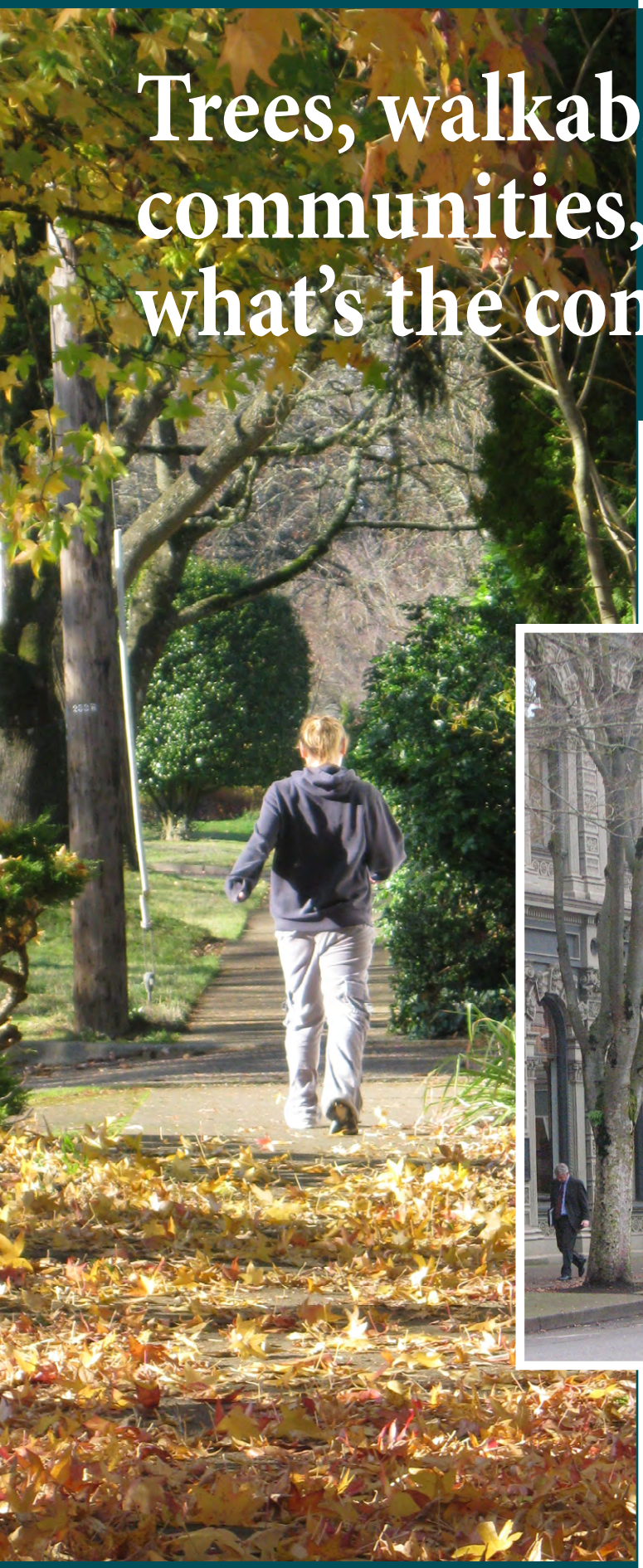
Trees, walkable communities, public health: what's the connection?

Experts agree, trees are good for people.



Cynthia Orlando, ODF

As many Americans know by now, being above a healthy weight boosts our risk of developing serious diseases, including heart trouble, stroke, Type II diabetes, high blood pressure, and even certain types of cancer. The good news is, by eating healthy and getting regular physical activity, many weight-related diseases and their associated problems can be prevented.

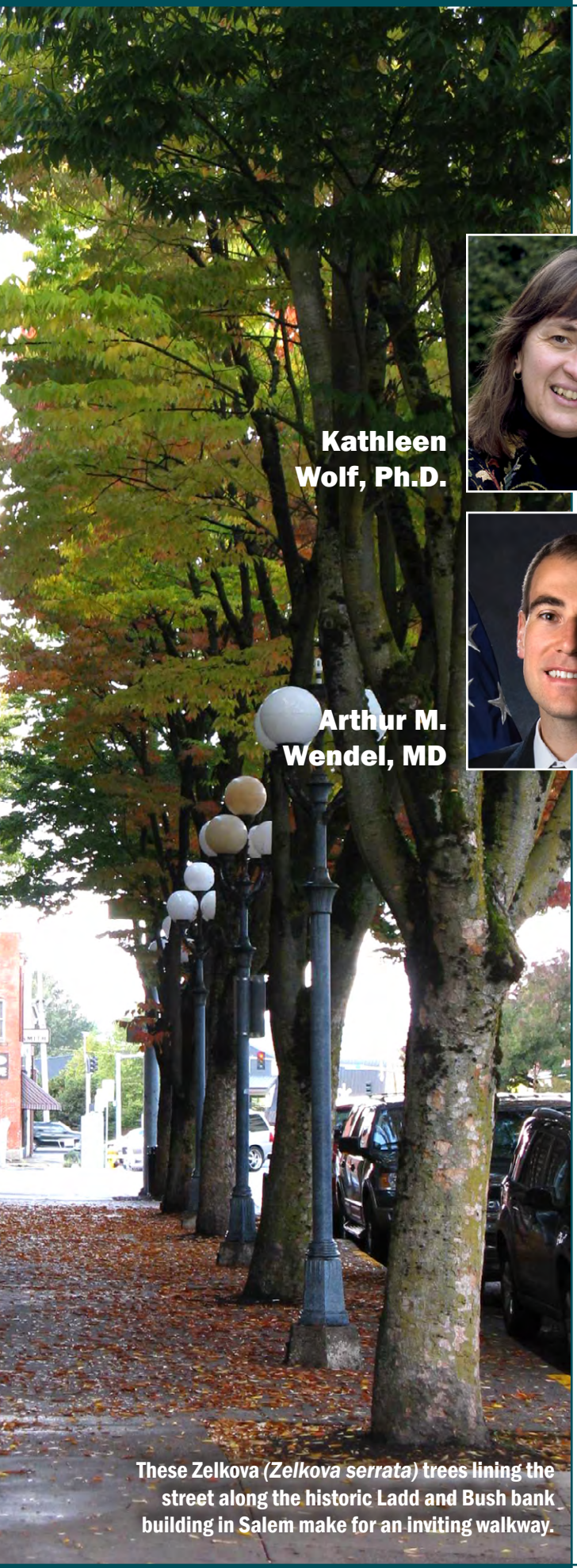
The bad news is, over the last 30 years, the number of overweight and obese people in the United States has risen for both children and adults alike. According to the U.S. Centers for Disease Control and Prevention, 65 percent of U.S. adults are overweight; in fact, physical inactivity has been identified as one of the top three underlying causes of death in the U.S. Given these trends those in the medical community, as well as foresters working in urban settings, are beginning to take a close look at the relationship between people, physical health, and the presence of trees, parks and open spaces.

Experts in agreement

For example, a study of adults living in Europe's urban areas found that residents of neighborhoods with more greenery were three times as likely to be physically active – and 40 percent less likely to be overweight or obese – than people living in the least green settings. According to an article by Social Scientist **Kathleen Wolf**, Ph.D., in the February, 2008 issue of *Arborist News*, a Netherlands study shows that residents of neighborhoods with abundant greenspace enjoy better health. This positive connection was particularly strong among the elderly, housewives, and people from lower socioeconomic groups.

Photo by Paul Ries, ODF

Cities like Corvallis, above, that offer shade trees, benches, public art, and more intersections per square mile are exercise-friendly and promote more walking.



These Zelkova (*Zelkova serrata*) trees lining the street along the historic Ladd and Bush bank building in Salem make for an inviting walkway.

Kathleen Wolf, Ph.D.

Arthur M. Wendel, MD

Arthur M. Wendel, MD, National Center for Environmental Health, Centers for Disease Control and Prevention (CDC), has serious concerns about fitness and health in the U.S. today. "We're facing a lot of public health crises," says Wendel, citing increases in chronic disease and in obesity rates. "Adult obesity has almost doubled in the past 20 years, and we've almost tripled our rate of childhood overweight. We need to look a little broader in how we address these issues."

Designing with people in mind

Wendel says people are more likely to choose healthy behavior when they live near parks and open spaces. Yet, even if you set parks aside, "you've got to provide ways to get there" says Wendel. "Ultimately, you'd like to be able to facilitate people to be able to walk or bike to those places. There are ways of designing parks and centers to make them more accessible, and more visible from the street," he says. Wolf says PhD students at the University of Washington have looked at the relationship between walking, exercise, and green spaces in our urban areas. Their findings confirm the theory that just the mere presence of trees and greenery has the effect of enticing more people to walk and exercise. That's because in more barren, highly paved neighborhoods, people judge distances to be greater than they actually are, "perhaps leading to decisions not to walk," says Wolf. Trees, it would seem, can be a great psychological motivator.

What about our children?

It's no secret America's children are in dire need of more outdoor play. About two-thirds of U.S. young people in grades 9 through 12 are not engaged in recommended levels of physical activity, according to Wolf. In her article "The Built Environment and Children's Health," Susan Kay Cummins, MD, CDC, says a child's built environment "is a central factor" in optimal health.

In an article in US News and World Report, Richard Louv (author, "Last Child in the Woods"), has a name for the current disconnect between people and nature; Louv calls it "nature deficit disorder." "Nature deficit disorder describes the human costs of alienation from nature," says Louv, "including diminished use of the senses, attention difficulties, and higher rates of physical and emotional sickness."

Wolf encourages walk-to-school programs. She also notes that streets with sidewalks and a wide buffer with trees scored biggest for "perceived safety" by parents. "Parents surveyed were more inclined to allow their children to walk to school when tree lawns (lawns separating sidewalks from streets) were present," Wolf added in a recent interview.

In her research Wolf has noted that physical activity often decreases for girls going through puberty; girls are more likely to participate in physical activities when nearby parks have shaded areas, or paths and natural areas in which to walk, she says.

Simply put, "if the built environment doesn't encourage walking, people quickly get discouraged," says Wolf.

In a Nature Conservancy article, CEO Steve McCormick put it this way: "No video game or television show can replace the majestic beauty of the mountains…or the simple joy (of) riding your bike all afternoon. Our children need that, and it's up to us to help introduce them to it."

Keys to building exercise-friendly communities

Pedestrian-friendly communities make it easier for people to integrate physical activity into their daily lives. Cities with shade trees, good paths, parks and pocket parks, public art, benches, walking and biking infrastructure (sidewalks and biking paths), and more intersections per square mile are some of the things that contribute to making a community more exercise-friendly.

And surprisingly, it's not only what we do for a living that can affect our health, but how we get there, as well. "Studies in Atlanta show that the less time you spend in a car each day, the less likely you are to be obese," says Wendel.

Interestingly, contrary to public perception, when people are out walking and exercising more, injury rates actually go down. "It turns out that in countries that have higher rates of walking and biking, the likelihood of injuries or fatalities per trip goes down," says Wendel, "so, the more people out walking and biking, the safer it gets."

Wolfe says regular physical activity need not be strenuous to be beneficial. "Adults benefit from moderately intense physical activity," such as 30 minutes of brisk walking most days of the week, says Wolfe.

During these times of rising unemployment and declining economy, getting exercise outdoors is becoming more important than ever. Besides physical benefits, studies also link one's physical fitness to mental and emotional well-being. No doubt our doctors, designers, foresters and the medical community will continue to discuss and promote a trend towards creating more walkable communities in our cities urban areas for decades to come.

Online Resources:

http://richardlouv.com/news
The Children & Nature network, a nonprofit group based out of Santa Fe, New Mexico, was created to support and encourage people and organizations that work to reconnect children with nature.
http://www.childrenandnature.org/

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Photo by Cynthia Orlando, ODF

This street, in the brand new Crescent Village neighborhood of North Eugene, includes both benches and newly-planted trees; it's a good example of planning for a "walking-friendly" community. The development also wisely promotes the use of drought-tolerant plants, and bioswales.

Arthur M. Wendel, *MD, MPH is a medical officer in the Public Health and Built Environment Initiative, National Center for Environmental Health, Centers for Disease Control and Prevention (CDC). Board-certified in family medicine and preventive medicine, he is a graduate of CDC's Epidemic Intelligence Service. He has worked in a variety of areas of public health, including disaster response, food-borne illness, and environmental health. He received his B.A. from Pomona College, his M.D. and M.P.H. from Tufts University. Dr. Wendel's interests include building health communities and transportation systems.*

Dr. Kathleen L. Wolf *is a Research Social Scientist at the College of Forest Resources, University of Washington. Since receiving her Ph.D. from the University of Michigan, Dr. Wolf has done research to better understand the human dimensions of urban forestry and urban ecosystems. She is interested in how scientific information about how people experience nature in urban settings can be integrated into local government policy and planning. Dr. Wolf has presented her research throughout the United States, in Canada, Europe, Australia and Japan. An overview of Dr. Wolf 's research programs can be found at www.cfr.washington.edu/research.envmind.*

About the author: *Cynthia Orlando is an Agency Affairs Specialist and certified arborist for the Oregon Department of Forestry.*

Published January 2010
Reprinted from: Spring 2009 – "Forests for Oregon" magazine