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Why Your Health Is Bigger Than Your Body by Claudia Rowe

Talking with Dr. Ted Schettler is probably unlike any conversation you have had with your physician. Raise the topic of breast cancer or diabetes or dementia, and Schettler starts talking about income disparities, industrial farming, and campaign finance reform.

The Harvard-educated physician, frustrated by the limitations of science in combating disease, believes that finding answers to the most persistent medical challenges of our time—conditions that now threaten to overwhelm our health care system—depends on understanding the human body as a system nested within a series of other, larger systems: one's family and community, environment, culture, and socioeconomic class, all of which affect each other.

It is a complex, even daunting view—where does one begin when trying to solve problems this way?

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Schettler is an exceedingly logical thinker, and his vision for a more evolved kind of health care came from the down-to-earth experience of helping to clean clam flats along the St. George River in Maine during the 1980s. "I was living and practicing on the coast there, and working with a local organization to clean up the river because we had these rich clam flats that had been closed for years because of periodic spikes of E. coli. If anyone ate the clams they would get very sick.'

Meanwhile, paper mills were dumping dioxins into other rivers nearby, and Schettler learned that fish from those rivers sometimes had even higher chemical levels than fish caught in urban harbors. But factory bosses claimed that regulating waste from the pulp mills would cost community jobs, which prompted dozens of young factory workers to protest. Schettler, despite being steeped in traditional medicine, was unable to ignore these interrelationships: a degraded natural environment, a precarious local economy, and perennially sick people. "These things—the effect of the environment on peoples' health—were never discussed at the medical conferences,' he said. "So it caused in me a major re-examination.'

Schettler went back to school, earned a master's degree in public health, and began applying a scientist's rigor to his wide-ranging pool of interests. Since then, he has researched connections between poverty, iron deficiency, and lead poisoning; insecticide

use, Parkinson's, and Alzheimer's disease; income disparities and asthma.

He calls this new approach to medicine "the ecological paradigm of health.'

"It sounds like tree-huggers or something,' Schettler said in an interview. "But I mean 'ecological' in the sense that there are these multiple systems, one within the other—a family within a community, within a society, within a culture—and that's the way ecologists tend to talk about ecosystems. It's accepting up front that humans do not stand apart from the environment. We're a major species, along with the mosquitoes and fish and trees and bacteria. And there are all of these wonderful interrelationships.'

Our Health and Ecosystem Health

Currently getting over a case of Lyme disease, Schettler notes that the condition wasn't even on the radar three decades ago. Likewise, West Nile Virus. And dengue fever, first identified in the late 18th century, has soared since the 1960s, now infecting up to 100 million people worldwide each year.

"Can there be any doubt that human health is enormously dependent on ecological systems that we are having a major influence on?' Schettler says. "It's all one world. Our tendency to describe the natural world as something without humans is part of the problem.'

When economic inequality gets this wide it has an adverse effect on people's health.

Such a holistic approach to human health is often received as heresy within traditional medicine, but Schettler is hardly a Don Quixote tilting at windmills. He has testified before the U.S. Senate about links between Parkinson's and pesticide use. He has been interviewed on public radio and co-authored two oft-quoted books, *Generations at Risk: Reproductive Health and the Environment* and *In Harm's Way: Toxic Threats to Child Development*. Both explore Schettler's belief about the environmental underpinnings of a host of disorders, from learning disabilities to cancer. And both lay out the limitations of Western medicine in coming up with clear causes and effective treatment.

Breast cancer is a prime example. Dissatisfied with research into the origins of the disease, Schettler began to wonder whether chemicals found in cancerous breast tissue actually encouraged tumor growth. He found that a girl's exposure to DDT before the age of 14 corresponded to a greatly increased risk for breast cancer later in life. "If we're looking only at adults, we're missing this important window of susceptibility,' Schettler says. "But in medicine we weren't going there. We were responding only to the illness. I was interested in its origins.'

Food is another favorite "wedge issue,' a way of examining diseases like diabetes in relation to agricultural policies. Schettler, noting America's current epidemic of childhood obesity and diabetes, began examining not only blood sugar levels in children but also the neighborhoods in which they lived. He found that many did not have a single market selling fruits and vegetables.

That led his musings a step further, to inquiry into the agricultural policies guiding food into stores. Which flowed naturally into an examination of conditions for agricultural workers who, it turned out, had high rates of cancer.

In Schettler's analysis, each of these factors—the mass production of processed food, the lack of easily accessible fruits and vegetables, the health condition of farm

workers—is fused with the others: "It's fine to give people dietary advice, and advise them to exercise—in this country we have a long history of telling people how to change their own lives,' he says. "But it's not just a matter of an individual making a poor choice. It's what our system has provided to them, so it needs to be changed at the systems level. Diabetes and obesity are big-ticket items with huge implications for the federal budget.'

Thinking that way, it's no stretch for the physician to segue into a discussion of federal farm subsidies for chemically produced foods. Or, on a more personal level, to question colleagues in health care about their failure to advocate for changes to the food served in schools.

Schettler's approach touches everyone: He asks school districts that cut physical education programs as soon as budgets get tight, "What's the message we're giving to kids? This is really troubling. We're facing an obesity and diabetes epidemic that's going to overwhelm our health care system. And if there's one thing that we should be doing it's stressing the importance of diet and exercise for young people.'

You might think that a physician like Schettler—unafraid of skewering sacred cows wherever he finds them—would be a lightning rod for criticism. And indeed, the American Council on Science and Health issued a sharp rebuke in 1999 after Schettler attacked a report issued by the organization (and co-authored by former Surgeon General C. Everett Koop) for its stand on phthalates: "The American Council on Science and Health is disappointed, but not surprised, by activists' continued attempts to discredit a panel of well-respected, nationally and internationally recognized scientific and medical professionals,' the statement said. "Once again, there has been an attempt to shift attention from sound science to misrepresentations and half-truths.'

Other than this, there is virtually no public criticism of Schettler's work. And even that fracas left him singularly unperturbed.

"Some of these chemical groups might label me an 'enviro' but that's about it,' he said. "Still, this is an area of great debate—whether our job is merely to identify and treat disease or whether it is also to be advocates in public policy.'

Clearly, Schettler has made his decision. "You really do get into down-and-dirty politics here. That's where this all plays out.'

Inequality Makes Us Sick

Wherever Schettler turns his focus, drilling down to the root causes of illness inevitably means confronting social problems, foremost among them economic inequality.

How Does Inequality Define the Health of a Nation?

Richard Wilkinson discusses inequality and the effects it can have on a country's citizens.

Take lead poisoning: Poor diet leaves children from lower-income families more likely to suffer iron deficiencies. And an iron-deficient diet allows more lead to be absorbed in the intestinal tract, transporting more of the damaging metal to the brain and leading to increased neurological impairment among kids whose families are least able to counter those effects.

"If you just address the lead itself, without looking at diet and social circumstances, you don't get very far,' Schettler says. "So yes, it's important to make sure that kids aren't being

exposed to excessive amounts of lead and neurotoxins, and we need to keep doing that work. But we also need to be looking at housing, income disparities, the food system, energy production—things that are likely to have a bigger impact on a larger set of conditions and diseases.'

In short, poverty leads to increased exposure, which is exacerbated by heightened vulnerability (in this case, the iron-deficient diet) and an impaired ability to respond—"a toxic triad," Schettler calls it.

The link between socioeconomic status and poor health is widely acknowledged. But perhaps less obvious is the finding that income disparities within a community also appear to have a deleterious effect, making one family susceptible to illnesses that another living in the same area—but at a higher income level—might escape.

As proof, Schettler cites research on asthma that found poorer kids—even when symptom-free—had higher levels of inflammatory markers in their blood than youths from wealthier families in the same neighborhood. Meaning that it took fewer irritants to push the poorer children over the threshold into a full-blown attack. Once sick, they were also less resilient—that is, less able to quickly recuperate—than wealthier children, either because they lacked treatment at home or were unable to get to a doctor.

"Higher income is protective—even in the same community," Schettler says. "That's why it's so concerning to see this income gap in America now. We know it's setting the stage for adverse health outcomes for people. Is that class warfare? Well, yes. When economic inequality gets this wide it has an adverse effect on people's health. That's what the literature tells us. We shouldn't shy from saying it.'

Show Me the Progress

After spending 30 years as an emergency medicine physician, Schettler now serves as science director for two organizations, the Science and Environmental Health Network and the Collaborative on Health and the Environment. The latter is a partnership of some 4,000 health practitioners and scientists committed to promoting discussion of the connections between the environment and learning disorders, birth defects, infertility, childhood leukemia, endometriosis, and various cancers.

Admittedly, it's a pretty bleak vision, this tangled web of social, medical, and political problems. And looking at it, you might expect Schettler to be wracked with hopelessness. Yet he is not.

"I actually think it's a very important time in the world now," he says. "There's something here for everyone to do.'

He points to examples of significant change already underway within the health care industry itself, where the incineration of hospital waste has long been a leading source of dioxin emission. Hospital food, too—traditionally a fatty rotation of grilled cheese, burgers, French fries, and milkshakes—has been little more than "a joke," Schettler says.

But since its founding in 1996, the international collective Health Care Without Harm has steadily been chipping away at these problems, and has now seen the closure of thousands of medical waste incinerators. It has initiated a Green Building program geared toward creating energy-efficient medical centers; and it has begun to change the way hospitals, with their enormous purchasing power, buy food to promote more locally grown and sustainable

agriculture practices.

"The medical industry itself has been a great place to look at cleaning up,' says Schettler, who advises Health Care Without Harm. "Particularly as health care is almost 20 percent of the GDP.'

Make the Connections: Poverty, Obesity, and Diabetes

Even as a high school student in 1950s Ohio, the seemingly mild young man showed a talent for leadership. ("Ted's ability to organize his pals has made him a leader in the senior class,' notes his yearbook. "His sincere, fun-loving personality will draw friends to him.')

These days, Schettler puts those skills to work before crowds of students, researchers, and policy makers. Yet nearly every conversation circles back to same question: How is anyone to make a difference when confronted with Schettler's vision?

"I encourage people to recognize that they're working in common cause with others,' he says. "Many people are carrying a common message, just coming at it from different angles.'

By way of example, he cites Detroit, long a metaphor for urban blight, ingrained misery and societal failure. Though there is not a single major-chain supermarket within the city limits, Schettler focuses instead on a crop of urban gardens now dotting the broken blacktop. "People are starting to grow their own food, healthy food!' he exclaims. "There are wonderful things going on.'

This article is reprinted here with permission. Claudia Rowe wrote this article for It's Your Body, the Fall 2012 issue of YES! Magazine. Claudia has been an award-winning social issues journalist for more than 20 years. Her work has appeared in Mother Jones, The New York Times, The Seattle Times, and The Seattle Post-Intelligencer.