Robert Wood Johnson Foundation

ISSUE BRIEF #1

EXPLORING THE SOCIAL DETERMINANTS OF HEALTH

This issue brief, published in March 2011, is one in a series of 12 issue briefs on the social determinants of health. The series began as a product of the Robert Wood Johnson Foundation Commission to Build a Healthier America.

What Shapes Health-Related Behaviors?

1. Introduction

Over the past few decades, scientists have clearly documented how our behaviors protect us from, or put us at risk for, disease. Most Americans know what it takes to be healthier: exercise more, eat a more nutritious diet and abstain from smoking. Despite increased awareness, however, too many Americans continue to practice unhealthy behaviors: in 2008, for example, nearly 60 percent of U.S. adults had no regular leisure-time physical activity and one-fifth were current smokers.[1] These behaviors contribute significantly to poor health and early death.[2-4]

Until now, most efforts to improve health-related behaviors have focused on health education to better inform people about the importance of making healthier decisions. More recently, however, that focus has broadened as a result of new understanding about how the conditions in which we live, learn, work and play also shape health.[5-9] Many Americans live in neighborhoods with limited access to fresh food or safe places to exercise, have few affordable options for high-quality childcare and experience stressful working conditions—all of which represent significant obstacles to making healthy choices for themselves and their families. This issue brief summarizes current knowledge about factors that shape health-related behaviors and provides an overview of promising approaches based on that knowledge.

While most approaches to health-related behaviors have focused on personal responsibility, a growing body of knowledge tells us that people's living and working conditions—and factors like education and income that shape them—play a fundamental role as well.

2. What shapes health-related behaviors? The importance of social factors

We all want to be healthy, so why do some people practice healthy behaviors, while others—including many who are aware of the value of these behaviors—do not? A person's behaviors are shaped in part by his or her individual characteristics, including genetics, but there is growing evidence that the environments in which people learn, adopt and maintain behaviors also play an important role. [7, 8, 11-13]

Many important behavioral risk factors for illness and early death in the United States vary dramatically depending on where people are on the social and economic ladder. The links between health-related behaviors and both education and income—the most common measures of social and economic advantage in this country—have been well-documented. As the examples below illustrate, increases in income and educational attainment typically correspond to decreases in the prevalence of health-harming behaviors and increases in the prevalence of health-promoting behaviors. In many cases, these differences reflect more than the contrast between those who are poorest or least-educated and everyone else; instead, we often see incremental improvements with each step up the income or education ladder. These patterns have been observed for an array of behaviors, beginning in childhood and continuing throughout life. [14-20]

The following examples illustrate the links between health-related behaviors and social factors including income, education and neighborhood conditions, beginning in childhood. These kinds of patterns have been seen in findings from a range of studies, including studies that have considered other potentially relevant factors such as gender, age and race or ethnic group.

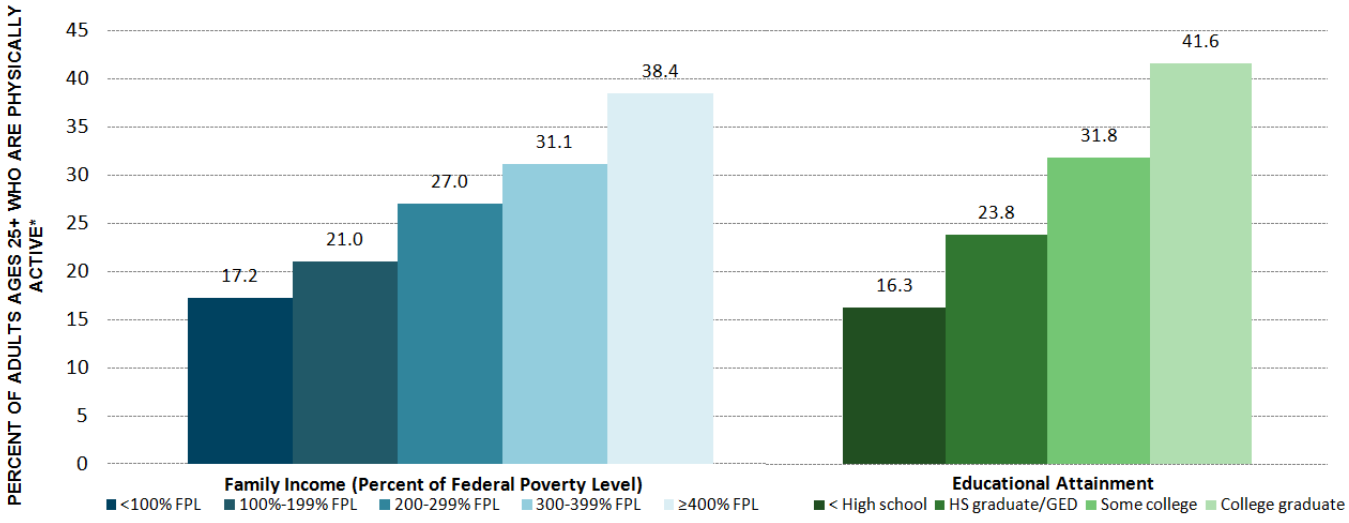
*In this brief, the term **social factors** refers to education, income or wealth, race or ethnic group, and living and working conditions throughout life.*

***Social advantage** or **disadvantage** refers to the relatively favorable or unfavorable conditions that people experience related to one or more of these social factors.*

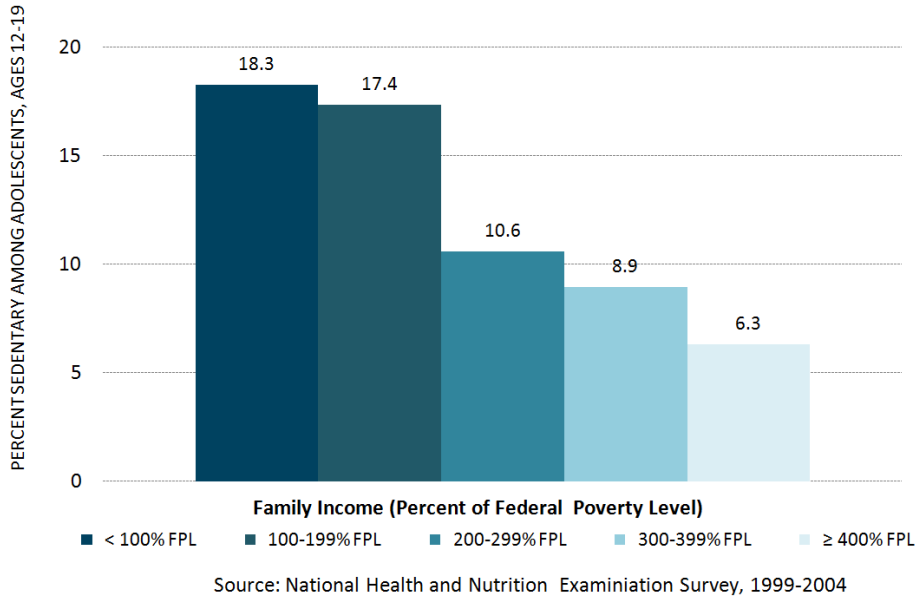
PHYSICAL ACTIVITY

Both income and education are associated with physical activity among adults, with lower rates of physical activity (Figure 1) and higher rates of sedentary behavior (not shown) seen at lower levels of income and educational attainment. Similar patterns have been observed among adolescents as well (Figure 2).

Figure 1. Adults with higher income or more education are more physically active.



Source: National Health Interview Survey, 2001-2005 *Age-adjusted



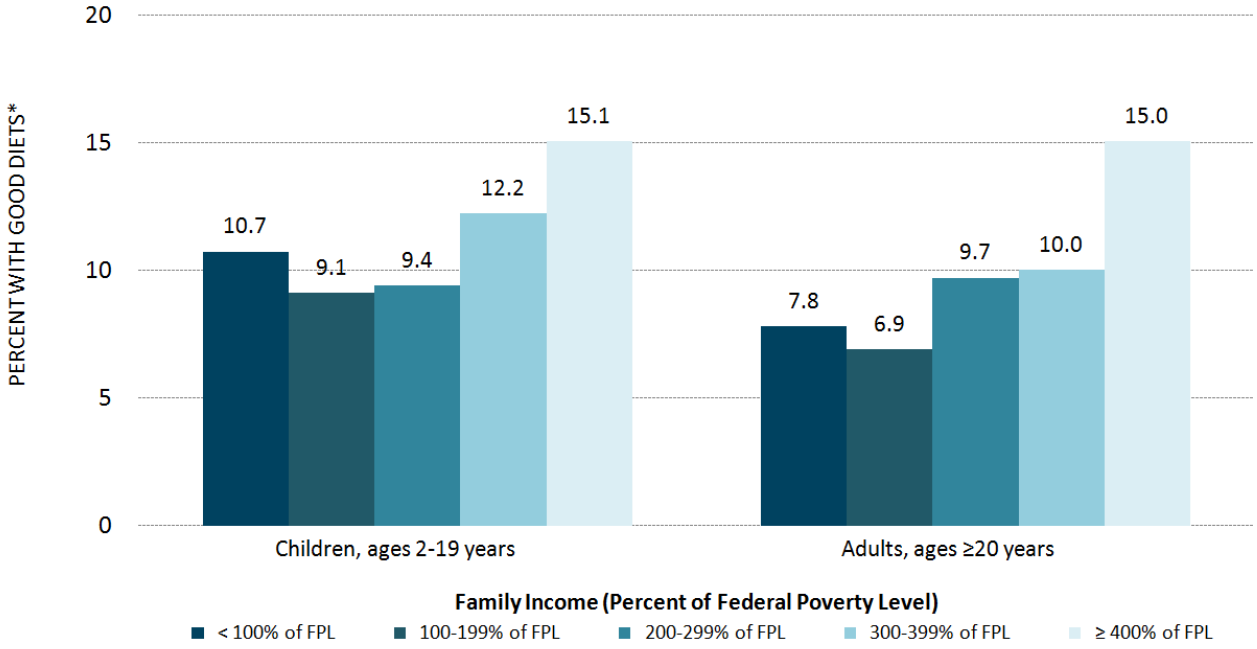
Source: National Health and Nutrition Examiniation Survey, 1999-2004

Figure 2. As family income rises, teenagers are less likely to be sedentary.

NUTRITION/HEALTHY EATING

As illustrated in Figure 3, people in higher-income families are generally more likely to eat healthier foods. [21] People in lower-income households eat fruits and vegetables less frequently. [22-24] In addition, the quality of residents' diets improves with greater neighborhood-level access to healthy foods, as measured both by their availability in neighborhood stores and by proximity to full-service supermarkets.[25]

Figure 3. As family income rises, adults and children are more likely to have good diets.

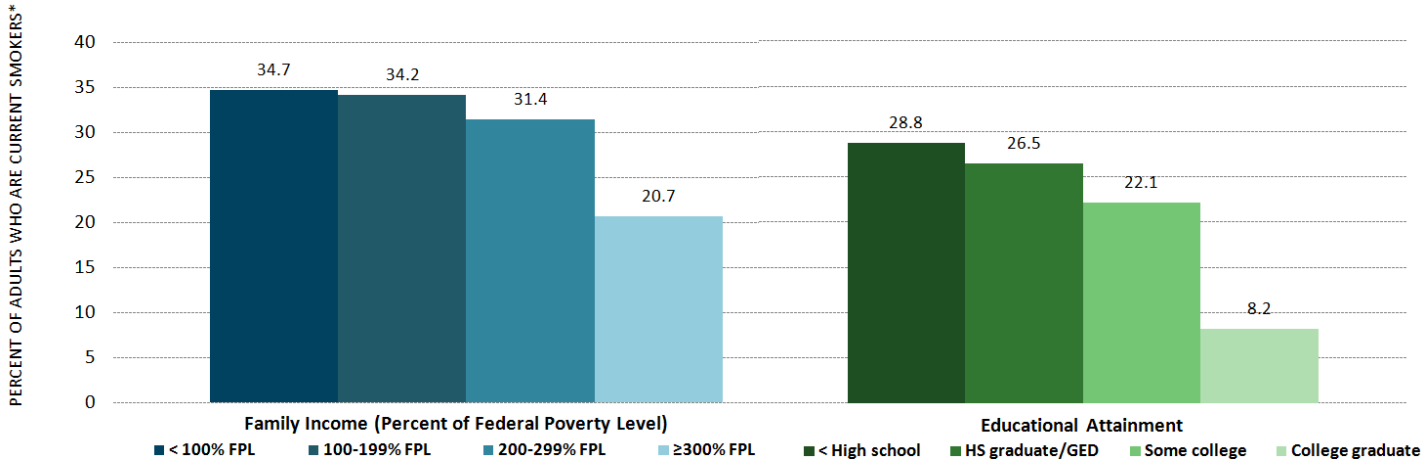


*** The mean healthy eating index (HEI) score measures intake of 10 key diet components (grains, vegetables, fruits, milk, meat, total fat, saturated fat, sodium, cholesterol, and variety), each ranging from 0-10 with higher scores indicating healthier eating. A good diet is defined as a having an HEI score above 80. Source: National Health and Nutrition Examination Survey, 1999-2002.**

SMOKING

As seen in Figure 4, both income and education have been associated with smoking among U.S. adults,[17, 23, 26, 27] including pregnant women,[28] with the lowest rates typically seen in the highest-income and most-educated groups. While smoking rates have decreased over time, the declines have been most dramatic among the most socially and economically advantaged groups.[29] Smoking rates have also been associated with neighborhood characteristics; even after taking into account individual-level income and education, rates of smoking are higher in neighborhoods with more convenience stores, higher crime and limited access to transportation and exercise facilities.[30, 31] Socioeconomic disadvantage during childhood has also been associated with smoking later in life.[32, 33]

Figure 4. Adults with lower incomes or less education are more likely to smoke.



*Ages 18-64 years. Source: NHIS 2000; adapted from Barbeau, E. M., N. Krieger, et al. (2004). "Working class matters: socioeconomic disadvantage, race/ethnicity, gender, and smoking in NHIS 2000." Am J Public Health 94(2): 269-78.

*Ages ≥25 years. Source: National Center for Health Statistics. Health, United States, 2007 with Chartbook on Trends in the Health of Americans; Hyattsville, MD: Centers for Disease Control and Prevention; 2007.

3. What explains the links between health- related behaviors and social factors?

A large body of research sheds light on the relatively direct ways in which aspects of people's physical environments—for instance, access to and quality of housing, transportation, stores, playgrounds and parks—either promote or present obstacles to healthy behaviors. [25, 34, 35] Aspects of the social environment also can shape behaviors, often in less direct ways. For example:

- ***Income and wealth shape access to health-promoting conditions***. Economic resources affect the extent to which people can afford to make health-promoting choices for themselves and their families regarding the food they eat; how they spend their time, including physical activity; and whether they live in safe homes and neighborhoods free of physical hazards. Fresh food typically costs more than processed food and tends to be less available in lower-income neighborhoods where full-service grocery stores may be scarce. Lower-income neighborhoods often lack safe places to exercise as well.[25, 36, 37]

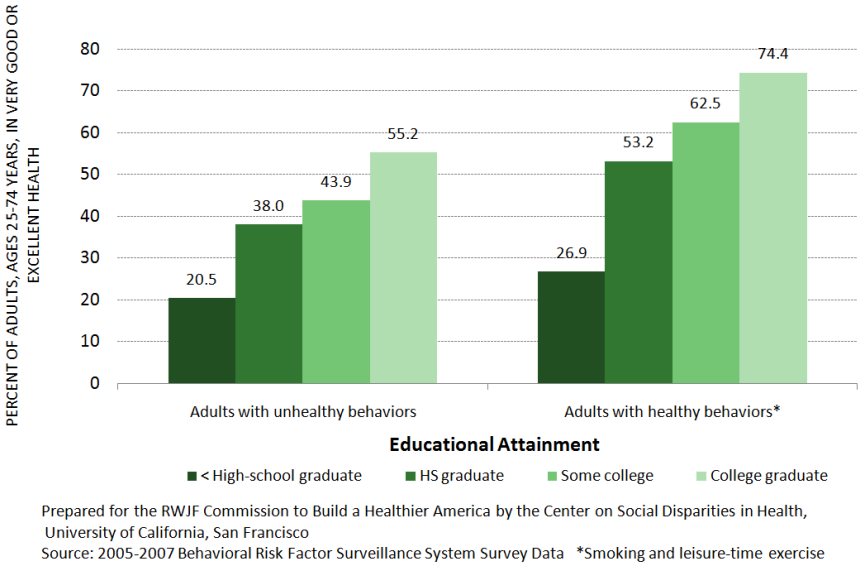
- ***Education plays a powerful role in shaping health behaviors, in multiple ways.*** Having more education may mean greater health knowledge and better problem-solving skills to make more informed choices about behaviors,[38] including those related to seeking appropriate medical care.[39-41] Education can also shape health-related behaviors in other important ways. A person's educational attainment is closely linked with his or her options for employment and income, which in turn can influence behaviors as noted above. Having more education and a better job is also linked with the kinds of social support, networks and norms that support healthy behaviors and discourage behaviors that are health-harming.[42-44]

- ***Stressful conditions and experiences contribute to unhealthy behaviors***. While a growing body of research suggests that chronic stress can have direct physiologic effects on health, stress also can shape health via its effects on health-related behaviors. For example, children who experience stressful circumstances, particularly on a daily basis, are more likely later in life to adopt—and less likely to discontinue—risky health behaviors like smoking and abuse of alcohol or drugs[45-47] that may function as coping mechanisms. (Another issue brief in this series focuses on the links between stress and health.)

EXPLAINING DIFFERENCES IN HEALTH: BOTH HEALTH-RELATED BEHAVIORS AND SOCIAL FACTORS PLAY IMPORTANT ROLES

We know that behaviors, along with medical care and genetic makeup, are key determinants of health. But there have been tremendous advances over the past two decades in our understanding of the fundamental importance of the social determinants of health—of how health also is shaped by factors including income and education, living and working conditions, and early childhood experiences.

It is important to note that behaviors alone do not fully account for the strong links between factors such as income and education and so many health outcomes. For example, Figure 5 shows differences in adult health status by both educational attainment and smoking and leisure-time exercise. This figure demonstrates that a person's chances of being in very good or excellent health are greater at each higher level of educational attainment—whether or not he or she practices healthy behaviors. Social factors—such as education—can have powerful effects on health, over and above how they shape health-related behaviors.

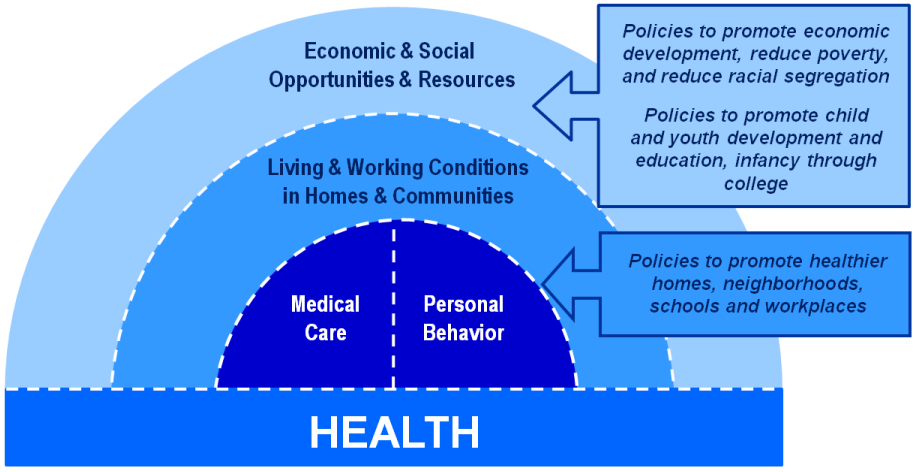


Prepared for the RWJF Commission to Build a Healthier America by the Center on Social Disparities in Health, University of California, San Francisco
Source: 2005-2007 Behavioral Risk Factor Surveillance System Survey Data *Smoking and leisure-time exercise

Figure 5. Social factors —such as education—can have powerful effects on health, over and above how they shape health-related behaviors.

4. Helping people choose health

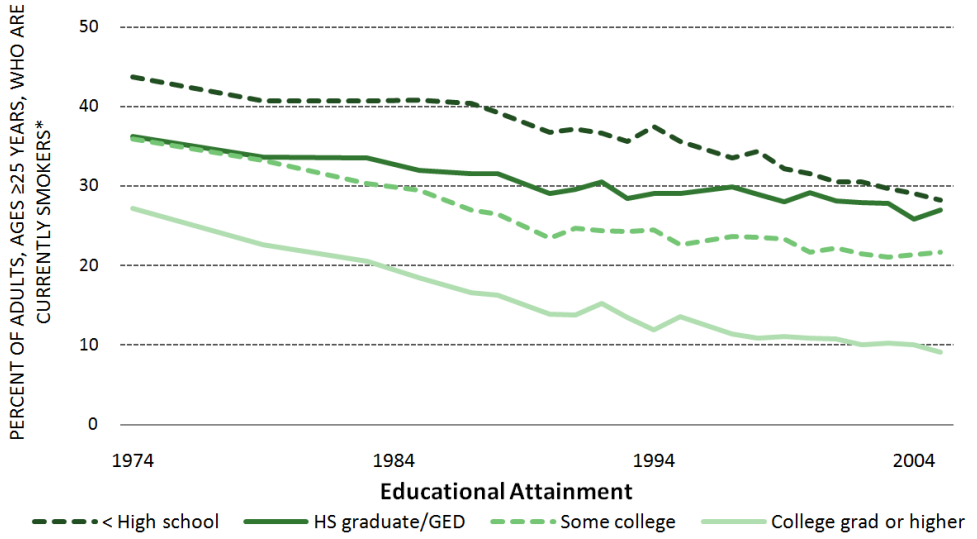
Good health depends on personal choice and responsibility, on people making the commitment to choose health-promoting behaviors for themselves and their families—to eat a healthy diet, include physical activity as part of daily life and avoid risky behaviors like smoking and excessive drinking. As noted above and seen in Figure 6, however, people's health behaviors are also shaped by conditions over which they as individuals have little or no control. Many Americans live and work in circumstances that make healthy living nearly impossible, even when they are informed and motivated. Many have limited or no access to grocery stores that sell nutritious food; many live in communities that are unsafe or in disrepair, making it difficult or risky to exercise.[5, 7, 10, 25, 35, 48, 49] The chronic stress produced by working in conditions with excessive demands, lack of social support, long working hours and job insecurity can manifest in unhealthy behaviors, even among individuals highly motivated to "choose health."[50-54] In addition, the legacy of racial segregation means that many people in historically disadvantaged groups have particularly limited choices about the physical and social environments in which they live, even though racial discrimination is no longer legal.[55]



Source: Robert Wood Johnson Foundation Commission to Build a Healthier America

Figure 6. What influences health? Broadening the focus.

Efforts to improve health-related behaviors have focused primarily on providing information and encouragement to convince individuals to change their behaviors. We have learned, however, that these efforts often appear to be least successful in reaching those who need them most.[29, 56-58] The success of anti-smoking campaigns in reducing overall smoking rates, as noted above, has largely been based on the declining rates of smoking among people in more socially advantaged groups.[26, 29, 59] However, persistent differences in smoking rates by income and education [11] (Figure 7) raise concerns about the growing proportion of smokers for whom traditional interventions may be ineffective. [60]



Source: NCHS. Health, US, 2006 with Chartbook on Trends in the Health of Americans. Hyattsville, MD. *Age-adjusted.

Figure 7. Persistent gaps in smoking by education.

Much remains to be learned about the most successful strategies for helping people adopt and maintain health-promoting behaviors. Current knowledge tells us that improving the health-related behaviors of all Americans and narrowing disparities will require broadening our focus. We must move beyond the necessary, but not sufficient, step of educating and encouraging individuals to make healthier choices, to find ways to improve the conditions in people's homes, schools, workplaces and communities. Because these conditions affect people's choices, improving them will create more opportunities for people to make healthy choices. [5, 10, 61-63]

Other issue briefs in this series explore the role of income, education,[38] working conditions[64] and neighborhoods[34] in health and health-related behaviors and provide examples of interventions that appear to have worked in creating healthier environments. In addition to policies focused on expanding social and economic resources and opportunities, including the Earned Income Tax Credit, minimum wage laws and extending high-quality Early Head Start programs, the following are examples of approaches that show promise, in part because of their emphasis on capacity-building:

- Pennsylvania's Fresh Food Financing Initiative is a public-private partnership that mobilizes community support and investment to address a broad range of obstacles to supermarket development in distressed neighborhoods. New York State and New Orleans have adopted this model, hoping both to increase fresh food access and create jobs,[65] and a recent bipartisan coalition in Congress introduced bills to replicate this approach nationwide in an effort to eliminate "food deserts" and reduce childhood obesity.[66]
- An evaluation of programs combining universal free breakfast with nutrition education found less stigma associated with eating free breakfast at school (a factor contributing to less than optimal participation in these programs) as well as improvements in eating habits among students.[65]
- The Robert Wood Johnson Foundation Commission to Build a Healthier America recommended that schools be required to provide physical education programs, active recess or after-school activities to help children meet the goal of an hour of physical activity every day. In Chicago, the city's Walking School Bus program, in which one or more adults walk with a group of children to and from school, has helped to increase walking to and from school by addressing safety concerns; 90 percent of these public-school students are now are closer to meeting the activity goal by walking to and from school. [65] Similar programs have been initiated in other municipalities.[67]
- The Arabia Mountain Trail in a primarily African-American community near Atlanta has connected neighborhoods, downtown and commercial areas with historic sites and nature preserves, providing a transportation route and recreational resource for pedestrians and bicyclists.[65] In another community, opening a schoolyard after-hours with attendants for safety increased the number of children playing actively outdoors and reduced their television, movie and computer-game time.[68]
- The Shape-up Somerville program involved a wide range of community participants to increase options for physical activity and availability of healthful foods in children's school, home and community environments. After one year, participating 1st- to 3rd-grade children had significantly decreased BMIs compared with children in two similar Massachusetts communities.[69]
- In 2002, New York City embarked on an ambitious effort to address behavioral causes of chronic disease. After large increases in cigarette taxes, legislation promoting smoke-free workplaces and restaurants, provision of free nicotine replacement therapy to smokers and an aggressive anti-tobacco advertising campaign, the city saw its first drop in smoking prevalence in a decade. The declines were evident across all age and racial-ethnic groups, at every level of educational attainment, among both U.S.-born and foreign-born persons and in all five boroughs of the city, and were especially pronounced among low-income and Hispanic women.[70]

5. Conclusion

Given the fundamental role of behaviors in shaping health,[69] building a healthier America will clearly depend on finding ways to ensure that more Americans have the ability to adopt and maintain healthy behaviors, beginning in childhood and throughout their lives. As Thomas R. Frieden, the current head of the U.S. Centers for Disease Control and Prevention, has recommended, highest priority should be given to "interventions that change the context to make individuals' default decisions healthy."[10] While no government or private program can take the place of people making healthy choices for themselves and their families, society bears a responsibility as well: to pursue programs and policies that both encourage and enable all Americans—and particularly those who face the greatest obstacles—to choose health.

We need "interventions that change the context to make individuals' default decisions healthy." — Thomas Frieden, Director of the U.S. Centers for Disease Control and Prevention, 2010

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The Robert Wood Johnson Foundation focuses on the pressing health and health care issues facing our country. As the nation's largest philanthropy devoted exclusively to improving the health and health care of all Americans, the Foundation works with a diverse group of organizations and individuals to identify solutions and achieve comprehensive, meaningful and timely change. For 40 years, the Foundation has brought experience, commitment, and a rigorous, balanced approach to the problems that affect the health and health care of those it serves. When it comes to helping Americans lead healthier lives and get the care they need, the Foundation expects to make a difference in your lifetime.

ABOUT THE COMMISSION TO BUILD A HEALTHIER AMERICA

The Robert Wood Johnson Foundation Commission to Build a Healthier America was a national, independent, non-partisan group of leaders that released 10 recommendations to dramatically improve the health for all Americans. www.commissiononhealth.org

ABOUT THIS ISSUE BRIEF SERIES

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