

NYT Magazine, Sunday, October 12, 2003. Enough to Make You Sick? by Helen Epstein

Beverly Blagmon lives in the School Street housing projects in southwest Yonkers, a once-vibrant manufacturing area just north of New York City long mired in unemployment and poverty. Beverly has asthma, diabetes, high blood pressure, rheumatoid arthritis, gout and an enlarged heart, and her blood has a dangerous tendency to clot spontaneously. She is 48, and she had her first heart attack in her late 20's. One of her brothers died of heart failure at 50, and another died of kidney failure at 45, as did a sister who was 35. A young cousin recently died of cancer. In the past three years, at least 11 young people she knows have died, most of them not from gunshot wounds or drug overdoses, but from disease.

Monica, who asked that her last name not be used, moved to the Crown Heights section of Brooklyn from School Street a year ago. She has diabetes, arthritis and asthma. She is overweight, and the pain from a back injury that occurred four years ago makes it hard for her to walk or even bend over a stove. Her elaborately braided hair is tinged with gray. In the past year, six of her friends have died, all of them younger than she is. When asked simple questions about her life -- when she was born, where she grew up, when her three children were born -- Monica answers in short phrases, wiping tears from her eyes. She is 36.

Ebony Fasion, 22, and her friend Dominique Faulk, 17, both former residents of School Street, have asthma. Dominique's cousin Jo-Scama Wontong, 19, still lives in the School Street projects. Jo-Scama has lost so many people she loved to disease and accident recently that whenever she thinks about it, she is stricken with panic. "My heart beats so fast, and I can't breathe, and there's just death going through my mind the whole time. "

Something is killing America's urban poor, but this is no ordinary epidemic. When diseases like AIDS, measles and polio strike, everyone's symptoms look more or less the same, but not in this case. It is as if the aging process in people like Beverly and Monica were accelerated. Even teenagers are afflicted with numerous health problems, including asthma, diabetes and high blood pressure. Poor urban blacks have the worst health of any ethnic group in America, with the possible exception of Native Americans. Some poor urban Hispanics suffer disproportionately from many health problems, too, although the groups that arrived most recently, like Dominicans, seem to be healthier, on average, than Puerto Ricans who have lived in the United States for many years. It makes you wonder whether there is something deadly in the American experience of urban poverty itself.

The neighborhoods where Beverly, Monica, Ebony, Dominique and Jo-Scama live look like poor urban areas all across the country, with bricked-up abandoned buildings, vacant storefronts, broken sidewalks and empty lots with mangy grass overgrowing the ruins of old cars, machine parts and heaps of garbage. Young men in black nylon skullcaps lurk around the pay-phones on street corners. These neighborhoods are as segregated from the more affluent, white sections of metropolitan New York as any township in South Africa under apartheid. Living in such neighborhoods as southwest Yonkers, central and East Harlem, central Brooklyn and the South Bronx is assumed to predispose the poor to a number of social ills, including drug abuse, truancy and the persistent joblessness that draws young people into a long cycle of crime and incarceration. Now it turns out these neighborhoods could be destroying people's health as well.

There are many different types of disadvantaged neighborhoods in America, but poor urban minority neighborhoods seem to be especially unhealthy. Some of these neighborhoods have the highest mortality rates in the country, but this is not, as many believe, mainly because of drug overdoses and gunshot wounds. It is because of chronic diseases -- mainly diseases of adulthood that are probably not caused by viruses, bacteria or other infections and that include stroke, diabetes, kidney disease, high blood pressure and certain types of cancer.

The problems start at birth. The black infant death rate in Westchester County is almost three times as high as the rate for the county as a whole. Black youths in Harlem, central Detroit, the South Side of Chicago and Watts have about the same probability of dying by age 45 as whites nationwide do by age 65, and most of this premature death is due not to violence, but to illness. A third of poor black 16-year-old girls in urban areas will not reach their 65th birthdays. Four times as many people die of diabetes in the largely black area of central Brooklyn as on the predominantly white Upper East Side of Manhattan, and one in three adults in Harlem report having high blood pressure. In 1990, two New York doctors found that so many poor African-Americans in Harlem were dying young from heart disease, cancer and cirrhosis of the liver that men there were less likely to reach age 65 than men in Bangladesh.

Since the time of slavery, physicians have noted that the health of impoverished blacks is, in general, worse than that of whites. Racist doctors proposed that the reasons were genetic, and that blacks were intrinsically inferior and physically weaker than whites. But there is very little evidence that poor blacks or Hispanics are genetically predisposed to the vast majority of the afflictions from which they disproportionately suffer. As the living conditions of blacks have improved over the past century, their health improved in step; when conditions deteriorated, health deteriorated, too. This has helped support the contention among researchers that much chronic disease among minority groups is caused not by genes, but by something else.

That something else may come down to geography. Ana Diez-Roux, an epidemiologist at the University of Michigan, has shown that people who live in disadvantaged neighborhoods are more likely to have heart attacks than people who live in middle-class neighborhoods, even taking income differences into account. Researchers from the Rand Corporation found that neighborhoods where many buildings are boarded up and abandoned have higher rates of early death from cancer and diabetes than neighborhoods with similar poverty rates and similar proportions of uninsured people, but intact housing. Abandoned buildings do not in themselves cause disease, of course, but they are an indicator of neighborhood deprivation and neglect -- and this does seem to be associated with poor health, though we don't know why.

In some ways, our public health institutions are in the same position they were in 150 years ago. In the mid-19th century, public health boards were established to fight the great killers of the day -- cholera and tuberculosis. The poor were more susceptible to these diseases then, just as they are more susceptible to chronic diseases now. And then, as now, the reasons were unknown. Some believed diseases were acts of God and the poor got what they deserved. If they would only drink less, go to church and stay out of brothels, they wouldn't get sick. Others maintained that the afflictions of poverty were environmental. A stinking mass of invisible vapor, referred to as "miasma," hung in the air over the slums, they claimed, and sickened those who inhaled it.

It was not until the early 1880's, when the German scientist Robert Koch looked down his microscope at swirling cholera and tuberculosis bacteria, that everyone finally agreed about what was going on. The water the poor drank was full of sewage and contained deadly cholera germs; in overcrowded tenements, the poor breathed clouds of tuberculosis bacteria. Malnourished alcoholics tended to be more susceptible to these diseases, but immoral behavior was not their primary cause. Nor was miasma. The primary cause was germs.

We don't have a germ theory for chronic diseases like stroke, heart disease, diabetes and cancer. We know something about what can aggravate these diseases -- diet, smoking and so on -- but not enough about why they are so much more common among people who live in certain neighborhoods, or what makes, for example, a poor person who smokes the same number of cigarettes a day as a rich person more likely to get lung cancer. Or why several research studies show that smoking, eating, drinking and exercise habits do not fully account for why rich people are healthier than poor people. Even lack of health care cannot entirely explain the afflictions of the poor. Many poor people lack health insurance, and those who have it are often at the mercy of overworked doctors and nurses who provide indifferent care, but inadequate health care cannot explain why so many of them get so sick in the first place.

Most poor minority neighborhoods "are less healthy," says Adam M. Karpati, who works in the Brooklyn office of the New York City Department of Health and Mental Hygiene. "You walk down the street and you know it. But what is that thing that you know is going on? What's at play there? That thing you can't name? We don't know that."

Clearly we need to examine this miasma with a different kind of microscope. The best we have at the moment are theories that fall into two main schools of thought. One school holds that the problem has mainly to do with stress; the other holds actual deprivation responsible. These two factors are often intertwined, but the emphasis is important. "There are so many fists in the face of poor African-Americans," says Arline Geronimus, a professor of public health at the University of Michigan who leans toward the stress school, and she proceeded to list them for me. They have enormous family obligations, she explained, and while the middle class are able to purchase child care and care for elderly relatives, the poor cannot. The experience of racism and discrimination in everyday life is also still very real, and very stressful. She says that blacks are faced with a society that institutionalizes the idea "that you are a menace -- and that demeans you," she says. Nancy Krieger, a Harvard researcher, found that working-class African-Americans who said they accepted unfair treatment as a fact of life had higher blood pressure than those who challenged it.

Geronimus calls the grinding everyday stress of being poor and marginalized in America "weathering," a condition not unlike the effect of exposure to wind and rain on houses. Listening to Geronimus describe "weathering," I found it hard not to wonder whether anyone really knows what it is. Stress is subjective, a feeling, and it means different things to different people. Philip Alcabes, associate professor of urban public health at Hunter College, says that stress is like the miasma that was once thought to cause cholera in 19th-century slums. "You can't see it, you can't really measure it, but it floats over certain people, especially the poor, and makes them sick."

If "weathering" and stress have their modern day Robert Koch, he is probably Bruce McEwen, a neuroendocrinologist at Rockefeller University in New York. McEwen argues that stress hormones threaten the health of poor people, especially blacks and the Hispanic poor. Stress hormones are produced by the adrenal glands in response to signals from the brain. When people feel frustrated, frightened or angry, stress hormones travel through the bloodstream and instruct different parts of the body to prepare for an emergency. They speed up the heart rate and narrow the arteries so that blood gets to the tissues faster; blood sugar rises, so that energy rushes to the muscles and other organs; and some bodily functions, like digestion and the mechanisms that maintain the strength of the bones and other tissues, are inhibited. But not all stress is the same. Occasional periods of intense stress, like what you feel during a near miss in a car, do no harm. However, McEwen's research suggests that constant exposure to stress hormones impairs the immune system and damages the brain and other organs.

Chronic stress also signals the body to accumulate abdominal fat around the waistline, which is more dangerous than fat that lies under the skin, or subcutaneous fat. Abdominal fat worsens many chronic health problems, including diabetes and heart disease, whereas subcutaneous fat does not. It's as if stress hormones were like lye, powerful stuff that in small amounts is useful for cleaning the stove, but that in large amounts will eat right through the floor.

Not everyone believes that stress is a major contributor to the health crisis among the poor. George Davey Smith, a professor of clinical epidemiology at the University of Bristol in England, agrees that the poor live very stressful lives, and that racism is an everyday reality for many people. However, in his view -- the second school of thought on the matter -- the health crisis among the poor has more to do with living in a deprived environment.

The experience of poverty in America has changed a great deal since the 19th century; the poor now have safe drinking water and live in less crowded dwellings, and many have cars and TV's. However, it's also true that many poor people eat unhealthful food, smoke and abuse drugs. Americans hear a great deal about the importance of making healthy choices in their lives; warnings about cigarettes and high-fat foods issue frequently from the surgeon general's office and fill the pages of magazines and best-selling advice books. There are plenty of people who feel little sympathy for overweight diabetic people, poor or not, who eat regularly at McDonald's. But while there is considerable controversy about the ideal lifestyle regimen, you don't need to know much about impoverished neighborhoods to see the absurdity of choosing to go Atkins or macrobiotic for a person like Beverly Blagmon, who subsists on disability payments. Poor people are more likely to have unhealthy habits because fast food and cigarettes are abundant and cheap in their neighborhoods, and healthy alternatives tend to be limited.

A recent survey conducted in four regions of the United States found that there were three times as many bars in poor neighborhoods as in rich ones, and four times as many supermarkets in white neighborhoods as in black ones. There are fewer parks in poor neighborhoods as well, so it is more difficult to find open spaces in which to exercise, and many of them are dangerous. Forty-one percent of New York's public elementary schools have no consistent physical education program. As Mary T. Bassett, a New York City deputy health commissioner, said to me, public health campaigns that tell people to "just say no" to smoking, or to change their diets and start exercising, can be cruel if they are indifferent to neighborhood circumstances.

Davey Smith also points out that many of the poor black people who are sick today grew up in the 40's, 50's and 60's, when many black people lived in overcrowded dwellings, and were more prone than affluent whites to childhood infections. Some of these infections may have long-term effects on health. *Helicobacter pylori*, a bacterium that has been associated with both ulcers and stomach cancer in adulthood, is most often acquired in childhood, and this may explain why poor blacks in particular have relatively high rates of both diseases. Adults who were poor as children, even if they are not poor now, are also more prone to stroke, kidney disease and hypertensive heart disease.

I wondered about these alternatives. Presumably both stress and material disadvantage are important causes of ill health among the poor. But which is more important? And what would be the best way to address these problems? If stress is a major cause of ill health, interventions to alleviate it -- counseling, antidepressants, even yoga -- might be beneficial. A recent article in The British Medical Journal suggested that building self-esteem actually helped a group of Native Americans manage their obesity and diabetes better than did conventional counseling about diet and exercise. On the other hand, if material disadvantage is a major cause of ill health among the poor, then extensive changes in the environment in which the poor live -- for example, cleaner buildings and more parks -- are needed.

Perhaps Beverly Blagmon, who lives in the midst of such problems, could help resolve this matter. I asked her what she thought the health crisis in southwest Yonkers was caused by, and she answered without missing a beat. "Racism." We went on to talk about the lack of jobs in the area and the dilapidated state of the housing. I also learned that if stress is a killer, there is plenty of it on School Street, but yoga classes and motivational seminars are not likely to be of much help.

Beverly raised 10 children, eight orphaned nieces and nephews in addition to her own son and daughter. The kids were desperate for attention from the overextended Beverly. "It was hard," she said. "You had to deal with 10 different personalities." All the kids are grown now, and all but two have left home. Now she worries because some of them can't find jobs. When she was young, Yonkers was full of factories that hired many young people. But not anymore.

Then last year, disaster struck. Beverly's 21-year-old daughter was killed in a car accident; shortly thereafter, her nephew was shot and killed right outside her building. "I was totally out of it," she said. "People don't know how much a death can take from you. I went into the hospital right after my daughter's funeral. They didn't know if I'd had a mild stroke or not."

"Life is taken stupidly" all the time around School Street, Beverly said, but this doesn't make it easier to handle. Beverly struggles with these losses, and said her family, friends and even officials from the local Housing Authority have been supportive. But when Beverly talked about life on School Street, what she said is underscored with tension -- the constant strain of "us versus them." She sees the police in particular as a constant source of grief. "Some of them are very prejudiced, even now," she told me. She claimed that a few officers harassed children and teenagers, and have even been known to swear at kids and shove them. She recalled, as if it were yesterday, a 1997 fight at School Street. Someone called Beverly to come outside, which she did, along with a visiting friend. Police officers were on the street, some of them shouting, and in the chaos that ensued, she said, a policeman knocked down Beverly's friend, an older woman who is legally blind. "I was freaked out," Beverly said. "The main witnesses were drug dealers, and they couldn't say anything." (The Yonkers police confirmed that the woman later filed a complaint, but said an internal investigation found no wrongdoing.) Beverly said she was infuriated when, shortly after the incident, she saw the mayor of Yonkers praise the police in a televised speech.

People who are not poor often casually ascribe their aches, pains and even more serious afflictions to "stress," but stress, if it is a killer, is a far more serious problem for people like Beverly. When middle-class people feel the police or other authorities treat them unfairly, they often have the resources to hire a lawyer and even effect change. But all too often poor blacks feel ignored when they complain about discrimination and abuse.

How might painful experiences like Beverly's be imprinted on the body? Laboratory animals suffer when stressed with electric shocks or when kept in isolated cages away from their peers, and they sometimes do develop symptoms that resemble human chronic diseases. But how does mouse stress compare to Beverly's stress? Or mine? Or yours? George Davey Smith would argue that it is entirely possible that the afflictions of poor people like Beverly are not due to stress, at all, but to old-fashioned deprivation: crowding, poor nutrition, lack of exercise and exposure to dirty air, germs and vermin. For a while, Beverly's family of 11 crowded into a two-bedroom apartment, until they were eventually moved into a six-room place. Once, money was so short that she begged the welfare office for food stamps. There is nowhere around School Street for kids to run around, Beverly says, except a concrete playground with a set of monkey bars. "Why can't they put up some swings or build a basketball court? You see kids using garbage cans as basketball nets around here." Until two years ago, an incinerator in the building spewed forth horrible fumes that may have contributed to the high rates of asthma on School Street. "When you got ready to polish the furniture, it was black with dust," Beverly recalled. "Every day. Now, how much of that was getting in our lungs? I've been in the hospital every year with acute asthma." The incinerator has been replaced by

a compactor, but as a result, life is a constant battle against roaches and mice, whose droppings also worsen asthma. Beverly told me that she recently caught three mice in one day. "I put them on the maintenance people's desk," she said. The elevators are always breaking down, which is hard on the elderly. Once she saw human feces in the hallway.

After talking to Beverly, I could only conclude that her life was full of many sorts of trouble, any or all of which might be harmful to health. If only it were possible to devise an experiment that would examine the effects of stress and deprived living conditions on the health of the poor. For nearly 10 years, the U. S. Department of Housing and Urban Development has been conducting an experiment called Moving to Opportunity that seems to be doing just that. HUD researchers wanted to see what happens to poor urban families who move out of neighborhoods like Harlem in New York, Roxbury in Boston or the South Side of Chicago and settle in better neighborhoods. They wanted to know whether moving would help children do better in school, and escape being drawn into crime when they reached adolescence. They also wanted to know whether their parents would climb out of poverty.

HUD did find that people's lives improved in some ways. For example, the children who moved to better neighborhoods in Baltimore did better on standardized tests, and adults there were more likely to get off welfare. But HUD's most remarkable early findings had to do with health. In Boston, poor children who moved to low-poverty neighborhoods were less likely to experience severe asthma attacks. Adults in New York who moved were less likely to suffer from symptoms of depression and anxiety than those who stayed behind, and adults in Boston were more likely to report that they felt "calm and peaceful." The HUD researchers who devised the experiment had not set out to study health, but their findings were so striking that they decided to expand their study to determine whether moving out of poor neighborhoods affected other aspects of health that they did not measure in the first round, including blood pressure, obesity and other factors associated with such chronic afflictions as heart disease, cancer and stroke, like smoking. Those results aren't available yet, but when I heard about the earlier study, I decided to conduct a small experiment of my own.

I wanted to talk to families, like those who had participated in the HUD program, who had recently moved out of the slums. Did the move affect their health? And if so, why? Did people experience less stress? Did they eat better food? Breathe better air? What might their experiences tell me about the mysterious miasma of contemporary poverty?

My investigation led me to Jerrold M. Levy, the general counsel of the Enhanced Section 8 Outreach Program, or ESOP, which helps low-income families move out of depressed, dangerous inner-city neighborhoods in Yonkers into middle-class areas. ESOP wasn't conducting any studies of these people, of course, but Levy was willing to put me in touch with 10 of the families he'd helped move. He had noticed that the people who moved out of dangerous neighborhoods seemed happier. "A few weeks after they've moved," he says of his clients, who are mostly single mothers, "they come into my office, and it's like one of those programs on late-night TV where they do the makeovers, you know? They have their hair done nicely, they're wearing high heels and makeup, it's like they're transformed. They have a new sense of self-worth and dignity. But will you see changes in their health? I don't think so." Depression and anxiety are major health problems that affect large numbers of poor people, so I thought I would be satisfied just to find people whose mental health improved. And I did find such people. But I also found that most people who moved gained far more than high spirits.

Of the 10 families I met, 9 had at least one member who suffered from a serious health problem before the move that required either medication or hospitalization. Of the 16 people in these families who had health problems, 12 told me that they felt better in significant ways -- either their symptoms were less severe so that they no longer required hospitalization, or they were taking less medication. Their health problems included severe asthma, diabetes, high blood pressure, liver cirrhosis and eczema. Emergency-room visits for the asthmatic kids virtually stopped, and some adults with high blood pressure or diabetes reduced the doses of their medications. This was hardly a rigorous scientific experiment. There was no control group, and I was not able to check medical records. Nevertheless, I was stunned by what people told me. These people felt better, and moving appeared to have made all the difference. If moving out of southwest Yonkers were a drug, I would bottle it, patent it and go on cable TV and sell it.

Juanita Moody is now 52. In the summer of 2001, she and her husband, William, moved to a middle-class section of Yonkers from a low-income housing complex on Nepperhan Avenue, where they lived for nearly 30

years. Juanita was crippled by polio when she was a teenager, and during an operation to adjust her spine, she was given a blood transfusion that contained hepatitis C. The virus lay dormant for many years. But two and a half years ago, Juanita's doctor told her that her liver was showing signs of damage and advised her to take interferon, a prescription drug for viral infections. When Juanita found out about the possible side effects, however, she refused. Today Juanita's liver tests are almost normal, suggesting that her hepatitis is not progressing rapidly. "The doctor said I was fantastic, in terms of enzymes," Juanita told me. I did not speak to Juanita's doctor myself, so I could not confirm her diagnosis, but Juanita seemed energetic, and other doctors confirmed that it is possible for hepatitis to slow its progression. In addition, Juanita says that since she moved, her blood pressure has fallen from 140/90, which is considered high, to 130/78, which is almost normal, and the dose of blood-pressure pills she takes has been reduced by half.

Juanita, a born-again Christian, attributes her improved health to prayer and to the new regimen she has maintained since she moved. She has become a health-food nut. Before she moved, her daughter told me, "everything was fried, fried, fried. Before she'd eat at McDonald's and stuff, but not now." Now she drinks fruit and vegetable juices, and her kitchen cabinets are full of natural remedies: vitamins C and E, zinc, magnesium, calcium, alpha lipoic acid and milk thistle, which she says is excellent for the liver.

Juanita says she began focusing more on her health after she moved. When she lived on Nepperhan, there were too many other things to worry about, including frequent robberies and killings in and around the complex itself. The building managers put up a fence to keep drug dealers out, "but the crackheads living inside the building gave the dealers the keys." The elevators were often broken, which meant that someone would have to carry Juanita and her wheelchair up and down three flights of stairs.

Juanita's new apartment is not in a luxury building. It's on a busy road, near two gas stations and a shopping mall, and has few amenities. But it is safe and has nice, leafy views. On Nepperhan, "it was stressful just to walk out of that place. You were always scared for the kids. . . . You wake up stressed, go to sleep stressed, you see all the garbage and the dealers. That is depressing. In a bad environment like that you say, 'What's the use of doing anything?'" Living in her new apartment building gives her a very different feeling. "It inspires you to do all you can - spiritually, health-wise, any kind of way."

It is well known that junk food can make anxious people feel better. Researchers from the University of California recently discovered one possible reason. In response to constant stress, the brain makes a hormone called corticotropin-releasing factor, which instructs the adrenal glands to manufacture stress hormones, including adrenaline and cortisol. These hormones cause a range of physiological changes that over long periods can be harmful. When people with high levels of cortisol eat sugary, fatty foods, fat is deposited in the abdomen. The researchers theorize that these abdominal fat cells can temporarily inhibit the brain from making corticotropin-releasing factor, reducing feelings of stress and anxiety. If this theory is correct, it could explain how the stress of poverty creates a biological urge to overeat, thus putting poor people at greater risk of obesity and its consequences -- diabetes, heart disease, stroke and certain types of cancer. Perhaps this explained why Juanita found it easier to change her diet once she moved out of the stressful atmosphere of Nepperhan Avenue. She admitted that doctors had been telling her over the years that she should consume less fattening food. "But they can tell you, and you don't do it," Juanita said.

Noemi, 31, moved with her two teenage children and her 76-year-old aunt, Raimunda, from Burnham Street in Yonkers to a better neighborhood in northwest Yonkers only three months before I met her in August. Noemi, who asked that her last name not be used, has had diabetes since childhood. Shortly after she moved, her doctor reduced her dose of insulin by three units. Noemi thinks it's because she feels less stressed in the new neighborhood. "Stress affects your blood sugar," she explained. "It makes your sugar go up so you need more insulin." She drove me from her new neighborhood of neatly mowed lawns, bushy trees and two-car garages to the place she used to live. "Look at the neighborhood here," she said, as we drove by industrial garages, boarded-up buildings and vacant lots. An enormous, dented, wheezing Lincoln car screeched by. "I had to be worried all the time, you know. Are the children gonna get hit by a car? Is something gonna happen? We've lived in neighborhoods with a lot of drugs, a lot of people getting killed. You'd read about it in the paper the next day and think: Oh, God! That's only two blocks from here."

Noemi's aunt Raimunda speaks no English, although she has lived in the United States for more than 15 years. She has high blood pressure and heart disease. I asked Noemi to ask Raimunda how she was feeling these days.

"She says her thing with the head is gone," Noemi translated. "Before she used to get dizzy, but not anymore. Not for the past couple of months." When I asked Raimunda why she thought the dizzy spells went away, she, unlike Noemi and Juanita, did not mention stress. Instead, she said she thought the improvement had something to do with diet. "She thinks the chicken is better here -- easier to digest," Noemi said. "But what she doesn't know is that since we moved, I still buy the chicken in the same place."

After meeting Noemi, Raimunda and Juanita, I began to see more clearly what Arline Geronimus, the University of Michigan researcher, was talking about. Perhaps the miasma that is killing the poor really is stress after all. Then I spoke to the mothers of six children who had severe asthma. Every one of them had significantly fewer and less severe attacks after the families moved out of southwest Yonkers. Reduced stress could be partly responsible -- stress can worsen asthma -- but it seemed clear to me a cleaner environment was also responsible. The children ranged in age from 3 to 16; they all moved out of southwest Yonkers and settled in different parts of Westchester. The mothers, who asked that their last names not be used, saw astonishing changes, and hearing their stories convinced me that the only way to deal with the staggering epidemic of asthma that afflicts 30 percent of children in some New York City neighborhoods is to clean up the rundown, roach-infested buildings where so many of these children live.

Carmen and her 4-year-old son moved to a middle-class section of Westchester in the spring of 2002. In Yonkers, her son would have severe asthma attacks every month and would have to sit for hours every day breathing through anebulizer. Since they moved, she says he has needed the nebulizer only twice. Two years ago, Monique, her 3-year-old son and 8-year-old daughter moved from Cedar Street in Yonkers to Peekskill. When they lived on Cedar Street, her son's severe asthma came complete with projectile vomiting. The attacks started just a few months after he was born, and they terrified Monique. She blames her former landlord. "There was no hot water for two weeks once, there were leaks in the roof, so it was damp all the time. Sometimes there was water coming through the roof, and mice playing in the living room," she says. "There were cockroaches everywhere, even in the refrigerator. The landlord did nothing until I called the health department. It was stressful having all those roaches around. You didn't know if they were crawling all over you at night." As soon as the family moved up to Peekskill, the boy's attacks became less severe. Although he is still on medication, the violent attacks and the vomiting have stopped.

Cockroaches and vermin do worsen asthma, and this might explain why Monique's son was so sick. But there could be another reason that so many children in poor neighborhoods have asthma, and why they get better when they move. In the past decade, rates of childhood asthma, as well as obesity and diabetes, have soared in the very neighborhoods that were worst affected by the crime waves of the 70's, 80's and 90's. One possible explanation, says Daniel Kass, a search scientist for the New York City health department, "is that asthma follows the crime epidemic, because it goes wherever people spend a lot of time indoors."

Poor parents, terrified that their kids will be killed on the street, tend to keep them inside, with the windows shut and the TV on, where they are constantly exposed to contaminants in indoor air, which some researchers believe can be as damaging as industrial pollution. Not only are sedentary, overweight kids more at risk for asthma, but kids with severe asthma tend to exercise less and are thus prone to obesity. Mothers trying to protect their kids from crime may not realize they are putting their future health at risk. As Mindy Fullilove, professor of clinical psychiatry and public health at Columbia University explained, "The best parents -- the people who are the most upright, the churchgoers, the most protective mothers-- keep their kids inside, and they are at the intersection of the asthma and obesity epidemics."

I thought of Trevor Jackson Jr., a 14-year-old boy with serious eczema who moved from southwest Yonkers up to Cortland Manor in northern Westchester two years ago. "This is a much better atmosphere," his mother, Dawn, told me. Their new apartment is in a large house with a wide sloping lawn surrounded by trees. "The kids can just go outside anytime. The little one wouldn't go to sleep when we first got here." He wanted to be outside all the time. In Cortland Manor, "kids have a better chance to grow," Trevor's father, Trevor Sr., says. "We see deer in the yard, woodchucks, otters, frogs. There's just life up here."

I was beginning to see that the problems of stress and material deprivation were inseparable parts of the contemporary miasma of poverty. But how did these neighborhoods become so unhealthy? New York City is one of the most segregated metropolitan areas in the country. Blacks, whites and other ethnic groups interact every day,

but to a large extent they live separately. At the same time, the city has also become more segregated by wealth, so that many black and Hispanic neighborhoods are also the poorest.

The Harvard sociologist William Julius Wilson has described how, thanks to the civil rights movement of the 60's, many middle-class blacks have been able to find jobs and housing outside traditional black areas, leaving behind the most impoverished, poorly educated people. This concentration of disadvantage -- racial, social and economic -- combined with the loss of many unskilled manufacturing jobs, is what Wilson says contributed to the many social problems associated with poverty today, including drug abuse, crime and single motherhood. Mindy Fullilove says that these trends contributed to widening health inequalities as well. As racial and economic segregation increased, health problems became concentrated in the most deprived areas, as if the miasma were condensing over them. Indeed, I wondered if the miasma might not turn out to be segregation itself.

In order to understand the health crisis among America's urban poor, Fullilove explains, you can't just consider what's going on now. "You have to look at the history of these neighborhoods" and think about the people who live there and what has happened to them in the past. "The history of each neighborhood will determine its pattern of disease. A city like New York suffers from an overlay of epidemics. "

In the 70's, 80's and 90's, poor minority neighborhoods throughout the country experienced a protean health crisis. Rates of some chronic and infectious diseases began increasing for the first time since World War II. Even older blacks who made it into their 60's, and who once had as good a chance of reaching their 75th birthdays as 60-year-old whites, began dying at higher rates.

Fullilove says that urban-renewal projects that helped create concentrated poverty, along with redlining -- discrimination by banks and insurance companies -- and public-service cuts in poor neighborhoods led to catastrophic changes in the way the poor lived, and destroyed the foundation that made poverty endurable. The migrancy of poor people, displaced by fires, evictions and other calamities, destroyed informal community mechanisms for caring for children and controlling the behavior of adolescents and young adults, and this made it harder than ever for the poor to cope. "It was like a massive refugee situation," Fullilove says.

At the same time, as the middle class increasingly campaigned for restrictions on cigarette and alcohol advertising, those companies spent more of their marketing dollars in poor neighborhoods. As Rodrick and Deborah Wallace wrote in their book "A Plague on Your Houses," politicians looked the other way when companies posted huge, colorful billboards -- depicting exuberant black people smoking cigarettes and drinking beer -- outside schools and churches in Harlem, Brooklyn and the South Bronx. Construction on central Harlem's first full-size supermarket did not begin until 2002, but in the 90's there were more than a hundred places where a child under 18 could buy cigarettes, including individual "loosies," which are cheap but illegal.

The wave of crime and drugs of the 80's and 90's has subsided considerably, and some once-grim urban neighborhoods are even prospering. But poverty has risen in many suburban minority enclaves, and the health problems of the poor have not gone away.

Much has been written about how such social problems as joblessness and drug abuse worsen health problems, but it is also possible that the converse is true. Both Beverly and Monica have lost jobs as a result of illness, and many sick people fall into poverty. Anne Case, a Princeton University economist, has shown that unhealthy young people are far less likely to succeed in school and find good jobs later on. Thus, illness can trap poor families in cycles of disease, death and poverty for generations.

Adam Karpati of the New York City health department says that even though we don't know what the miasma is, there is still a great deal we can do to improve the well-being of the poor. In the 19th century, it was not the discovery of germs that led to the greatest advances in public health, but a series of profound changes in the way the poor lived-- a virtual social revolution. Then, as now, health and poverty were inseparable from each other, and better housing, sewers, decent wages, better working conditions and improved nutrition saved millions of lives. Today much could be done to improve the environment and make life less stressful for the poor. The health department is working to reduce mold and roach infestation in public housing, as well as encouraging doctors and community organizations to address such problems as obesity, asthma and diabetes. These admirable programs, however, are modest in scale, and in the current fiscal climate, their financing is far from secure.

More ambitious changes are needed, but at present, our government is permitting matters to get even worse. Since 2000, millions of jobs have been lost, and nearly three million people have joined the ranks of the poor, who now account for more than 12 percent of the U. S. population and 24 percent of African-Americans. This means

fewer families will be able to move out of poor neighborhoods on their own. For now, the federal Section 8 program – which provides subsidies for people to pay for private housing -- is the only hope most people have of getting out of these neighborhoods, but even its future is in doubt. Possible budget cuts could mean thousands of Section 8 recipients will lose their vouchers next year, and in the longer term, Republicans in Congress hope to devolve the program to the states. This will almost certainly mean the program will shrink. Last month, moreover, HUD also suspended rental supplements that Jerrold Levy says have made programs like ESOP possible. "This will reinforce the ghettoization of poor people, " Levy says.

Rising unemployment and budget cuts will not only harm people's health. They will also cost Americans money. Take diabetes and asthma as examples. Around one million people succumb to Type 2 diabetes each year, with African-Americans, Hispanics and Native Americans most at risk. The bill for treating the nation's 11 million known diabetics comes to \$92 billion for medications and doctors' visits plus \$40 billion in lost productivity due to absences from work and premature death. The yearly bill for the nation's asthma epidemic is \$14 billion. As Beverly pointed out to me, shortsighted cuts, amounting to a few hundred million dollars, from the HUD budget mean programs to refurbish public housing, organize recreation for children and build playgrounds have been halted. The exterminator teams that used to come every month now come once every two months, and the roaches are flourishing as never before.

Whatever the miasma is that afflicts America's minority poor, it is at least partly a legacy of the segregation of America's cities. These neighborhoods, by concentrating the poor, also concentrate the mysterious, as yet poorly understood, factors that make them sick. You'd almost think this new miasma was caused by some sort of infection, because of the way it seems to strike certain neighborhoods and certain types of people. I recently came across a research article by Angus Deaton of Princeton University, reporting that white people who live in cities with large black populations have higher death rates than whites with the same income who live in cities with smaller black populations. It made me wonder whether the deprived, polluted, roach-infested, stressful conditions in which poor blacks live aren't affecting all of us, to some degree. And even if we never find out what the miasma is, this possibility should scare us into treating this as the health emergency it is -- if nothing else will.