

WALKABLE NEIGHBORHOODS: A Key to Longer Life?

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City-dwelling senior citizens have longer lives if they live near green areas they can walk in. At least they do in Japan.

That was the finding of a five-year study by researchers at Tokyo Medical and Dental University reported last December in the British Medical Association's **Journal of Epidemiology and Community Health**. Longevity was extended by both greenery-filled public areas like parks and tree-lined streets.

While research from Tokyo may appear to have little bearing on what planners should do in Detroit, Battle Creek, or Saginaw, when the Japanese talk about long life and exercise they are worth listening to. According to noted author Andrew Weil, M.D., the Japanese have "the best health and greatest longevity on the planet."¹

The researchers of a 25-year study of Okinawans, who beat even their fellow Japanese as the longest-lived people on earth, conclude that "exercise is considered so important in risk reduction for many diseases...that if you could pack age it in a pill it would out sell Viagra."²

The Japanese also have one of the relatively largest elderly populations. And the health and well-being of senior citizens is poised to become par amount in American life as the huge baby boom generation begins to retire in a very few years.

A Place to Stroll

A total of 3,144 Tokyo area residents aged 74-89 were surveyed in 1992 and followed up with in 1997. The survey asked the seniors about nine characteristics of their residential environment:

1. close-to-home space for taking a stroll
2. parks and tree-lined streets close to home
3. noise from cars and factories near the home
4. crime levels
5. number of hours of sunlight in the home
6. existence of a garden at the home
7. whether the home faced a road with bus service
8. whether the seniors had active communication with their neighbors
9. whether the seniors preferred to stay in their community.

The data on these factors came from the seniors' own assessments rather than from empirical measurement.

The percentage of seniors surviving after five years was correlated with each of these environmental characteristics for the seniors as a whole, for men and women separately, and for seniors of different ages. Only the first two items in the list were consistently associated with greater likelihood of survival. They predicted survival independent of the seniors' age, sex, marital status, socioeconomic status, or attitude toward their community.

Nearly three out of four of the seniors who felt their neighborhoods had "enough" close-to-home space for strolling were alive to stroll five years later (see Table 1), while just over half of those reporting no such space survived. Similarly, nearly three out of four who enjoyed "plenty" of parks and tree-lined streets nearby survived, while only two-thirds of those with "very little" of such amenities lived another five years.

The researchers cautioned that the same results might not be obtained in cities with lower population densities. Densities in met-

ropolitan Tokyo are of course considerably higher than in cities in Michigan, where older residents may have easier access to green areas. But as attached as we are to our cars, even Americans in smaller cities with more green spaces may be less inclined to walk in them than the urban Japanese.

Empirical Support for Planning

The researchers suggested two implications for planners.

1. "Greenery filled public areas that are nearby and easy to walk in should be further emphasized in urban planning for the development and re-development of densely populated areas in a megacity."
2. "Vision sharing and consensus building in the community for city planning would be more constructive if supported not only by intangible preferences but also by substantial evidence showing health outcomes."

They observed that traditional planning principles are often subjective and based on preferences or intangible factors. Longevity, on the other hand, is both quantifiable and universally recognized as a desirable outcome. Planners, they imply, might win more support if their ideas were better buttressed by objective evidence of outcomes.

Walkability May Just Be Job One

While it's important not to overgeneralize from the results of one study, several of the Japanese findings are interesting.

Traditional concerns of planning and zoning such as noise from cars and factories in residential areas and access to sunlight did not predict greater survival among the seniors as a whole. Although gardening is acknowledged to be both life-sustaining exercise and stress-fighting recreation, it did not seem to have any effect on which seniors lived longer. And local crime levels, of ten a concern among American senior citizens, had no significant effect on survival either.

This is of course not to imply that planners should not continue to encourage noise reduction, light and air, space for gardens, and safe neighborhoods. What these findings may instead suggest is that elders' ability to easily get moderate exercise by walking can be even more important than these traditionally recognized desiderata.

Table 1
FIVE YEAR SURVIVAL RATES

	Close-to-Home Space for Taking a Stroll	Close-to-Home Parks & Tree-Lined Streets
Plenty	—	74.2
Enough	73.8	—
Some	70.1	70.0
Little	—	70.8
Very Little	67.9	66.2
None	55.7	—

Figures represent percentage of seniors surveyed who were still living five years later.

Source: T. Takano, K. Nakamura, and M. Watanabe, "Urban Residential Environments and Senior Citizens' Longevity in Megacity Areas: The Importance of Walkable Green Spaces," **Journal of Epidemiology & Community Health**, December, 2002, pp. 913-918. □

About the Author

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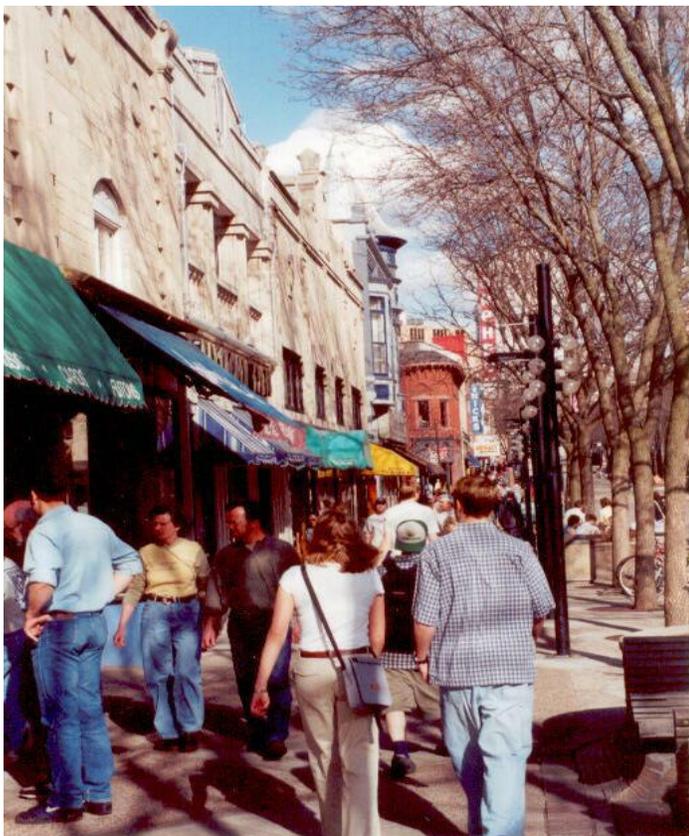


Photo by Gail Associates.

Walkability is often high in university neighborhoods like State Street in Madison, Wisconsin. But Japanese research shows such environments may be of even greater benefit to senior citizens.

And it should also be noted that it was not green spaces per se that influenced longevity, but such areas that were both walkable and close-to-home. Even tree-lined streets—not necessarily considered as health-promoting open spaces in this country—were considered to have beneficial effect, although they were not tested independently of parks. And as the first of the nine factors suggested, it apparently was not the openness or greenness alone that was influential, but rather the ability to easily walk through these areas. When nearby open spaces and streets encouraged walking, they apparently counteracted the sedentary life style that has been implicated in both illness and premature death.

It is moreover unclear how important the “green” factor was. Would streets without trees or walkable open spaces without park-like landscaping have been just as effective? Or might their barrenness have offered less motivation to walk and therefore had less of an impact on health? Though the Japanese research doesn’t suggest an answer, planners may wish to continue to call for trees on streets and in park areas just to be on the safe side.

Another unanswered question is to what extent the Japanese seniors’ attitudes and perceptions affected the results. Longevity, after all, was found to vary not with the actual extent of nearby parks or walking areas, but with what the seniors said about the adequacy of their provision.

The adequacy ratings might have reflected usage more than presence. Seniors who walked in their neighborhoods frequently may have felt nearby places to do so were more satisfactory, whereas seniors who for whatever reason did not walk may have inappropriately attributed their lack of activity to an inadequacy of local facilities. A Canadian study, did, however, suggest that residents of older neighborhoods, which are more likely to be walkable, do tend to walk more than residents of newer subdivisions.³

Unwalkable Green Acres

Despite certain ambiguities, the Japanese research does suggest that for seniors at least, large centralized parks or open spaces that are not close-to-home may be of limited benefit. Simple trails or linear greenways right in the neighborhood may be more desirable than grand recreation areas accessible only by car. Perhaps sidewalks should be considered as recreation spaces and mandated more often in new developments than they are.

Senior citizens, of course, are not the only ones who can benefit from close-to-home walkability. Health authorities recommend walking as ideal exercise for all age groups. But in this country younger people may not find walking through green areas any easier to do than their parents or grandparents do.

Green we’ve got. Our newer suburbs typically have no lack of green spaces in the form of private residential lawns and extensive landscaped areas around non-residential facilities like offices, industrial parks, schools, and shopping centers.

But the non-residential Green Acres are seldom walkable, typically serving largely for ornamental purposes, to offset the bleakness of parking lots, or to meet zoning requirements for setbacks or other unbuilt spaces. Walking through them is often prohibited or discouraged by their designers. And in the words of *Pittsburgh Post-Gazette* columnist Brian O’Neill, “Swing sets in the backyard don’t make up for the inability to walk to a playground.”⁴

And suburban streets that lack sidewalks and otherwise discourage walking, may not promote long life no matter how many trees they are lined by.

Rediscovering Walking in America

But that may be changing. Our Japanese friends are not alone in discerning the value of walkability. On this side of the Pacific, the U.S. Health & Human Services Secretary Tommy Thompson now wears a pedometer and vows to boost his daily step count. The health-oriented Robert Wood Johnson Foundation has received

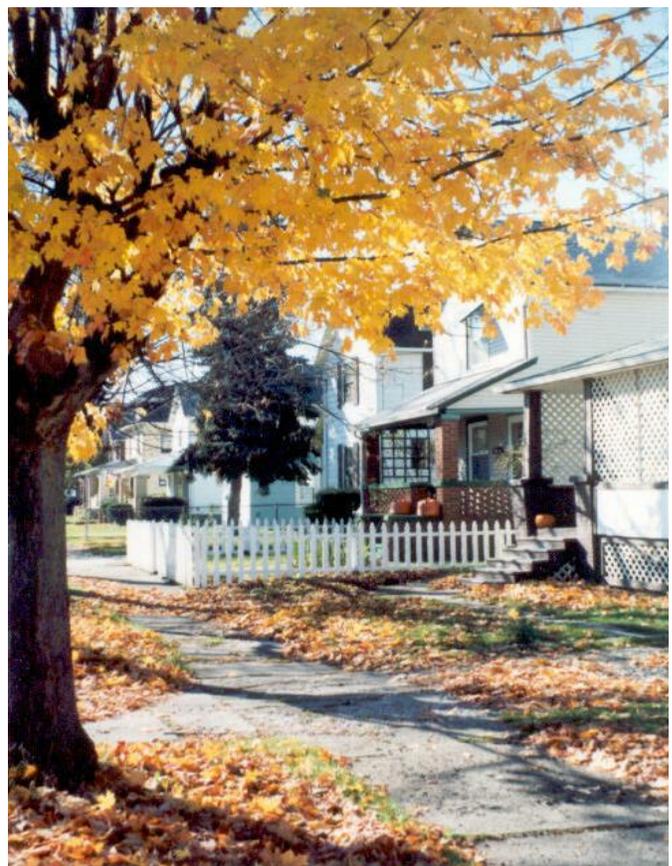
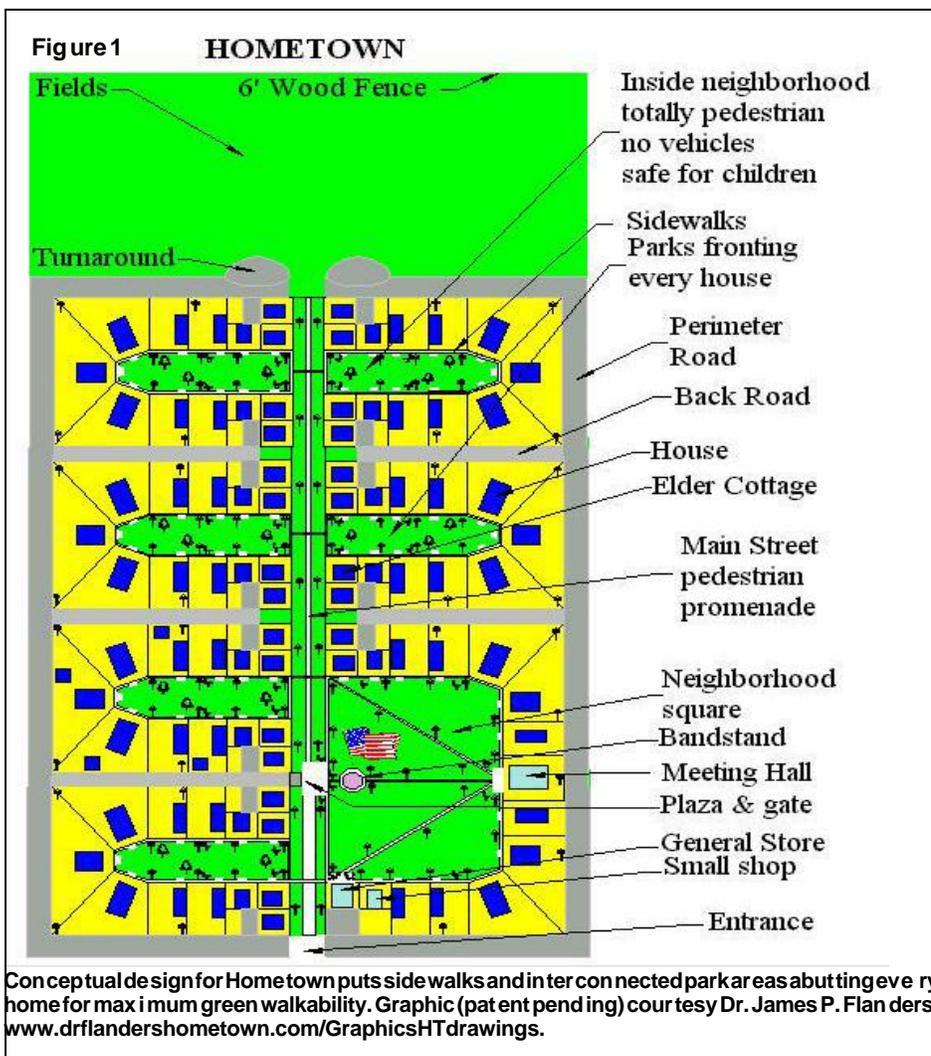


Photo by Gail Associates.

Seniors who could stroll along tree-lined streets like this had longer lives.



Graphic reproduced with permission of Dr. Flanders.

in addition to the human psyche, Flanders draws inspiration from the small intestine.

The long pen in sula-shaped villi found in this organ are designed to maximize surface contact area so as to take in the most nutrition. Similarly-configured park areas about every Hometown house lot, the homes wrap around open space "villi" in U-shaped blocks. See Figure 1. With a sidewalk-equipped park area connected to other green areas in the developed located outside each front door (there are both conventional homes and elder cottages), Hometown maximizes the longevity factors found by the Tokyo research.

Flanders did a survey of real estate agents that suggested a home buyer preference for Hometown communities over both sprawl and New Urbanism as well as a 16 per cent value advantage over homes in conventional subdivisions.

The Problem of Behavior

But perhaps the most trouble some dilemma in the realization of walkable communities is that people need not only places and opportunities for walking and other physical activity but also the motivation.

Research has not yet established that the egg comes before the chicken—that if you build sidewalks, trails, parks, and walkable neighborhoods people will start thinking twice before jumping in the car. It is not clear that walkable communities, old or new, don't simply "preach to the choir." They may mainly attract people who are already disposed to walking and have little effect on the rest of the population.

an overwhelming response to a new program exploring ways to increase opportunities for everyday physical activity by redesigning our buildings and replanning our communities and their transportation.

Active Living by Design (www.activelivingbydesign.org) is administered by an office in Southern Village, a neotraditional development in Chapel Hill, North Carolina, by the School of Public Health at the University of North Carolina. ALBD offered 25 five-year grants of up to \$200,000 for projects focused on reworking our architecture, planning, and transportation engineering to foster walking, cycling, stair climbing, and active recreation. Obviously hitting a hot button, they received 966 applications. Funds will be awarded in September.

New Urbanist communities with smaller house lots, sidewalks, and neighborhood destinations you can walk to have been extensively covered in *PZN* (see June and July 2002). They are still few and far between, however, and usually quite pricey.

Close-Knit Community (CKC) planning, a more relaxed form of walkable development that does not insist on high-cost New Urbanist architectural nostalgia, offers a model for smaller cities and a broader range of housing prices.⁵

CKC simply downsizes development, trimming fat from lot sizes, setbacks, street widths, and parking lots. It emulates historic urban neighborhoods in an overall pattern without trying to duplicate their architectural appearance. As simply a tighter weave in the urban fabric, CKC is distinguished from New Urbanism by being concerned more with scale than with style.

A third walkable community concept is Hometown, a detailed model developed by Dr. James P. Flanders, a clinical psychologist.⁶ Hometown is conceived as a community re-engineered from human psychological needs for socialization, safety, peace, and beauty. But

to new subdivisions where codes mandate sidewalks but where they are none the less seldom used. The Field of Dreams "they will come" the ory may work best on the silver screen.

Even New Urbanist subdivisions, which are planned to facilitate walking more than most developments, are ironically typically found in suburban sites reachable only... by car.

In the interest of public health and longevity, planners should, as the Japanese researchers advise, encourage walkable streets and open spaces made more attractive for strolling by trees and other greenery. But the larger question is whether the people we plan for will change their behavior even if walking is made more convenient.

As with much else in planning, there are no guarantees. But the epidemics in this country of obesity, diabetes, heart disease, and other killer ailments attributable in large measure to lack of physical activity call for a response.

FOOTNOTES:

1. Bradley J. Willcox, M.D., Craig Willcox, Ph.D., and Makoto Suzuki, M.D., *The Okinawa Program* (New York: Three Rivers Press, 2001), p. ix.
2. *Ibid.*, p. 34.
3. For a summary see John L. Gann, Jr., "Marketing and Medical Research May Support Close-Knit Communities," *Planning & Zoning News*, January, 2003, p. 22.
4. Brian O'Neill, "The Demise of Bipedal Urban Transport," *Pittsburgh Post-Gazette*, April 28, 2003, p. B5.
5. John L. Gann, Jr., "Close-Knit Community Planning: Reconciling the New Urbanism With the Old," *Planning & Zoning News*, July, 2002, p. 4.
6. Information on Hometown is available from Dr. Flanders at 10438 Highway 61 South, Vicksburg, MS 39180 or from the Web site drflandershometown.com.
7. For an overview of the effect our communities have on our health, see Richard Jackson, M.D., M.P.H., and Chris Kochitzky, M.S.P., "Creating a Healthy Environment: The Impact of the Built Environment on Public Health," *Planning & Zoning News*, January, 2002, p. 6, and Martha T. Moore, "Walk Can't Walk," *USA Today*, April 23, 2003, p. A1. □