Abstract

The municipal government will mandate that new developments must include wide and safe sidewalks. The municipality should also provide sidewalks for the already existing sprawled areas. As suburban sprawl continues in America, a socially important part of neighborhood structure is missing: the sidewalk. This small subtraction leads to unfortunate implications. There are prevalent statistical correlations between a lack of sidewalks (unwalkable neighborhoods) and a decrease in physical activity, such as obesity. This, in turn, leads to an increase in conditions that are caused by a lack of physical activity. Where sidewalks are present, they have been proven to increase pedestrians’ safety. A more walkable environment specifically means that more children will be able to walk to and from school, which will decrease their likelihood of being overweight. Sidewalks, which provide an alternative to driving, are a sustainable and an environmentally friendly medium of transportation. Sidewalks also allow for communities to be built, and communities have been proven to increase lifespan, among other things. While one of the only criticisms of sidewalks is the large price tag that goes along with them, there are cost effective ways of planning and installing sidewalks. Thus, it is important that all neighborhoods be walkable neighborhoods.
The importance of individuality to Americans, coupled with certain policy choices from the past, has led to suburban sprawl today. Sprawling areas consist of wide streets to contain traffic, single-use-zoned areas, and no sidewalks. Dr. Kevin M. Leyden, a associate professor of Political Science at West Virginia University and Director of their Institute for Public Affairs, noted in his study on social capital that suburbs have become so focused around the automobile that it is no longer sensible for developers to put in sidewalks (1547). This focus on the automobile has led to a general sedentary lifestyle for suburbanites, which have serious physical and mental side effects.

The government has done little to help the situation. In fact, only .7 percent of transportation funds are spent on ensuring a safe environment for pedestrians. Unfortunately, many Americans have no choice but to live in the suburbs, which are, in some cases, cheaper than urban housing options. This is one reason that the government must intervene in the case of the sidewalk. If people have little choice about where they live, they should at least be allowed healthy living environments. Mitch J Duncan, a professor at the School of Health & Human Performance at Central Queensland University in Australia, explained in his article, “Perceived environment and physical activity: a meta-analysis of selected environmental characteristics,” that the small changes that the government can make through policies can have an overall huge effect on “community behavior” (5). Experts agree that those building environments are also shaping behavior. Developers and architects should, then, be finding ways to promote healthier behaviors. Thus, the municipality must mandate that new developments include wide and safe sidewalks. The government should also provide sidewalks for the already existing sprawled areas.

**Sidewalks and Physical Activity**

Existing suburbs, with a few exceptions, lack sidewalks, which creates a pedestrian unfriendly environment. Ironically, many suburbanites must drive to get to an area that is walkable. This environment leads to a total dependence on the automobile, even for simple errands. Alyson Geller, a freelance health journalist with her master’s degree in Public Health Studies, shows in her article on Smart Growth that people in automobile dependent areas are more likely to live sedentary lifestyles (1410). These sedentary lifestyles lead to obesity. Physical activity was not always something that Americans struggled to obtain. Kristin Butcher, an associate professor of economics at Wellesley College, and Patricia M. Anderson, former mayor of Eagan, Minnesota and former state auditor, believe that improved technology has allowed physical activity to become less of a necessity for Americans today (32). This change is apparent in the number of students who travel to school. Today, less than 25 percent of school-aged children walk to school, whereas over 65 percent of their parents, a generation earlier, walked to school (Anderson 33). Physical activity is simply no longer a necessity or an integral part of everyday life in suburbia.

However, studies show that there is an important association between a person's “perceived environment” and their level of physical activity (Duncan 4). Dr. James F Sallies, a professor of Psychology at San Diego State University observes that a person’s surrounding built environment, can significantly impact the simple decisions people
make in their daily live, like whether to drive or walk to school (90, Duncan 5). A study by Dr. Guijing Wang, from the Centers for Disease Control and Prevention in Atlanta, Georgia, has proven that if a neighborhood is walkable (i.e. if it has safe sidewalks) people will opt for physical activity (549). In walkable neighborhoods, people can choose to be active in their commutes to work, school, or recreation. Sidewalks provide this choice.

Dr. Howard Frumkin, professor of Environmental and Occupational Health at Emory University, has found, however, that residents’ use of sidewalks is dependent on whether or not they have been effectively designed and properly maintained (1454). In this way, residents’ surrounding give them “cues and opportunities” to be physically active in their daily live (Duncan 5). Thus their perception of their environment gives them a choice between a physically active or sedentary lifestyle.

Sidewalks and Physical Health

This lack of physical activity has dire consequences for Americans. One of the most obvious side effects of a lack of physical activity is obesity. Geller notes that currently, there are about 38.8 million adults in America who are considered obese (1411). Dr. Reid Ewing, a research professor at the National Center for Smart Growth and associate editor of the Journal of the American Planning Association, Dr. Ross Brownson, director of the Prevention Research Center and Saint Louis University, and Dr. David Berrigan, Associate Director of the Applied Research Program at the National Cancer institute, list the many side effects of obesity: cardiovascular disease, type two diabetes, stroke, coronary heart disease, osteoarthritis, gall bladder disease, colon cancer, sleep apnea, respiratory problems, hypertension, dyslipidemia, and orthopedic problems (2). Furthermore, people who do not participate in regular physical activity are two to three times more likely to die a premature death than those who are able to be physically active (Geller 1411).

Tragically, a lack of physical activity has also taken hold on American youths. Statistically, 41 percent of young children who are obese and, remarkably, 80 percent of teens that are obese will remain obese into adulthood (Ewing 2). The percentage of obese children has increased dramatically in the past few decades. A child today is three times as likely to be obese as a child thirty years ago (Ewing 2). This is due in part to children’s inability to walk or bike to and from school. Presumably then, a child living in a more traditional neighborhood would be less likely to be overweight. This is consistent with available data. One study found that adolescents and young adults living in contemporary suburbia were more likely to be overweight than their urban counterparts (Ewing 10). Similarly, another study found that people living in walkable areas were more physically active than those in suburbia (Sallis 101). Specifically, an adolescent in suburbia is 2.41 times as likely to be overweight than their urban counterpart (Ewing 10).

This is due, in part, to the suburban sedentary lifestyle. One expert argues that certain sedentary behaviors such as using a computer, playing video games, and watching television are enhanced in neighborhoods that are not safe or walkable (Sallis 94). However, studies have proven that it is not the sedentary activity itself that can lead to obesity. Adolescents who live in walkable areas statistically exercise less and watch TV more than those in suburban areas, however obesity is less prevalent in walkable areas.
(Ewing 10). This is partially due to the fact that people in urban areas must participate in physical activity in their daily lives.

Walkable neighborhoods themselves are one variable that always lead to healthier lifestyles. This is mainly due to the fact that simply driving or riding in an automobile is a risk factor for obesity (Sallis 94). Thus, living in an area that is dependant on the automobile is an automatic risk for health problems. Studies have shown that people who live in walkable areas are 240 percent more likely to meet the minimum requirements for physical activity than those who live in suburban sprawl areas (Sallis 93). It is not surprising then, that several studies have shown that those in walkable neighborhoods have lower body mass indexes (BMI) than those in suburban areas (Sallis 93).

Walkable neighborhoods have a further impact on health: simply being in nature or even out-of-doors has been proven to enhance physical and mental health. For example, studies have found that specific groups of people such as prisoners, children with ADD, inner-city girls, people over 65 years of age, and dental patients have shown improvements in health due to contact with nature (Frumkin 1452-3).

These factors combined reveal that walkable neighborhoods lead to better physical health or, at the very least, better opportunities for good physical health. In response to these statistics and to the American public’s increased concern for their own health, it is important to implement this policy that can, in part, help to increase the public’s health.

**Sidewalks and Pedestrian’s Safety**

Another serious detriment to physical health is the danger to the actual safety of pedestrians while traveling. Currently, suburbs are not built to facilitate pedestrians. More often than not, they are built only with travel by automobile in mind. These areas are rarely ever safe for traveling by foot or bicycle. These unwalkable areas lead to accidents and injuries. Mary Pohanka, a registered nurse and member of Arlington, Virginia’s Commission on the Status of Women, and Dr. Sheila Fitzgerald, a chiropractor in South Dakota, state that every year there are 6,000 deaths and 11,000 injuries caused by cars to pedestrians in the U.S. (244). These numbers are much higher than those in Western Europe where there has been more focus on accommodating bikers and pedestrians (Sallis 94). Dr. John Pucher, a research associate of Urban Planning and Policy Development at Rutgers, and Lewis Dijkstra, who is with the European Commission in Brussels, Belgium, studied Germany and the Netherlands efforts to improve pedestrian safety as it could be applicable to the United States. One fact that this study brought was that per-trip and per-kilometer, American pedestrians are more likely to be killed than those in Germany or the Netherlands (1511-2). Both Germany and the Netherlands have much higher rates of walkers and cyclists, in part, because they have installed more effective and safer sidewalks (Pucher, 1512, 1513). The most dangerous areas are those that have no sidewalks and necessitate crossing several lanes of traffic at a time (Pohanka 244, Sallis 93). It is noteworthy, then, that in places that are considered safer, people respond with higher levels of physical activity (Duncan 4).

Simply planting a sidewalk on the side of the road is not enough to promote physical activity. It is important that the sidewalk itself is safe and makes pedestrians feel separated from the dangers of the street. Wider sidewalk with bicycle lanes and tree
strips make people feel separated from traffic and are safer (Frumkin 1453). The authors of Suburban Nation: The Rise of Sprawl and the Decline of the American Dream, who, together, have successfully designed and planned hundreds of walkable neighborhoods, point out that, surprisingly, parallel-parked cars on the side of the street can also allow for safe traveling for pedestrians. Like the tree strips, parallel-parked cars work as a safety barrier between pedestrians and traffic (Duany 71). These effective and safe sidewalks can help to decrease the enormous number of pedestrian crashes every year (Sallis 93).

Safer streets are especially important to the youth in the United States. As stated previously, the number of children that actively commute to school has significantly dropped over the past few decades, which, in part, has led to the obesity epidemic. Obviously, part of the reason that school-aged children do not actively commute is because they lack safe options to get to school. This leads to mass inefficiencies and expenditures. For example, in some school districts, children who live only one and a half miles from school are eligible for bussing if the area is considered unwalkable and hence, unsafe (Anderson 33). Intuitively, then, walkable neighborhoods would lead to more students actively commuting to schools. To that end, one study found that in walkable neighborhoods, children walked to school 64% more and biked to school 114 percent more than in walkable neighborhoods (Sallis 101).

The CDC has long recommended more sidewalk as one way to reduce danger to pedestrians (Geller 1411). However, in most cases, these recommendations have been ignored. The government must do more in order to ensure that pedestrian travel remains a safe and viable option for Americans.

Sidewalks’ as a Sustainable Option for the Environment

An immediate concern for Americans today is the environment’s health. One way to directly help the environment is by increasing the prevalence and effectiveness of sidewalks. The studies, which have been considered above, have shown that where sidewalks are available they will be used. With that in mind, it is important to contemplate the effect that sidewalks could have on the environment as a more sustainable option.

The main concern of the US Department of Transportation today is the creation of newer, more effective transportation options for automobiles (Frumkin 1453). This is coupled with the fact that the suburbs’ developers focus their development on automobile use, usually without pedestrians in mind. Together, these trends lead to more miles traveled per capita in the United States (Anderson 32-3). This has led to excessive and dangerous levels of emissions. One study found that one third to one half of all smog in the cities is due to automobile emissions (Geller 1411). This same study also noted that the vast use of automobiles has led to a third of all Americans breathing polluted air in the cities (Geller 1411).

Even most of these dangerous automobile emissions will decompose in the atmosphere eventually. However, Julian D Marshall, an assistant professor of Civil Engineering at the University of Minnesota, notes that emissions become a problem when they cannot decompose at least at the same rate at which they are being put into the environment (676). When emissions are entering the air at a higher rate than they can decompose, then the emissions are not considered sustainable. As driving continues to
increase, so too do the emissions from the automobiles. These emissions have dangerous side effects for those breathing them such as asthma (Pohanka 243-4). Excessive emissions from automobiles also lead to poisonous runoff. This is especially dangerous in sprawling areas, which have 43 percent more runoff than in urban areas (Pohanka 243). This is compounded by the fact that the wetlands, which serve as a natural filter of runoff, are being eaten up by suburban sprawl (Pohanka 243).

Sustainability experts consider something to be “sustainable” based on its effect on ecosystem functions. Ecosystem functions are, “goods and services provided by the natural environment that are required to support human life, human health and species viability” (Marshall 676). At the rate that Americans are using automobiles today, they are not sustainable. Sidewalks are a sustainable option because they take up a minimal amount of space and promote traveling by foot or bicycle rather than automobile.

**Sidewalks Building Communities**

New suburbs and their focus on Americans’ individuality and the “American Dream” have forgotten to include communities. This lack of community is caused by several factors: one of them is a lack of sidewalks. Leyden uses the term “social capital” to describe the amount of community feeling in a given area (1546). Leyden finds that social capital is important for several reasons that people may not consider: places with high social capital are more likely to have functioning democracies, low crime rates, and more economic development (1546). However, there are some better-known side effects of social capital.

People who feel like they are living within a community are healthier individuals overall (Pohanka 244). People who do not have social connections are two to 5 times as likely to “die from all causes” than those who live in communities (Leyden 1546). Traditional, walkable neighborhoods have proven to offer many benefits to those who live in them. Leyden’s studies found that in walkable neighborhoods, “residents walk more, feel more connected to their communities, are more likely to know their neighbors, are more likely to trust or have faith in other people, are more likely to contact elected officials to express their concerns, and are more likely to walk to work” (Leyden 1548-9).

One real danger of the suburban lifestyle is social isolation. In socially isolated places, people have lower physical and mental health (Pohanka 244). Because suburban sprawl pushes people away from one another, necessitates the automobile, and makes pedestrian activities dangerous, it also inhibits social interaction. One part of the solution to this problem is installing effective and safe sidewalks. Sidewalks facilitate interaction whether it is spontaneous or intended. While these specific occurrences may seem small in themselves, they produce significant effects like promoting trust and respect between neighbors (Leyden 1546). Sidewalks create a place for people to interact. This interaction can lead to the formation of important communities, which increase physical and mental health and stability.

**Cost Effectiveness of Sidewalks**

The first half of this policy addresses new development. According to the policy, the municipal government will mandate that developers include safe and wide sidewalks.
This obviously means that the developers are going to have to incur a fairly high cost in order to install sidewalks. Because of this, each lot will cost more, and to compensate, the size of the lots will be smaller in places that zone by price. This helps to address two problems of sprawl. First, each house consumes too much land, and second, sprawl does not follow the traditional grid pattern. Smaller lot sizes lead to less land consumption. Furthermore, because sidewalks would be more expensive in the sprawling modern areas where they would have to follow winding streets, developers would most likely opt for straight streets where sidewalks could follow parallel to the street in a grid pattern of blocks.

The second half of the policy, however, addresses the more difficult problem of putting sidewalks into suburban areas that already exist. Because building sidewalks along the curving streets of the suburbs would lead to so many complications, it is more efficient to build trails to connect the different development zones that are divided according to their purpose. Because the main, and one of the only, arguments against building sidewalks is cost, Wang and his colleagues did an analysis of the cost effectiveness of trails built in suburbs in Lincoln, Nebraska. They discovered several interesting points about building trails for pedestrians in suburbs. There are two main costs that go into building a trail. The first and largest expenditure is on the initial construction of the trail. Of the lifetime of a trail, 85 percent of its cost is in the initial construction (Wang 550). The second cost is in maintaining the trail. Wang notes that as the age of a trail increases, so too does the amount of money that must be spent in order to maintain the trail (551). This is one reason that it is so important to emphasize the planning and designing of the trail before starting in order to maximize the usable years and cost-effectiveness of the trail.

Wang also found that the cost per user could be used to measure cost-effectiveness. In the case of Lincoln, the trails had a wide range of total costs. The average, however, was only $235 per user (549). This, of course, according to the policy, would not be paid for “per user”. Rather, all residents of a municipality would pay for it through their taxes, whether they use it or not, so the total cost would presumably be lower than the average Wang and his colleagues found. Furthermore, in the US, the estimated medical costs due to inactivity per capita is $622; almost three times as much as the cost of the trail per user (Wang 549).

Finally, Wang discussed the value of planning beforehand for the trail. This is especially important because the actual cost of a trail can vary substantially. Because the cost can vary so much, trails can fit many budgets (Wang 551). With the medical costs of inactivity so high, it is vital to consider the benefits of having the opportunity for physical activity when considering whether or not building a trail in a given area would be cost-effective (Wang 522). Safety and convenient access to trails are important factors in estimating the amount of use that the trail will get. Thus, those should be important considerations before construction, but can also add to the total cost of the trail (Wang 552). Experts should also consider the specifics of a trail before beginning construction. For example, limestone-chip trails may have lower costs than concrete trails, but their total lifespan and maintenance costs are higher (Wang 551). Finally, trails and sidewalks are used most by cyclists. 73 percent of all the users of the trails in Lincoln were cyclists (Wang 551). Thus, trails can be most effective if they are built especially, but not exclusively, with cyclists’ interests in mind.
Overall, Wang and his colleagues found that because costs can vary so greatly due to many variables, trails in suburban areas are a real option for many price ranges. While the government would obviously incur the cost of building these paths, the benefits in the long run would outweigh the short-term costs.

Conclusion

By mandating sidewalks, the government can make impressive changes to the physical and mental health of the American public. It is important to note, however, that this policy is just one part of a Smart Growth agenda. While it in itself will most likely prove to have a positive impact, further policy options to supplement the sidewalks should also be considered (Wang 552). It is also important to remember that improving the built environment is a collaborative effort involving “health professionals, urban planners and architects, transportation engineers and real estate developers, environmental psychologists and geographer” (Frumkin 1454). All of these professionals bring different banks of knowledge to the policymaking table and all of them should be consulted in this policymaking process. Simply by installing sidewalks, municipal governments can make a significant and necessary change in Americans’ lifestyles.
Works Cited


Works Consulted


