

Asbestos

400,000 Miles of Drinking Water Pipes May Have Been Made With The Deadly Substance by Barbara Robson

The prospect is chilling: by best estimates, about 20 million people have had significant exposure to cancer causing asbestos on the job. Three hundred thousand Americans are expected to die of asbestos related cancer in the next twenty to thirty years. Now, the deadly substance is contaminating drinking water around the continent.

Asbestos is one of the most potent carcinogens known to man. Cancer now claims at least one life an hour among people who inhaled it on the job. As many as 200,000 wives and children of asbestos workers will also grow ill merely from washing asbestos laden clothes or being exposed at their homes. Many of these people do not know that they can [file a lawsuit](#) to combat the expensive medical costs associated with lung cancer.

The American Congress passed legislation in 1984 to control asbestos hazards in the building materials of 31,000 schools attended by some 13 million children. And asbestos is present in millions of houses, apartments and buildings.

Now, alarming levels of invisible, needle like fibers of asbestos have been discovered in tap water. Much of it comes from an estimated 400,000 miles of asbestos cement water pipe. Enough to circle the globe sixteen times. Buried beneath hundreds of North American cities.

Yet scientists and government officials can not agree on how serious this hazard actually is, or even on what levels are acceptable. "We believe asbestos breathed is a definite carcinogen", says Dave Ryan, a press officer for the Environmental Protection Agency, "but as far as asbestos in water, the jury is still out".

The people of Woodstock NY know the worry first hand. In late 1985, so much asbestos was in the tap water that it clogged the town's pipes. Health officials warned citizens not to drink the water, to limit showers and to keep asbestos contaminated water out of humidifiers.

Tara Roberts, a thirty one year old business woman and mother, is the leader of the citizen's group Asbestos Free Woodstock. When she first heard Woodstock's health warning, she thought of her one year old daughter, who had had a cold. On her pediatricians advice she'd covered the crib and put a vaporizer beside it.

"I realized that the vaporizer was probably putting asbestos into the air she breathed," Roberts grimly recalls. "I was horrified." For over a year, she has hauled gallons of clean water home, taken dirty clothes to a laundromat that uses well water and showered at the houses of friends with safe water.

Roberts states the 1980s message from the famous town of Woodstock: "Any community with asbestos cement pipe either has a problem or will soon have one."

In the past decade, asbestos contamination in drinking water has been discovered in communities throughout North America. In 1982, Department of Health and Human Services survey of 538 US cities showed sixty five percent of them had some asbestos in their water. Almost nine percent had levels that health experts say should have signaled concern.

In Connecticut, a state that banned installing new asbestos pipes seven years ago, 900 miles of asbestos laden pipe is still in the ground, supplying drinking water for over 600,000 people. The Detroit News informed 4 million water drinkers that 1100 miles of the pipe that lay beneath them showed more than 3 million fibers in a quart of tap water.

Asbestos cement water pipes may be anywhere in North American, from Winnipeg Canada to Texas, and, depending on its condition may cause people to swallow from a few hundred to hundreds of millions of fibers every day.

Dr. Philip Landrigan is the director of Environmental and Occupational Medicine at the Mount Sinai School of Medicine in New York. "Houses built between 1950 and 1980, when asbestos cement pipe was in vogue have a good chance of using water from these pipes, but on one is certain as developers records are imperfect and good data is incomplete."

Unfortunately all too little is being done. Water utilities typically deny any risk for fear of liability. Occasionally the utilities even deny they used asbestos cement pipe. Two decades ago, asbestos cement pipe producers, including former industry giant Johns-Manville, attempted to fix the problem. With Food and Drug Administration approval, they sprayed a vinyl liner inside asbestos pipe and subsequently sold miles of treated pipe throughout New England. A few years ago, tetrachloroethylene, a chemical known to produce cancer in test animals was found to be leaching from the vinyl lining into the water. By 1980 when Manville finally took its vinyl lined asbestos pipe off the market, 1000 miles were buried in New England and New York.

Asbestos cement pipe producers paid for reports that advised water utilities to treat highly acidic water flowing through their pipes. Acidic water can cause the cement to disintegrate, which can result in the release of asbestos fibers.

On almost all fronts denial of the asbestos hazard in tap water seems to run deep. In ostrich like fashion city officials seem to be pretending that because they can't see the asbestos fibers in the water, little need be done. Winnipeg, a prairie city of over 600,00 is a case in point.

Sixteen years ago, Dr. Francis Konopasek, a physics professor at the University of Manitoba studying asbestos levels in wine and beer wondered if the deadly mineral might be making its way into Winnipeg's drinking water. Upon inquiring he was told, incorrectly, that asbestos pipe was only used to carry sewage, not water. In 1979, a Canadian government report showed that Winnipeg's drinking water was indeed tainted by asbestos. The city had almost 400 miles of asbestos cement pipe in the ground for nearly half a century. Over the next few years Winnipeg tested asbestos levels in its drinking water. In 1983, the year before sampling was stopped, a quart of Winnipeg drinking water contained 12 million fibers

In the winter of 1986, facing public outcry, the city finally banned further installation of asbestos cement water pipe. But it also brought in Joseph Cotruvo, director of criteria and standards in the EPA's office who gave a different view of the risk. "A multi million dollar study found the weight of evidence is slight that ingested asbestos causes cancer". Not surprisingly, environmentalists were unconvinced.

Unfortunately industry and government officials have been able to hide behind the fact that no adequate studies exist to measure the debilitating effects of drinking asbestos contaminated water. Dr. Irving Selikoff, the world's leading expert on asbestos related disease says that there are sound scientific reasons to suspect a cancer risk from asbestos in drinking water.

In November of 1985 the EPA proposed a nationwide standard for asbestos in drinking water. It stated that consumer protection was needed only when more than 7 million fibers per quart were found, and only when those fibers were long, which means longer than ten microns. In other words the EPA was assuring everyone that hundreds of millions of fibers shorter than ten microns were dandy to swallow!

To get to that dubious position the EPA shunted aside its own 1980 estimate of risk, as well as the advice of its own science advisory board and the opinion of the National Research Council. Instead it turned to a single animal study showing that asbestos Feb. in pellet form to rats was barely carcinogenic.

The author of that study, Ernest McConnell of the National Toxicology Program has acknowledged his surprise. "We would never regulate fibers longer than ten microns, based on my asbestos findings".

According to Mount Sinai's Dr. Landrigan, the EPA is misguided in its attempt to pretend that the short fibers are benign. Furthermore, the Natural Resources

Defense Council, a group of scientists and lawyers with a strong track record in fighting for clean water supplies, charges that the EPA is allowing a risk 10,000 times greater than is prudent.

Also in November 1985, the EPA officially conceded that humidifiers could add to the hazard posed by asbestos contaminated water.

In drinking water the cancer risk seems to depend on the amount of asbestos swallowed. When you take a little asbestos and send it out to other parts of the body no one site is going to have very much, therefore the risk theoretically should be low. Asbestos has however, one very dangerous quality, as it accumulates in the body; the microscopic fibers lodged in tissues can remain like little time bombs and cause cancer years later. Since asbestos exposure is cumulative, young people are in particular need of protection. "Adults have three or four decades to develop cancer after exposure", says Dr. Landrigan. "The kids have six or seven. this means that a smaller dose of a carcinogen is as dangerous to the kids as a larger dose of it is to adults".

Controlling asbestos so that standards are met is critical. In Woodstock, pipes crumbled so badly that the proposed standard was exceeded. In one 1985 sample, 300 million fibers of every length were found per quart.

As thousands of other North Americans become suspicious of what level of asbestos may be in their drinking water, the big question is how to take preventive measures. At the very least, water districts should be required by law to tell consumers what type of pipe transports their precious commodity and before major problems erupt they should be required to test their water. If necessary districts should be required by law to quickly remove the pipe, just as schools have been required to remove asbestos pipe and insulation/tiles. Failure to do so dooms millions of people to become test animals in a massive biological experiment involving a known carcinogen.

: Barbara Robson was a reporter at the Winnipeg Free Press in Canada when this investigative report was first written and published in U.S February 1987