have a potentially dramatic impact on the health of American women and in reducing U.S. healthcare expenditures. However, eliminating the obstacles that prevent regular physical activity and formulating campaigns to promote it are more complex than would seem. Physicians and other healthcare providers can attest to the frustrations faced in trying to motivate patients to exercise regularly. While no increase in activity levels have been found from behavioral counseling, healthcare providers must continue to stress to patients the importance of regular physical activity and its health benefits. Community-wide efforts addressing a specific population’s special interests, barriers, and motivations could perhaps be central in promoting physical activity as recommended by the USPSTF. Finally, whatever the approach, efforts should target those at greatest risk for a sedentary lifestyle, namely women, minority women, and those with lower economic and educational achievements.

References

3. Centers for Disease Control and Prevention. Self-reported physical inactivity by degree of urbanization – United


Information available at CDC Nutrition & Physical Activity State Legislative Information page at http://apps.nccd.cdc.gov/DNPAPLEG/
