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Task Force (see p. 1468) to update its guidelines on the risks and benefits of daily aspirin use. The group had endorsed its preventive prowess for heart attack and stroke but discounted its anticancer effects. The potential to protect against both cancer and heart disease could tip the balance toward recommending aspirin for many more healthy adults, Thun says.

"It reshapes the debate about the risk and benefits of aspirin for cancer prevention,"

—ANDREW CHAN, MASSACHUSETTS GENERAL HOSPITAL

Others are more cautious about recommending broad use of aspirin to ward off cancer. "In 2012, gastroenterologists still get called to the emergency room for bleeds" caused by the drug, says cancer prevention researcher Andrew Dannenberg of Cornell University. Colorectal cancer researcher Sanford Markowitz of Case Western Reserve University in Cleveland, Ohio, points to studies suggesting that only people with a particular genetic profile will see their cancer risk go down if they take aspirin. "I would want more data on who benefits and who does not," Markowitz says.

Cancer prevention researcher Raymond Dubois of the MD Anderson Cancer Center in Houston, Texas, is also wary. "Initially we thought we could put aspirin in the drinking water. That's not the case," he says. "Where this field is going is towards a more personalized approach."

The picture may become clearer soon when WHS reports on longer-term effects of aspirin on cancer risk. Their next paper "will be crucial," Rothwell says. And even some on the pro-aspirin side urge caution. "We don't want to mess this up," Thun says.

–JOCELYN KAISER

Philadelphia story. With a push from a local nonprofit, The Food Trust, and a windfall of federal funding, efforts are underway to boost healthy offerings at small grocers around the city.

CREDITS: (TOP CENTER) MEL EPPS/THE FOOD TRUST; (ALL OTHERS) THE FOOD TRUST

Tackling America's Eating Habits, One Store at a Time

Several initiatives are evaluating if easing access to healthy food will change how Americans eat—and reduce obesity around the country

PHILADELPHIA, PENNSYLVANIA—The food market Clara Santos runs in South Philadelphia is less than 5 kilometers from the city's majestic art museum. Driving there, polished brick townhouses and trendy eateries with names like Caffeination and The Belgian Café give way to stretches of modest row houses, abandoned lots, and the occasional corner store advertising massive sandwiches called hoagies. Santos, who emigrated from the Dominican Republic, lives not far from the Olivares Food Market she took over 4 years ago. Graffiti marks its outer walls, but the shop, on a quiet block sandwiched between two city schools, is tidy inside. Children stop in frequently for soda and candy after classes let out.

Santos's store is one of 642 data points in an unusual urban experiment. Eight years ago, a local nonprofit called The Food Trust began studying whether bringing healthy, affordable food to corner stores like hers could change eating habits among the city's economically disadvantaged residents. The program started small. Then in 2010, the Healthy Corner Store Initiative rapidly expanded after partnering with the Department of Public Health here, which had just received a windfall: $15 million to help prevent obesity, part of $373 million from the federal stimulus package earmarked for health and wellness efforts around the country. Santos joined the project last year along with hundreds of other convenience store owners. Among other support, she received a display refrigerator where she showcases yogurt, precut watermelon, carrots, apples, and other fruits and vegetables, along with green bins for produce such as onions and plantains. Why not give the program a try, Santos says she thought: "Maybe we'll help the community."

Like Santos and those at The Food Trust, more and more people are trying to change the landscape of food in America. And change is desperately needed. More than one-third of

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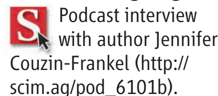
U.S. adults are obese, as are about 17% of children ages 2 and up. In 2008, researchers estimated that obesity cost the nation a staggering $147 billion in medical costs.

Many paths lead to obesity, and the lack of access to healthy foods is thought to be just one of them—but for those on the front lines, it seems among the easiest and cheapest to modify. The strategy is also getting a boost from first lady Michelle Obama, whose plan to combat childhood obesity includes the elimination of "food deserts," defined as low-income communities that are a significant distance from a full-fledged grocery store, though the specifics vary depending on whether the neighborhoods are urban or rural, among other factors.

Swapping food deserts for stores boasting fresh produce and other healthy foods—and using varied strategies in hopes of coaxing locals to buy them—comes with two questions. First, does promoting these foods change eating habits over the long haul? And second, does this, in turn, help fight obesity? Marketing bananas, demonstrating how to use cabbage in meals, and putting more boxes of wholesome cereals at eye level all sound like sensible practices that should help people lose weight or keep it off, but until recently, more effort has gone into initiating such interventions than scientifically measuring whether they matter. People "have an intuitive feel about the value and worth of this," since individuals cannot improve their eating habits and potentially lose weight if the food isn't available to them, says Allison Karpyn, the director of research and evaluation at The Food Trust. "The mandate from policymakers was, 'These communities need stores, they need revitalized neighborhoods.' It wasn't, 'We want to measure their BMI.' "

Evolving tactics

In the early days of food-desert research, it was hoped that simply plunking down a well-stocked supermarket where there wasn't one could change eating habits. One of the first people to test this was Neil Wrigley, an economic geographer and urban planner at the University of Southampton in the United Kingdom. Through his planning work, Wrigley was well-connected to the retail industry, and in 1999 he learned that a sizable supermarket would soon open in an impoverished area of Leeds.



Podcast interview with author Jennifer Couzin-Frankel (http://scim.ag/pod_6101b).

The neighborhood had high crime rates and many very young mothers. It was, Wrigley says, "isolated from the mainstream of economic life." From this community, Wrigley recruited 1009 households to help him examine how eating habits changed after the supermarket opened. Tracking eating habits for a week, 5 months before and again 7 months after the supermarket opened, Wrigley determined that the new supermarket did indeed influence food choices, but its impact was slight and variable.

Taking together all 615 households that stuck with the study, there was no measurable difference in fruit and vegetable consumption. But when the researchers looked at only the several hundred households that switched to shopping at the new store, there was a modest change: They added about a quarter-serving of produce to their diets, boosting the total to 2.89 servings—still far below the recommendations at the time of five servings a day. "We weren't expecting a big impact from improving availability, we just wanted to see whether there was any impact," says Wrigley, who called the results "heartening."

Wrigley's results suggested that a new store on its own has only so much power. Some consumers avoided the Leeds supermarket because they worried they'd be tempted by its rich offerings and would waste money. Furthermore, "many of these 21-year-old mothers had no experience in cooking at all," Wrigley says.

Beacon. This U.K. supermarket, which opened in an impoverished area in 2000, was studied for its impact on eating habits.

CREDIT: M. TAYLOR/WIKIMEDIA COMMONS

Another reason a new store has limited influence is that nearly everyone, no matter how they eat, is accustomed to buying roughly the same foods and preparing roughly the same dishes week after week. "You have to change patterns that have been ingrained over time," says Helen Lee, who recently moved from the Public Policy Institute of California in San Francisco to the social policy research organization MDRC in Oakland, California.

Lee studied how proximity to grocery stores affected childhood obesity in about 3200 communities around the country. The result? "What children had access to in their residential environments didn't predict who became overweight or who stayed overweight," she says. In general, evidence suggesting that people eat better when there's healthy food nearby "is really mixed," says Lee, who worries that eliminating food deserts in the absence of broader structural changes to combat poverty, such as educational reform and job training, could be a waste of precious dollars.

Against this uncertain backdrop are widespread efforts to promote access to healthy foods among the poor. In both New York City and Philadelphia, residents who use $5 worth of food stamps at a farmer's market receive $2 more to spend on fresh produce there.

In New York City, the Shop Healthy NYC initiative is, among other things, encouraging owners of more than 1000 of small corner stores called bodegas to stock produce and other healthier foods, such as low-fat milk. But tracing what people are actually buying in bodegas hasn't panned out. "The majority don't have electronic cash registers" and don't provide receipts, says Sabrina Baronberg, who helps oversee the program at the city's Department of Health and Mental Hygiene. "We've tried a variety of mechanisms. … It's very difficult to track sales."

The push for change despite limited data has divided public health experts. On the one hand, many say that it's hard to see a downside to offering more fruits and vegetables, low-sodium products, and low-fat dairy options to disadvantaged communities. On the other, with limited public health money, Lee, Karpyn, and others say, it makes sense to understand which strategies work best,

Published by AAAS
Downloaded from www.sciencemag.org on September 27, 2012

Selling the good. Researchers and others are experimenting with marketing strategies to sell produce and other healthy foods, and steer patrons from unhealthy choices.

rather than implementing a hodgepodge that may or may not make a difference. "I wonder if we're going about it the wrong way," Lee says, "if we're putting the intervention before the science."

Store-by-store

In neighborhoods dotting San Diego County, Guadalupe Ayala is trying to put science first. Ayala, a public health researcher at San Diego State University in California, focuses on modifying behaviors to prevent obesity and other chronic health conditions. Currently, she's working with 18 small-to-medium-sized grocery stores whose shoppers are mainly Latino. Nine of the stores are left alone. In the other nine, Ayala intervenes by helping the owners offer healthier foods: by providing, for example, a salad bar for precut vegetables (which many Mexicans like to eat, she says), or exploring how ingredients in prepared foods can be modified to make them healthier. The researchers are also providing marketing materials to highlight healthy foods. Thanks to their small size and the immigrant community they serve, the store's staff members know many of their shoppers by name—leading Ayala to suspect that they might have sway over what customers buy. With this in mind, employees are trained "to do suggestive selling to promote healthier foods."

To measure the outcome of the various interventions, Ayala and her colleagues are recruiting 396 customers—22 for each store—and tracking their eating habits for a year. The researchers are also studying what goes on in the stores: Do they sell more healthy foods? Do they allocate more space to such food? Do they use any marketing strategies beyond what Ayala suggests? To verify that customers are eating the fresh produce they buy, Ayala had planned to gather blood samples from 25% of participants and look at levels of carotenoids, a component in fruits and vegetables. But the grant, which is funded by the U.S. National Cancer Institute, was reduced and that side project was eliminated. Still, Ayala has an impressive $2.75 million for the effort—a sign of how expensive it is to probe these questions on even a small scale.

Another challenge for researchers like Ayala is keeping healthy foods affordable. She and her colleagues are keenly aware that if the foods they highlight aren't roughly the same cost or cheaper than what they aim to replace, interventions are unlikely to work. This often means focusing on less expensive produce, such as tomatoes and zucchini. Or it might mean expanding the number of stores that belong to the federal government's supplemental nutrition program for women and young children called WIC. Not every grocer that wants to can join WIC because of limited state resources to certify and monitor the stores. Those that do belong benefit from a guaranteed customer base. "We found that [participation in] WIC was the overriding determinant in whether a store had fresh fruits and vegetables, low-fat milk, [and] whole grains," says Ann Ferris, who directs the University of Connecticut's Center for Public Health and Health Policy in East Hartford. She has a paper coming out that backs this up.

To sell more healthy foods in Philadelphia, The Food Trust and its collaborators also rely on strategies used with great success to move junk food off store shelves. "If you put all the low-sodium goods together and put marketing around it and make it like a flashing beacon around the store, you'll attract attention," says Brianna Sandoval, who is overseeing the corner store initiative.

With colleagues at nearby Temple University and the University of Pennsylvania, The Food Trust is testing this approach in eight large grocery stores, most of them in Philadelphia. Four of the stores serve as controls, while in four others the researchers altered product displays in an effort to encourage healthier purchases. "It's a stealth intervention," says Gary Foster, who's helping lead the study and directs the Center for Obesity Research and Education at Temple. "Where the whole milk used to be, the skim is." More boxes of Cheerios are visible, along with more low-calorie soda; healthier frozen meals are at eye level. Still, Foster concedes that the approach is unlikely to radically change shopping habits. "In the scheme of things, it's a pretty weak intervention," he says. But because it costs stores little, it's also sustainable.

As this store-by-store research progresses, there are glimmers that changing eating habits, at least a little, is doable. Interventions in San Diego, Baltimore, Philadelphia, and beyond suggest that customers can be coaxed into buying healthier foods. But even if this works on a grander scale, across urban and rural areas—and no one knows yet if it will—can such changes make a meaningful dent in obesity? "There's an assumption built in here that nobody ever articulates," says Kelly Brownell, director of the Rudd Center for Food Policy & Obesity at Yale University. The assumption is that healthy foods sit on one end of a seesaw, with unhealthy foods on the other—and thus that eating more broccoli and Greek yogurt means ingesting fewer McDonald's hamburgers or liters of soda. There's no evidence to support this, however, he says.

Brownell, whose favored strategy is making it more difficult to find and afford unhealthy foods, still believes that access to healthy food matters. More fruits and vegetables reduce cancer and heart attacks, and communities deserve food choice. "If I didn't study obesity, but I studied cancer or heart disease, I'd be very happy about" these projects, he says. "But we can't necessarily expect [them] to help the nation's obesity problem."

–JENNIFER COUZIN-FRANKEL

CREDITS: THE FOOD TRUST; PHILADELPHIA DEPT. OF PUBLIC HEALTH; HEALTHY CORNER STORES NETWORK; JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH

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