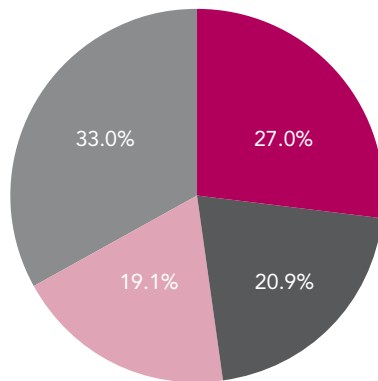


## Half of California Adults Walk Less Than One Hour Each Week

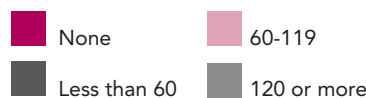
E. Richard Brown, Susan H. Babey, Theresa A. Hastert and Allison L. Diamant

One in four California adults does not walk at all for transportation or leisure in an average week—6.8 million adults in all. Nearly half of adults walk less than one hour during an average seven-day period, including those who do not walk at all and those who walk up to one hour (Exhibit 1). Only one-third of adults walk a total of two hours or more per week.

**Exhibit 1**  
**Walking for Transportation or Leisure or Both, Adults Age 18 and Over, California, 2003**



Minutes Walking for Transportation or Leisure in a Week



Source: 2003 California Health Interview Survey

Physical activity is important in preventing obesity and chronic conditions, such as diabetes, heart disease, osteoporosis and some types of cancer.<sup>1</sup> Walking is a moderate-intensity physical activity that can provide significant health benefits. Walking can be

done for transportation (to get somewhere, for example) or leisure (for relaxation, exercise, as a social activity or to walk a dog). Although adults may get exercise in a variety of ways—including through sports, fitness programs, or on the job—walking is the most common form of physical activity among adults, and it is an important component in overall levels of physical activity.

This health policy research brief examines the amount of time that California adults walk in an average week, based on data from the 2003 California Health Interview Survey (CHIS 2003), with a focus on characteristics of the neighborhoods in which people live.

Approximately 44% of adults walk for transportation, of these only 11% walk for two hours or more a week (Exhibit 2). More adults walk for leisure, about 56%, including just over 20% who walk for two or more hours per week (Exhibit 3).

A larger percentage of younger adults walk for transportation than do older adults. Younger adults spend more time walking for transportation during the week, but older adults walk more for leisure. These

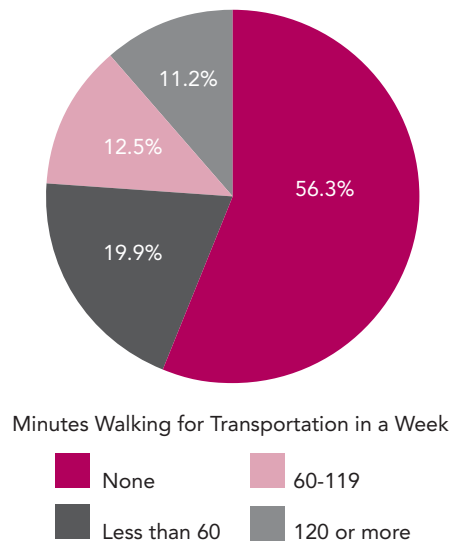
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Support for this policy brief was provided by a grant from the Robert Wood Johnson Foundation in Princeton, New Jersey.



## Exhibit 2

## Walking for Transportation, Adults Age 18 and Over, California, 2003



Source: 2003 California Health Interview Survey

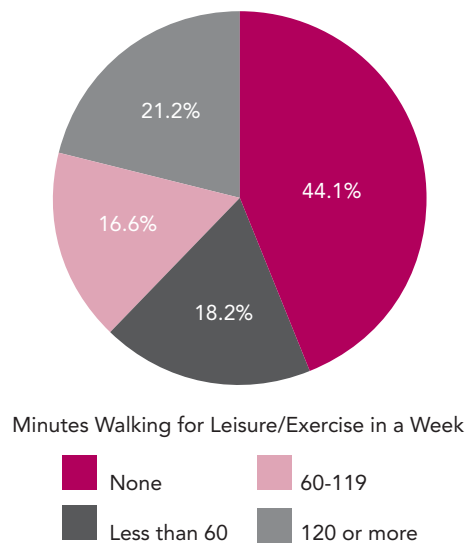
differences by age are related to the differing health conditions of younger and older adults. However, walking is also related to economic and social factors, such as family income, race and ethnicity, and the characteristics of the neighborhoods in which people live.

**Family Income Related to Walking**

Adults with incomes at or above 300% of the federal poverty level (FPL), who account for about half of the adult population, walk the least for transportation: an average of 40 minutes per week (Exhibit 4). Adults with family incomes below poverty walk for transportation more than twice as much (85 minutes per week). The fact that very-low-income adults walk more for transportation—whether it is to the store, to the bus stop, to somewhere else, or as part of their job—is related in part to their having much less access to private automobiles.

## Exhibit 3

## Walking for Leisure or Exercise, Adults Age 18 and Over, California, 2003



Source: 2003 California Health Interview Survey

More affluent adults (at or above 300% FPL) spend more time than other income groups walking for leisure (76 minutes vs. 63 to 65 minutes per week; Exhibit 4). However, when walking for leisure and walking for transportation are combined, adults below the federal poverty level walk more than all other income groups because they spend much more time walking for transportation (an average of 144 minutes per week vs. 113 to 118 minutes; Exhibit 4).

**Race and Ethnicity Also Related to Adults' Walking Habits**

Among the major race and ethnic groups, Latinos walk the most for transportation (72 minutes), followed by American Indian/Alaska Natives (AI/ANs; 61 minutes), Asians (57 minutes), African Americans (50 minutes), and Native Hawaiians and other Pacific Islanders (40 minutes; Exhibit 4). Whites and Pacific Islanders walk less for transportation than other groups (39 and 40 minutes per week, respectively).

## Walking for Transportation, for Leisure, and Total Walking by Family Income and Race/Ethnic Group, Adults Age 18 and Over, California, 2003

Exhibit 4

	Walking for Transportation	Walking for Leisure	Total Walking*
	Average Minutes per Week	Average Minutes per Week	Average Minutes per Week
<b>Family Income as Percent of Federal Poverty Level **</b>			
Below 100%	85	65	144
100% – 199%	57	63	118
200% – 299%	51	65	113
300% and above	40	76	116
<b>Race/Ethnicity</b>			
White	39	77	115
Latino	72	60	129
Asian	57	67	123
African American	50	56	103
American Indian/Alaska Native	61	95	148
Native Hawaiian and Other Pacific Islander	40	58	98

\* Total walking includes walking for either transportation or leisure. Total walking may not equal the sum of walking for transportation and walking for leisure because respondents with extreme responses for each type of walking were excluded from analyses.

\*\* In 2003, the Federal Poverty Level was \$12,384 for a family of two; \$14,680 for a family of three; \$18,810 for a family of four; <http://www.census.gov/bbes/poverty/threshld/thresh03.html> (accessed September 27, 2005).

Source: 2003 California Health Interview Survey

AI/ANs walk the most for leisure (95 minutes), followed by whites (77 minutes), Asians (67 minutes), Latinos (60 minutes), Pacific Islanders (58 minutes), and African Americans (56 minutes). In aggregate, combining walking for leisure and for transportation, AI/ANs walk nearly two and a half hours, and Pacific Islanders and African Americans walk an average of a little more than one and a half hours per week (Exhibit 4). Latinos, Asians and whites average approximately two hours of total walking each week, although the proportions of walking for leisure and transportation vary significantly between those groups.

These group differences reflect the conditions of the *average* member of each group, but important differences remain within these groups. Among Asian ethnic groups, for example, Japanese walk less for transportation than Chinese, Filipinos, South Asians, Koreans or Vietnamese. On the other hand, these Asian ethnic groups do not differ statistically in the amount they walk for leisure.

### Neighborhood Characteristics Affect Walking

Places people live directly affect how much exercise they get, and this helps to account for some of the differences in walking times between racial and ethnic groups. Access to parks and other spaces for physical activity, neighborhood safety and social cohesion vary from neighborhood to neighborhood, and these characteristics influence how active people are.

Adults who report having access to a safe park or other open space walk more for leisure or exercise than adults who do not have such access (73 vs. 64 minutes per week, on average), but this access does not affect their walking for transportation (Exhibit 5). Adults who report that their neighborhood has a crime prevention or neighborhood watch program walk more for leisure, on average, than adults in neighborhoods without such a program (76 vs. 67 minutes).

## Exhibit 5

## Walking for Transportation, for Leisure, and Total Walking by Neighborhood Characteristics, Adults Age 18 and Over, California, 2003

	Walking for Transportation	Walking for Leisure	Total Walking*
	Average Minutes per Week	Average Minutes per Week	Average Minutes per Week
<b>Access to Safe Park</b>			
Access	51	73	122
No Access	51	64	113
<b>Neighborhood Watch</b>			
Neighborhood Watch	50	76	124
No Neighborhood Watch	52	67	117
<b>Social Cohesion</b>			
High (3.0+)	45	76	119
Low (<3.0)	57	65	121

\* Total walking includes walking for either transportation or leisure. Total walking may not equal the sum of walking for transportation and walking for leisure because respondents with extreme responses for each type of walking were excluded from analyses.

Source: 2003 California Health Interview Survey

Adults who report living in a neighborhood that has more social cohesion (measured by the extent to which people trust their neighbors, share values with them, get along with them and are willing to help them) also walk more for leisure than those in a neighborhood with little social cohesion (76 vs. 65 minutes).

It is evident that people walk more for leisure or exercise if they live in neighborhoods that have safe parks nearby, have taken steps to enhance neighborhood safety and have a mutually supportive social milieu. It is noteworthy that all of these factors are related to family income. That is, increasing family income is associated with living in a neighborhood with more social resources. In contrast, people who are poor are typically forced by their circumstances to live in neighborhoods that have more social problems and fewer community resources to address them.

Interestingly, adults who live in neighborhoods characterized by less social cohesion walk more for transportation—that is, because they need to—than those who live in more cohesive neighborhoods. This may be due in part to differences in income levels between neighborhoods with high vs. low social cohesion. Social cohesion is not related to total walking. However, having access to a safe park and having a crime prevention or neighborhood watch program are significantly related to more total walking, a result of their strong relationship to average time spent walking for leisure.

Several of the socio-demographic and neighborhood characteristics related to how much adults walk for transportation and/or for leisure are also related to whether adults do any walking at all. The one in four adults in California who do not walk at all in an average week disproportionately are older, have moderate family incomes (above the

poverty threshold but less than 300% of poverty), have less access to a safe park or open space, and live in neighborhoods that do not have a crime prevention or neighborhood watch program.

### **Conclusions and Policy Recommendations**

Walking is an important form of physical activity for adults, and the amount of time that adults spend walking for transportation, for leisure and walking overall differs significantly by the socio-demographic characteristics of individuals and by the characteristics of their neighborhoods. The data and analysis in this health policy research brief present a compelling case that walking for leisure and for transportation are affected by income; and that walking for leisure is directly affected by the safety and social cohesion of neighborhoods, and by access to safe parks and other recreation spaces.

Very-low-income adults spend the most time walking because they are more likely to have to walk in order to get where they need to go. Time spent walking for transportation is much greater among lower-income adults than among more affluent ones, which may be explained—in part—by lower rates of private automobile ownership.<sup>2</sup> Latinos' greater walking for transportation may be related, in part, to their work. Four occupational categories—agricultural, production, construction, and service workers—average the most minutes spent walking for transportation; more than half of Latino workers are employed in those occupations. AI/ANs are similarly well represented in those occupations, whereas whites are under-represented in those categories.

Walking for leisure is strongly related to having access to a safe park, having a neighborhood watch or crime prevention program, and living in a neighborhood in which people trust and depend on each other. All of these attributes of the person's neighborhood are highly related to the income of the individual, as this study demonstrates, but they are also related to the affluence of the neighborhood, as demonstrated in other studies.<sup>3</sup>

Even after taking account of neighborhood characteristics, total time spent walking is still related to income and to race and ethnicity. Adults below the poverty threshold walk more than those with family incomes at least three times the poverty level, and Latinos walk significantly more overall than do whites, African Americans and Pacific Islanders.

Walking is only one form of physical activity, but it is a valuable one for adults. Adults who walk less may be getting physical activity through other work or leisure activities, but for many adults, walking is the only form of exercise they get.<sup>4</sup>

Assuring that all neighborhoods have physical and social environments that encourage walking would increase the amount of walking that adults do. After adjusting for demographic factors, providing access to a safe park in communities without one would increase time spent walking for leisure by an average of eight minutes per week for adults in that community. Developing a neighborhood crime prevention program where there is none would increase leisure-time walking by an average of six minutes, and using community organizing techniques to build trust and mutual support in neighborhoods with low social cohesion would increase leisure-time walking by an average of at least five minutes. These factors

are additive, so that communities that establish safe parks, develop neighborhood crime prevention programs and build social cohesion could increase average leisure walking time by approximately 19 minutes.

Public policies can support and encourage more walking. State and local governments should increase the availability of and access to safe and appealing environments for physical activity. Expanding and enhancing parks will require a commitment of public resources. Although state and local government budgets are still very constrained, Proposition 40, enacted by the voters in 2002, provides \$2.6 billion that has been used, in part, to finance the development and improvement of parks throughout California. As a result of such bonds and other strategies, parks are being developed in many communities.<sup>5</sup> Cities and counties can go further by investing local bond and tax revenues in creating and enhancing parks and other open spaces for recreation.

Community leaders and local governments can develop neighborhood crime prevention programs. Government agencies should provide information and support for creating and sustaining neighborhood crime prevention programs, an intervention made more difficult by federal and state budget cuts that have reduced funding for these programs. Community leaders and local governments also can help build opportunities for interaction and engagement of residents in their own neighborhoods. Research suggests that social cohesion is higher in walkable, mixed-use neighborhoods. One way to promote social cohesion in neighborhoods then may be to promote policies that increase the walkability of neighborhoods. This includes policies that encourage mixed-use development, availability of spaces for recreation and pedestrian-oriented communities.

### Data Source

All statements in this report that compare rates for one group with another group reflect statistically significant differences ( $p < 0.05$ ) unless otherwise noted.

The findings in this brief are based on data from the 2003 California Health Interview Survey (CHIS 2003). CHIS 2003 completed interviews with over 42,000 adults, drawn from every county in the state, in English, Spanish, Chinese (both Mandarin and Cantonese), Vietnamese and Korean. CHIS 2003 provides the most recent information available on adult walking behaviors for the state of California. Respondents were asked “During the past seven days, did you walk to get someplace that took you at least 10 minutes?” and “Sometimes you may walk for fun, relaxation, exercise, or to walk the dog. During the past seven days, did you walk for at least 10 minutes for any of these reasons?” If either response was yes, they were then asked how many times they had walked for each reason, and how long those walks took on average.

CHIS is a collaboration of the UCLA Center for Health Policy Research, the California Department of Health Services, and the Public Health Institute. Funding for CHIS 2003 was provided by the California Department of Health Services, The California Endowment, the National Cancer Institute, the Robert Wood Johnson Foundation, the Centers for Disease Control and Prevention (CDC), the California Office of the Patient Advocate, Kaiser Permanente, L.A. Care Health Plan, and the Alameda County Health Care Agency. For more information on CHIS, visit [www.chis.ucla.edu](http://www.chis.ucla.edu).

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## Notes

- 1 U.S. Department of Health and Human Services. Physical activity and health: A report of the Surgeon General. Atlanta, GA. Department of Health and Human Services, Centers for Disease Control and Prevention, 1996.
- 2 Available at: [http://www.nonprofitbousing.org/actioncenter/toolbox/parking/data\\_income.html](http://www.nonprofitbousing.org/actioncenter/toolbox/parking/data_income.html). Accessed 10/21/05.
- 3 Estabrooks PA, Lee RE, Gyurcsik NC. Resources for physical activity participation: does availability and accessibility differ by neighborhood socioeconomic status? *Annals of Behavioral Medicine*. 2003 Spring;25(2):100-4. Sampson RJ, Raudenbush SW, Earls F. Neighborhoods and violent crime: a multilevel study of collective efficacy. *Science*. Aug 15 1997;277(5328):918-924. Anne R. Pebley and Narayan Sastry, "Neighborhoods, Poverty and Children's Well-being: A Review" (February 1, 2003). California Center for Population Research. On-Line Working Paper Series. Paper ccpr-035-04. Available at: <http://repositories.cdlib.org/ccpr/olwp/ccpr-035-04/>. Accessed 10/21/05.
- 4 Rafferty AP, Reeves MJ, McGee HB, Pivarnik JM. Physical activity patterns among walkers and compliance with public health recommendations. *Med Sci Sports Exerc*. Aug 2002;34(8):1255-1261.
- 5 See generally García R, Flores ES. Anatomy of the Urban Park Movement: Equal Justice, Democracy and Livability in Los Angeles. In: Bullard R, editor. *The Quest for Environmental Justice: Human Rights and the Politics of Pollution*. Sierra Club; 2005. p. 145-167.



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