Health Risks with Insulation

Insulation may pose some health risk - especially loose fill-type insulation, which can shed fibers into the air. Mineral and fiberglass insulation may have possible carcinogens, and even though cellulose fiber is relatively safe, it still contains borates and sulfates that could be potentially irritating. For these reasons, consider the best alternative; Polyester Poly batts.

POLYESTER - THE GOOD STUFF
Recycled No. 1 Plastic (PET) batts.

PET is the material from which drink bottles, carpeting and even clothing are made. PET batts can be used in the same manner as fiberglass batts: hang, staple or place them any way you like.

A recent study reports that of plastic (PET) items, almost 1 billion wind up in the countries garbage every year. That's **3 million** items **EVERY DAY**.

So it's good to know that **Polyester Batts** steps up as a solution to excess since it is made entirely from recycled, post-consumer product.

The vermiculite risk hits home

Local insulation remover worries about a growing, deadly asbestos problem

Thursday, August 24, 2000

By CAROL SMITH
SEATTLE POST-INTELLIGENCER REPORTER

Christopher Ladera has been vacuuming insulation out of attics for 12 years without realizing he may have been exposing himself to deadly asbestos.

Ladera, whose company, EnviroAire, specializes in residential insulation removal, does about 700 homes a year in the Seattle area and runs into vermiculite insulation at least three or four times a month.

Gerardo Soriano of Industrial

Vacuuming cleans up insulation in an Auburn apartment damaged in a fire. An assistant U.S. surgeon general warned earlier this month that handling of vermiculite insulation, some of which contains asbestos, can pose a substantial risk to workers or homeowners.
Scott Eklund/P-I

An assistant U.S. surgeon general warned earlier this month that even minimal handling of vermiculite insulation could pose a "substantial risk" to workers or homeowners.

"I didn't think it posed any threat to us," Ladera says. "Now I think I might have been exposed."

Ladera, 38, once worked in a law firm that handled asbestos cases. He knows what exposure to asbestos can mean.

"Yeah, I'm worried," he says. "I know the end results can be really bad."

He's also worried about his family.

"I share my laundry with them and there's dust everywhere on my clothes," he says. "I have a 5-year-old and 12-year-old and it could be possible I've exposed them to asbestos."

Ladera had no way of knowing the vermiculite insulation, which came from a now-closed mine in Libby, Mont., and was marketed as Zonolite Attic Insulation, contained asbestos.

Hundreds of workers and family members in Libby are sick or have died from asbestos-related diseases.

Ladera, thousands of homeowners and other workers may also have been exposed while doing home remodeling or other things in attics.

The Environmental Protection Agency yesterday said it plans an attic-sampling program in New England as a way to estimate the scope of the problem.

"Not all vermiculite contains asbestos, but at this point we are unable to determine or predict which does and which does not," said Stephen Johnson, deputy assistant administrator for the Office of Prevention, Pesticides and Toxic Substances in Washington, D.C.

Methodology for the sampling program is still being worked out, and the decision on making the program nationwide is pending, he said.

Ladera, meanwhile, has contacted the EPA's regional office for information on how to protect himself, his workers and homeowners.

The EPA and the Washington state Department of Health advise that vermiculite in attics be left alone. If it must be disturbed, the work should be done by a professional asbestos-abatement contractor, said EPA Region 10 spokesman Bill Dunbar.

Experts can be located by consulting the yellow pages under Asbestos Consulting and Testing. However, the EPA cautions consumers that testing their attic may not yield conclusive results because asbestos may be present in one part, but not another.

"It's better to act as if the vermiculite is contaminated and take appropriate precautions," Dunbar said.

Asbestos is dangerous only if the microscopic fibers are inhaled. Undisturbed insulation does not release airborne fibers, so the health risk is minimal.

Vermiculite, the only type of insulation containing asbestos, has a distinctive look. Unlike rock wool, or fiberglass, which have a fibrous appearance, vermiculite looks like small, shiny accordian-shaped pellets. Cellulose, another common form of insulation, tends to be gray and looks like ground up newspaper. Zonolite attic insulation was used from the 1950s through the mid-1980s.

An estimated 53,500 homes in Washington state contain vermiculite insulation.

Nationally, estimates range from about 2.5 million to 16 million homes.

The EPA is in the process of its own assessment of how many homes may have asbestos-tainted insulation, the EPA's Johnson said.

The agency has contacted the vermiculite mines and processing plants where ore was made into insulation to try to find where the vermiculite went, he said.

The state Health Department also advises people who may have had a substantial exposure to vermiculite dust to notify their physicians.

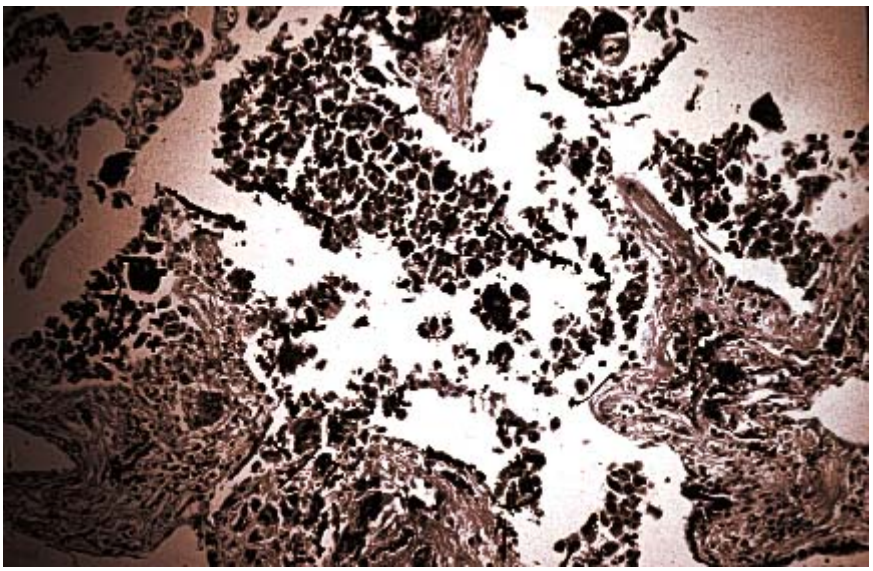
"It's possible they will want to do a baseline chest X-ray," said Tim Hardin, manager of the indoor air-quality program for the health department.

"We definitely like to limit exposure to asbestos," said Juliet Van Eenwyk, state epidemiologist with the Health Department. "We urge people to aim on the side of caution. If they have little kids, don't allow them to play in the attic area."

She also cautioned smokers who may have been exposed to the insulation to stop smoking.

"There's a synergy between smoking and asbestos," she said. "We would urge everybody to stop smoking, but if you think you've been exposed to asbestos and you smoke, it's like playing Russian roulette with lung cancer."

Asbestosis



ASBESTOSIS, MICRO - There is interstitial fibrosis around respiratory bronchioles, alveolar ducts and alveolar walls. This causes ectatic alveolar spaces enclosed with fibrous walls. These changes are similar to other causes of diffuse interstitial fibrosis except in asbestosis, asbestos bodies or ferruginous bodies are present (cannot see asbestos bodies in this image).

One Family's Story

By Greg S. Darlin

This is the story of the physical, emotional and financial torment my family and I suffered because of fiberglass contamination. The threat of serious future health problems loom over us, particularly our little boy and girl.

DECEMBER, 1995
Our furnace would blow hot air, then ten minutes later, blow cold air. I complained to management it was creating an unhealthy environment for my family, especially since Mimi, my wife, was pregnant. After five weeks of complaints, they replaced the furnace. It worked and I didn't give it any more thought.

JANUARY, 1996
I rushed Mimi to the hospital because she felt dizzy to the point of passing out. Her OBGYN feared Mimi would lose the baby. A nurse connected her to an IV and we stayed more than four hours before they discharged her. All during her pregnancy, Mimi had problems, much unlike her pregnancy with Michael.

JUNE, 1996
On June 15 Danielle was born, by Caesarian. Two days after Mimi's discharge, she was rushed back to the hospital with a kidney infection and acute edema. She came home two days later, with plenty of antibiotics. Never before did she have any problems with her kidneys. Again, we chalked it up to a complicated pregnancy.

JULY, 1996
We started to itch. We thought we had fleas, though we don't own any pets. It seemed logical. The summer was wet, we lived on the ground floor, and the woods

were 50 yards from our front door. The itching got worse and I called management to ask whether anyone else had complained about fleas. No, they stated, but if the itching continued, they would fumigate the apartment.

By the end of July, the itching was unbearable. Michael had rashes on his stomach. Danielle constantly scratched at her eyes; her breathing became labored and congested. Mimi started feeling dizzy and had small bumps on her scalp. I itched and felt dizzy. A fitness buff, I worked out with weights and jogged four miles a day, three to five days a week. I noticed a marked decline in my aerobic capacity. That is not supposed to happen at age 37. We attributed our symptoms to fleas.

AUGUST, 1996
Michael's health got worse. Dark circles formed under his eyes, he lost his appetite, lost about seven pounds, complained of being tired all the time, his legs ached, his ears and nose "tickled" (as he described it), and he started losing coordination. He even fell asleep at the dinner table. Mimi and I became distraught, thinking he might be showing early signs of MS.

Mimi took him to the doctor, where they performed blood tests, throat cultures etc. No problems were identified. Mimi kept telling me something was wrong the doctors weren't finding. I thought she was overreacting, yet I itched so bad I didn't want to work, felt dizzy and started to get depressed... a first. All of us itched and barely slept.

SEPTEMBER, 1996
During the first week of September, management fumigated the apartment. It didn't help. Our symptoms became worse, requiring more trips to doctors, more bills and more worries. Our personal doctor prescribed Quell, antihistamines, lotions and more. He was treating us for parasites! We even bought Nix at the store. That was very embarrassing; I knew most of the people at the check-out line. Nothing helped. Most frustrating was not being able to identify the cause. The naked eye can see fleas and lice. After a process of elimination we knew we didn't have lice, scabies, fleas or crabs.

The logical answer was mites. We contacted many sources, including the Florida Department of Agriculture. All evidence pointed toward the chigger mite: which can't be seen with the naked eye, thrives in moist climates, and whose bite inflicts its hosts with many ills.

OCTOBER, 1996
We thought we could see light at the end of the tunnel. We arranged for management to fumigate the house a second time. The exterminating company refused to spray, saying Maryland law required them to be able to see the pests. Mimi and I argued. He left, made a phone call and came back, saying he would perform a "general" fumigation and spray the building's perimeter. Within two days, they sprayed and fumigated the apartment. We were told it takes a few days for the chemicals to kill any parasite. A week later, we still itched, and decided to steam clean the carpets ourselves, to rid our apartment of all the chemicals.

While we thought we had chiggers, we furiously cleaned and washed ALL our clothes daily. We scrubbed the floors, the bathrooms... everything. At night, just before going to bed, we would rub ourselves down with Avon "Skin So Soft,"

because we heard it repelled bugs. In the morning we would bathe, reapply the lotion, and then put the clothes we were to wear in the dryer for 20 minutes, thinking the heat would kill any parasite on them. Nothing worked. We still itched and felt sick.

A week after the second fumigation, I told the apartment manager the spraying didn't do any good; we needed someone to help us. She stated management could do no more; they were referring the matter to their law firm. I begged her for help. When I said I intended on calling the County Health Department, she replied, "Do what you have to do."

The State and County Health Departments didn't do anything, until I mentioned we had mice, which may have made their way into the ventilation system. Whenever we turned the heat on, we itched, I added; maybe the mice had chiggers on them. They had to come out and inspect.

NOVEMBER, 1996
By the second week of November, the itching was so bad we stopped sleeping in the bedroom. The four of us slept in the living room, on blankets. The routine was:

1. Douse our bodies with Skin So Soft.
2. Put the blankets and sheets in the dryer for 20 minutes, along with our pajamas.
3. In the morning, do the whole thing all over again.

Deprived of sleep, Mimi and I started to really get on each other's nerves. I couldn't function at work. I had converted the den into a private office, so most of my work I did there, unless I had to meet clients, which I basically stopped doing because I didn't want to spread to them what I thought I had.

Mimi started to get lesions on her scalp. At the suggestion of our family doctor, we took her to the hospital for a thyroid test, thinking maybe an imbalance was the culprit. Wrong. After that, all of us went to a local dermatologist. He couldn't explain the sores on Mimi's head. All he could say was that whatever it was affected the whole family. He wouldn't do a biopsy.

One morning, without a notice, a Baltimore County inspector, along with the property manager, the owner of the pest control company, and the head of maintenance, knocked on our door. We let them in. The inspector opened a vent in the hall bathroom, and saw mouse droppings. The droppings were old, he said, because they were hard. I laughed, adding, "Any droppings, human or otherwise, will be hard after weeks of having hot air blowing on it." The pest control man started giving orders: all parties would wait until I sent slides of what we thought were chiggers (but ended up being fiberglass particles), to the oncology department at the University of Maryland. Within moments, they left.

Mimi and I knew that when we turned the HVAC on, we itched worse. That night, a light bulb went off in her head: if Dorothy, the property manager thought we had chiggers, surely she would not have leaned against our cloth sofa. Why was Dorothy so uneasy when the inspector opened the vent? Mimi saw the glistening particles.

We opened a vent, and I wiped my fingers inside. When I examined my hand under the light, I saw shiny, yellow particles. Mimi called her uncle, who has been in the

construction business for years. He told us to shut off the HVAC system and tape all the vents... what was blowing through was fiberglass. Immediately after the phone call, I taped everything, got on the Internet and searched for fiberglass contamination. It led me to Bob Horowitz and the Victims of Fiberglass.

We were horrified, but we finally knew to what we had been exposed for months. The following day, I started interviewing Certified Industrial Hygienists (CIH) to test the HVAC system. Finally, I found forensic engineer Steven Rogers. Then, I bought space heaters to warm our 1,750-square-foot apartment.

An amazing thing happened once we shut off the HVAC system: our itching and symptoms were gone after one week! All of us looked and felt better, especially Michael.

DECEMBER, 1996
Steven Rogers came, accompanied by a CIH, and started inspecting our apartment. To be thorough, he had to get into the furnace room located on our patio. Only management has the key, so he called the rental office, introduced himself and told them his intentions. Within five minutes, the head of maintenance arrived, and allowed Steve to examine the room... under escort.

Steve found fiberglass dust in the ducts and furnace returns, building code violations and mold. He advised us to decontaminate the unit with a HEPA-filter vacuum and get out.

On Dec. 2, I sent my landlord a certified letter, telling him I intended to file for a Rent Escrow Hearing. On Dec. 5, I filed. On Dec.10, Mimi and the kids moved out. Though we had done everything Steve Rogers advised, she didn't want to risk further exposure to our children. I stayed because all my computer and phone systems were in my converted office. Alone, separated from my family, I decided to fight back as hard as I could.

I wrote to President Clinton, Maryland's two U.S. Senators, the Governor, his aides, the head of the Maryland State Health Department and county officials. I hoped to make the politicians answer my letters and create enough stink so that political favortism couldn't bury it. My hopes were crushed. Whenever I mentioned my landlord's name, most backed away. However, I did get a response from the Governor's office, and that forced the County Health Department to come back out.

JANUARY, 1997
I received in the mail a notice from the Circuit Court to appear Jan. 21, as the plaintiff in the Rent Escrow Hearing.

On Jan. 9, totally unannounced, two inspectors came to my apartment with management. They stayed for an hour, concentrating on mold, insisting our symptoms were due to anything but fiberglass. Before they left, I pointed out the building code violations in Steven Roger's report.

The week before my court date, more people connected with my landlord appeared. Along with the property manager came the owner of the heating and plumbing company which did all the work on the property. An hour later, the maintenance staff cleaned the mold with bleach and removed debris from the furnace room.

On Jan. 19, I was greeted at my door by my landlord's attorney, an Industrial Hygienist, the property manager and the head of maintenance. I let them in. I asked the Hygienist if he was certified. He told me he was not. I asked if he intended to test the HVAC system. "Yes," he replied. When I asked what standards and protocols he would use, he gave me a blank look. Meanwhile, everyone was parading around the apartment. The attorney tried to convince me the landlord really cared; his demeanor turned from pleasant to arrogant when I disagreed. I called my attorney and Steven Rogers. Within five minutes, Steven Rogers called back and asked to speak to the attorney, whom he knew. He told the attorney to get out because I was given no notification he would be there, denying me the right for my attorney to be present. The attorney refused to leave, so I let him stay, under protest. But I did take out my video camera and started recording. All left moments later.

On Jan. 21, my attorney and Steven Rogers accompanied me to court. The landlord's attorney came in with seven witnesses, none relating to the case. He gunked up the court, telling the judge he needed at least four hours to hear the case, asking for a special court date. My lease was up Feb. 1. A court date afterward would be moot.

FEBRUARY, 1997
We now live in a different community and are trying to put our lives back together. We know others from our old community have suffered from similar problems. We intend to sue, and have no intention of settling or signing anything out of court. If we can save the life of just one person, all our pain would not have gone down the drain.

Thirty Years Installing Fiberglass Leaves Texan a Pulmonary Cripple

By Robert Horowitz
The similarities between Robert Lee "Red" Randolph, and Clarence Borel are portentous. A long-time asbestos worker, Borel hired an attorney in 1970 when breathing became difficult. The 1973 legal judgment in Borel's favor was the first among thousands which brought the asbestos industry to its knees, caused the bankruptcy of the giant Johns Manville Corp., and led to a near-total ban on asbestos in the United States. Borel's attorney, Ward Stephenson, founded the law firm in Orange, Texas, where Paul Henderson is now a partner. Henderson is representing Randolph in what could be another watershed case.

The same companies which made the asbestos products that killed Borel made the fiberglass insulation which Randolph used six days a week, sometimes for 12 hours a day. Randolph cut and installed fiberglass batts, pumped and sprayed loose fiberglass wool into attics, opened packages of fiberglass and unloaded trucks and trains full of the synthetic, respirable mineral fibers.

Randolph led an honorable, modest life in and around Lufkin, Texas. He was active in his church and in the local Knights of Columbus, and he enjoyed spending time with his wife and three children. Randolph left high school in 11th grade to work, and for most of his 30-year career as a fiberglass insulation installer, he took home $178 for a 50-hour-plus work week. He loved work, and said he would like to work to age 90.

Now the sixty-year-old Texan can no longer walk to his mailbox without stopping to

catch his breath. Henderson calls him a "pulmonary cripple." Randolph was diagnosed with obstructive lung disease and fibrotic lung disease caused by inhaled fiberglass. The Texas Workers' Compensation Commission adjudicated him totally and permanently disabled because of his condition, and pay his medical bills and a weekly cash stipend.

Randolph has sued the United States' three largest fiberglass manufacturers, Owens Corning, Manville and Certainteed. The case is strong, said Henderson, because Randolph was a hard-working family man with no known exposure to asbestos or any other industrial chemical, and he did not smoke cigarettes.

Randolph had only three employers over 30 years installing fiberglass. He says his employers never warned him fiberglass might be hazardous, and he was never offered a respirator. Fiberglass salesmen came by frequently to take orders. Red Randolph liked to chat with the salesmen, but the salesmen never inquired about Red's work practices or informed him about any potential hazards associated with the products they sold.

Red Randolph never wore a respirator. He knew fiberglass left a bad taste in his mouth, so he chewed on the end of a cheap cigar in order to drown out the taste.

Early in 1993 Randolph noticed a shortness of breath. That prompted him to see a doctor, and that was when he learned-for the very first time-the hazards of breathing respirable glass fibers. In March, 1993, he could no longer breathe well enough to work.

Since then, Randolph's condition has deteriorated; he now uses inhalers frequently and carries a portable oxygen tank. According to Randolph's deposition for the 128th Judicial District in Orange, Texas, doctors are doing the best they can, but only make him "halfway comfortable." He no longer goes to church or participates in the charitable works of the Knights of Columbus. He can no longer work around his home, and relations with his wife are not what they used to be.

"I'm not able to go out and see nobody," Randolph said in his deposition. "I wake up in the morning, take a bath, sit down and watch TV, and that's about it for the day. And then, if I walk anywhere, I go to my mailbox, right back into the house, and that's it."

Randolph's problems seem compounded at night, because, as he told the court reporter and the nine attorneys for the mineral fiber industry present at the deposition, it is nearly impossible for him to breathe when laying down.

Randolph: "I can't sleep at night... When I lay down at night, I have to sit up straight in order to breathe. And they must have got me a hospital bed here about a month ago where I can sit up straight so I can sleep... rest a little bit better. And, I get on my knees. I sleep on my knees at night."

Henderson: "How do you sleep on your knees, sir?

Randolph: I get down on my knees with my head down, and that kind of relieves something in here so I can breathe a little bit. That lasts about an hour... forty-five minutes."

Randolph identified fiberglass insulation products from Owens Corning, Manville and Certainteed as insulation materials he used throughout his career, pretty much in equal amounts. Attorneys for all three firms quizzed Randolph extensively during the deposition about the appearance of the packaging materials, the color of the insulation and his habit of using cigars to drown out the taste of fiberglass.

Fiberglass industry attorneys attempted several lines of questioning to link Randolph's ailments to sources other than fiberglass. They asked if his commercial insulating experience included any work in power plants or the nearby Eastman plant, but it did not. Owens Corning attorney Jeff Mundy pursued a ridiculous line of questioning about remodeling done in the Randolph's home decades ago.

Mundy: Did they come in and cut out holes in the wall?

Randolph: No, they did not.

Mundy: Did they come in and put in new drywall?

Randolph: They did.

Mundy: Joint stuff?

Randolph: That's right.

Mundy: Did you help with that at all?

Randolph: No, I did not.

Mundy: Pretty messy when they remodel that stuff?

Randolph: It wasn't that messy, because they cleaned up as they went.

Mundy: When they cut the drywall, that can be dusty, true?

Randolph: Yeah, but I wasn't there.

The case contains novel medical and legal issues, noted Attorney Henderson, so it is impossible to predict when it may go to trial.

Leaky Ducts Fill House with Fibers; Youngsters Contract Lung Disease

By Robert Horowitz

Problems affecting Kathy Markel, her two children, her parents and her sister started in 1992, when Knauf fiberglass was blown into the parents' home near Tampa, Florida. At the time the insulation was installed, a contractor used a plaster-like substance known as mastic to seal the duct system.

Soon after, everyone living in the home began noticing a strange white dust, which was persistent even after cleaning. The children, then aged 2 and 4, became sick, as did their grandparents and Mrs. Markel's sister. Kathy and her husband were living in a nearby apartment, and left the children with their grandparents for prolonged periods while the couple worked.

The children suffered many infections of the respiratory and sinus systems, severe irritations of the

skin and eyes, and a persistent, dry, barking cough. Occasionally, the coughing of family members became so bad it caused blood in the saliva. That was accompanied by some glaring psychological changes in the house occupants, noted by Kathy.

"I thought their behavior was really weird," she recalls. "Everyone was acting really fatigued. Emotionally, they all seemed worried. Everybody lost weight."

After eight months, the house was so dusty they called the contractors back. The technical staff told the Markels the mastic did not hold, that fiberglass was entering the living area through the heating/air conditioning system, that the system was creating a venturi which was sucking in the fiberglass, and that the system was contaminated. They sent the mastic team back in for another repair attempt. After spending about one day trying to fix the system using mastic, the contractor acknowledged the system was beyond repair, and agreed to replace the system at no cost to the Markels.

The Markels hoped this meant the end of their problems, but two weeks after the work was done, it seemed the dustiness was as bad as ever. This time the contractor would not agree to examine or repair the system.

Although the contractor told the Markels it had replaced the entire heating/air conditioning system, said Kathy, in fact they had left some 25 feet of the old, contaminated ductwork, which recontaminated the new system.

The Markels began looking for a cleaning company which would be able to clean the ducts and remove all the fiberglass from their house. But the price for a complete job was more than $10,000, which the Markels did not have. They considered getting a loan to have the work done, said Mrs. Markel, but since nobody would guarantee the house to be clean when they were done, opted against that. Also, the $10,000 would not cover the cost of replacing the contents of their home.

"We were in a no-win situation," she says.

A vegetarian trying to raise healthy children, Mrs. Markel became increasingly despondent. Both of her children were diagnosed by a physician as having reactive airway disease. The doctors called an environmental services company to the Markel's house to test the air. According to Kathy, they reported people should not be living in the house.

Neither child had breathing difficulties before their year-long exposure to fiberglass insulation, according to Kathy Markel. They still cough a lot, both use inhalers like any asthmatic. The Markel children also use a nebulizer at their home, sort of a hand-held humidifier which dispenses a medicated mist.

Of course, Kathy worries about the cancer issue and what problems her children may have in the future. At this point, however, she does not want to put her family through a trial. Her parents are still working with the contractor to fix the home, and are finally getting through to the principals.

"Everybody can't be bad. They're working with us. The problem is not fixed, but we trust this gentleman," said Kathy Markel. "We just want it fixed. The papers show that they goofed. They should fix their mistakes. We don't want more than we lost. "

The children no longer spent much time indoors when they visit their grandparents. Cleaning only seems to stir up more dust. Kathy's parents and her sister continue living in the home, and suffering respiratory ailments, allergy-like symptoms and skin irritations. According to Kathy, her parents are "physically ill and emotionally drained."

Family's Woes Began With an Itch

By Robert Horowitz
The family and the events in this story are real. The names and the location have been changed at the family's request.

When Lou and Mary Glass bought their new home five years ago in a suburb of a major Southwestern U.S. city, it seemed the American Dream was within reach. Three months later, Mary gave birth to a baby boy.

Like many other working parents, Mary was anxious to get back to her job in the medical profession. But problems soon beset the family. Mary noticed the house was always dusty, no matter how many hours she spent cleaning. The dust glimmered in the light, like glass. Mary noticed she could not wear her contact lenses in the house, it was too irritating.

Mary's skin itched. Her constant scratching turned irritations into open sores and lesions requiring medical attention. This was particularly vexing, because Mary never even had acne as a teen; her skin was unblemished. The extreme itching made Mary feel like feeling bugs were crawling on her. But the family dog had no fleas. The veterinarian examined some of the pinkish tufts of dust Mary brought in with a powerful microscope. They were not insect cocoons, he said, they looked more like glass shards.

When Mary went to doctors, they could find no reason for her itching. They suspected she harbored some feeling of inner dirtiness; perhaps related to giving birth. The dermatologists sent Mary to a psychiatrist, who promptly put her on Prozac, an anti-depressant, as well as tranquilizers to stop her from scratching so vigorously.

Being heavily medicated was a new and unpleasant experience for Mary. Soon after, she wound up at the local hospital emergency room with the first of many panic attacks. The doctors never really considered a physical cause for Mary's ailments, despite anything she might have said.

"The doctors just totally ignored me," she said. "They just patted me on the head and said 'You just need to keep taking your Prozac.'"

Doctors- including the surgeon for whom she worked-figured Mary's hormones were out of balance. Her employer needed someone steady and reliable, not what Mary had become, so he fired her.

"I was a lunatic. I admit it," she said. "I felt like I had bugs crawling on me for five years of my life."

When Mary was out of the house, she felt better. Convinced something was wrong with the house, Mary spent nearly every waking hour cleaning, making phone calls and looking for the answer. She was seeing three different skin doctors, as well as a therapist who had taken her off the Prozac. But she was still subject to the panic

attacks which left her, literally, breathless.

"The more I would panic in the house," she remembered, "the more I was breathing in."

Her phone calls; to the EPA, to the county health department, to anybody who might be able to help, became more urgent. She contacted the company which built their subdivision. Ultimately, she invited the vice president and his family to spend the night in the house, an offer which was declined.

Professional home inspectors and exterminators blamed the bewildering maladies on itch mites and even scabies. Lou, who was not home all day furiously cleaning like Mary, experienced skin rashes and was treated for scabies (which he did not have).

"We had people out here who couldn't figure out what was wrong, but none of them could stay in the house more than a half an hour," said Mary. "They would stand there and say, "Something's wrong here, but we don't know what it is."

The symptoms became markedly worse during the long, hot summer, when the air conditioning ran frequently.

"You turned the air conditioner on, I felt like I was getting sandblasted," Mary said.

Meanwhile doctors, therapists and prescriptions were draining their bank account. Also, Mary needed a constant supply of new clothes, because they became itchy after one wearing. The Glass' spent their last $1,000 of savings for a remediation company to clean the house. After shampooing the carpets, Mary said, the two workers had to leave because they stirred up so much dust.

The family, who had almost grasped into the American Dream, now just dreamed of a "normal" life. When the newborn son starting having rashes just like mom, Mary realized stronger action was critical.

Mary knew the house's persistent dustiness was the key to the problem. She stuck clear tape over the plates covering the air conditioning ducts, which soon were covered with a fibrous substance. She swept a few samples of dust into a jar. A friend suggested the substance was fiberglass insulation, and a helpful clerk at the local Home Depot store agreed.

The Glass' home, one of many in the tract, was built with a forced air heating/cooling system immersed in an attic full of blown-in fiberglass insulation. Mary found a hole the size of a hammer head in the air duct near the filter. Whomever had accidentally stuck their hammer through the duct had covered it up with a piece of scrap plywood.

Lou went into the attic to look around. He discovered one of the "Y" sections branching off the main duct was split open maybe a foot over the loose glass insulation. He taped that up. Also, the vent from the clothes dryer had come apart in the attic, further stirring up the microscopic glass shards.

Mary's anxiety attacks were replaced by the anger she felt upon researching fiberglass and its binding agents, resins of phenol and formaldehyde. She became an expert on cleaning up fiberglass dust, using silk cloths, old pantyhose and carpenter's tack paper. She began wearing silk clothes all of the time; it was the only fabric that could be washed free of the maddening microscopic fibers.

The Glass' homeowners' insurance policy was of no use whatsoever.

"They basically told us to sue (the builder) because this isn't something they cover and they weren't responsible," said Mary.

The home builder, fortunately, became interested in the Glass' plight upon finding out fiberglass was the likely cause of their problems. The builder hired an independent insurance adjuster to investigate, who seemed to agree with the diagnosis.

The builder also contacted the insulation manufacturer, whose representative found evidence of fiberglass contamination at the home. But according to Lou and Mary, he minimized the consequences of their exposure, telling them there was "no scientific evidence" of harm to humans, the body simply absorbs fiberglass.

Even so, the builder agreed to pay for an apartment while the Glasses moved out of their house. The builder also paid for an entirely new duct system to be installed, and for the carpeting, drapes, cloth furniture and clothing to be replaced. All of this was done without the Glasses even having to file a lawsuit.

"They wanted us to be quiet about it, that was very clear to us." said Mary.

Unfortunately, the builder's money was not enough to pay for the removal and replacement of the blown-in fiberglass insulation. The Glasses were broke, so the insulation remains.

"(The attic) door is nailed shut, and it's staying that way," remarked Mary.

Yet the goal of a "normal" life is still elusive. Mary is extremely chemically sensitive, becoming very uncomfortable in department stores, traffic jams, and anywhere else where there are high levels of formaldehyde. Last Christmas she was rushed to the emergency room in agonizing pain. She was diagnosed with kidney stones. With the help of some morphine, those were passed, but Mary was back in the hospital in a week with stones in her right kidney.

(Researchers John and David Goldsmith have tentatively linked kidney disease to high levels of silica in the body. Fiberglass is approximately 60 percent silica.)

Lou Glass called Victims of Fiberglass after reading about VOF in This Old House. He was looking for information, as well as knowledgeable doctors and lawyers. The doctors they have seen so far know almost nothing about fiberglass-related injuries, he said.

The Glass are worried about the threat of cancer, particularly for their young son.

Lou says he won't be able to live with himself if his son develops cancer in 25 years and no action was taken.

'Cheated out of a Healthy Life'

By Tom Verdin
(From the Port Huron, Michigan, Times Herald, Sept. 2, 1991)

Shelli Hanton could see the signs starting slowly, the coughing, the wheezing. Her then-boyfriend, Dean Lavery, would come home from work at the auto-trim plant a bit out of breath, tight in the chest, throat scratchy, as if he had swallowed a Brillo pad, sniffing like he had allergies.

Why was that, she wondered. He had always been in excellent shape. He jogged between five and seven miles four times a week; he practiced karate; he swam. He had never smoked.

"He was a health nut," said Shelli, 27.

Slowly, it got worse. The breathing became heavier. so heavy that Dean, who could once run 10 miles at a steady pace, collapsed one December trying to pull the couple's two young children on a sled.

And then it got ugly.

"I saw him wake up every morning with a bloody nose," Shelli said. "Sometimes it would be clotted and sometimes he whole face would just be full of blood. If he blew his nose, he would just blow blood right out of it, every time."

That was in late 1987. In 1988, the couple had enough. What was happening to him?

Lavery, now 29, went to a doctor. What he discovered has changed the course of his life, and maybe even shortened it.

A doctor at Michigan State University labeled his ailment "occupational asthma." Another physician concluded that Lavery suffered from allergic bronchitis and allergic asthma.

That second doctor was careful to say that Lavery's condition was not caused by his workplace, where the air swirled with fiberglass dust and the formaldehyde it is coated with. But, he said it certainly was aggravated by it.

Two weeks ago, a recurrence of heavy coughing sent Lavery to Henry Ford Hospital in Detroit. X-rays revealed a black patch on his lungs.

"I'll find out in a week or so what that means," he said. "I'm scared. I just hope it's not cancer."

Lavery began working in 1982 for United Technologies Automotive in Port Huron, one of hundreds of employees turning out the company's main product, automotive headliners.

A few years later, the company began using fiberglass in its manufacturing process. The employees had scattered concerns. They knew fiberglass shards could irritate their skin. They also had heard that fiberglass might harm their lungs.

"When we switched to fiberglass, the company brought (experts) in," Lavery said., "They showed us movies, told us it was completely harmless, that it couldn't hurt us at all. They told us our bodies had natural defenses like sneezing. Three hundred people believed them."

Dean Lavery doesn't believe them any more. He calls the two United Technologies plants "modern-day gas chambers."

"A lot of times it would hit you really hard. It would cut off your air. Your eyes would hurt really bad and tear up, and toward the end for me it got to where I wanted to pass out."

Since that first visit to the doctor in early 1988, he has tried to come back to work. The company bought him a charcoal-filtered mask prescribed by his doctor, he said, but them turned around and refused to let him wear it.

"They said it had to pass 11 (OSHA) inspections," Lavery said.

He said the company also would not retrain him for jobs that would remove him from the fiberglass and the formaldehyde dust.

The result is that his comebacks lasted only weeks or months. Lavery has been away from work more than he ahs been on the job since his health began to fade three years ago.

Since then, his doctor, W.P. Richards of Bloomfield Hills, has said that Lavery's "continued exposure to such noxious fumes will most likely result in permanent scarring of lung tissue (fibrosis and emphysema)."

And he recommended Lavery not work in the manufacturing of fiberglass products.

"(But) who's going to hire me with bad lungs?" Lavery asked.

United Technologies would not comment on Lavery's case, which has become the subject of a lawsuit filed last week in St. Clair Count Circuit Court. Lavery wants $30,000 in back wages; the company has offered $7,800.

"With respect to Mr. Lavery's allegations, we can't comment because it's pending litigation," company spokeswoman Anne Knisely explained.

But she said the Port Huron companies, responding to employee requests, have tested the air in their plants several times. Their tests and those taken by the Michigan Occupational Safety and Health Administration indicated air quality is well within national safety guidelines, she said.

"We're so far below the limits--- for formaldehyde and fiberglass... it's almost off the map," said Knisely, manager of advertising and environmental communications.

She said the company provides gloves and skin creams to protect workers from skin rashes. Goggles and paper dust masks also are provided.

Lavery, however, was told by his doctor that paper masks are not deterrent because they are too thin. If you can smell the formaldehyde, you're breathing in the fiberglass, Lavery said.

The company tells its employees the major risk from fiberglass is skin irritation, not lung cancer, Knisely said.

"As far as the corporation's preserving the health and safety of employees, that is most important," she said. "What we have communicated to our employees is that there is a difference between asbestos and fiberglass, and we try to tell them they do not carry the same health risks. The concern is irritation to the skin."

But an emerging body of scientific evidence suggests the risk from consistent exposure to fiberglass shards may be far greater than simply "irritation to the skin."

The glass shards are suspected to be as damaging to lungs as asbestos fibers.

Studies reviewed by the U.S. government has shown " a statistically significant increase" in respiratory-tract cancer among fiberglass production workers. Their lung cancer rate is 25 percent above normal after 30 years of employment, according to the National Institute for Occupational Safety and Health.

And the U.S. Labor Department now requires all glass-fiber products, including insulation, to carry labels warning of a possible cancer hazard by inhalation.

"Published experimental evidence demonstrates that fibrous glass has the same potential for inducting cancer as asbestos fibers of the same dimension," said NIOSH, the research arm of the National Occupational Safety and Health Administration, in a 1988 memo.

Lavery said other workers at United Technologies have had lung problems, nose bleeds, asthma, allergies and other ailments, but won't come forward because they are afraid for their jobs.

"(United Technologies) has said, 'There's nothing wrong with you. It can't hurt you,'" Lavery said. "United Technologies was a gas chamber, and I think in time they're going to find that out."

United Technologies would not say what conclusions its own doctors have reached about Lavery's condition. Lavery, however, said the company's doctors have concluded that there is nothing wrong with him.

"They say I suffer from 'chronic anxiety,'" he said.

His mother questions that. "I don't think (it's anxiety)," Clara Lavery said. "He was a good workers. He would be sick with the flu or something, and he would still go in. He wouldn't miss a day. I really think that it's done some damage to him. I'm sure of it."

Lavery has been living with his parents since last May, when he was fired for "failure to return to work from (a) medical leave after one year," according to his letter of dismissal.

His mother fears for his health. This is not the same son who was always healthy, exercising and working hard. He breathes heavily, and she said his coughing seems to be getting louder, deeper.

"Just knowing him and knowing how he doesn't ever complain... I'm really afraid that it's had a bad effect on him," she said. "I just hope it hasn't gone too far."

Dean Lavery says it already has gone far enough. He owes $2,500 in medical bills and he can't work in the construction trades, which he enjoys, because now even normal dust and wood smoke aggravate the allergies.

And he partly blames the pressures of the medical leaves and loss of income for his separation from Shelli.

"(The company) messed me up for life. I feel I can do work, but there's a lot of work I can't do," he said.

"I don't feel right. My voice has changed, by breathing isn't the same. Life in a bubble -- a lot of people laugh at that, but that's kind of the way I feel because there's a lot of things I can't be around.

Shelli also sides with her former boyfriend.

"Most of the people who work (at United Technologies) have families, and what are they going to do when they die off?" she asked. "I think they should give him full-time medical benefits. I don't think he should pay for all those problems on his own, and I think they should train him for a job so he's not working in all that dust.

"I think he really as been cheated out of a healthy life."

Fiberglass, sick buildings linked by Cornell researchers

By Robert Horowitz

"A survey of sick building syndrome complaints in nine buildings was conducted. Airborne pollutants and ambient conditions were not correlated with sick building syndrome complaints. There was a significant correlation between man-made mineral fiber counts in settled dust and sick building syndrome complaints." **—from the study abstract**

Sick Building Syndrome (SBS) occurs when a number of workers in an office building experience a variety of conditions, including eye, nose, throat and skin irritation, headaches, lethargy and respiratory problems. Doctors are often unable to explain the malaise, and it may be attributed to stress or low morale.

Although no one has proven the causes of sick building syndrome, in 1994 three researchers at Cornell University found a link between man-made mineral fibers in the settled dust in sick buildings, and the number of SBS symptom complaints by workers.

SBS has become more common place as the airtight office buildings built in the 60s, 70s and 80s age. The Cornell study, by Alan Hedge, William Erickson and Gail Rubin, was presented at the 6th International Conference on Indoor Air Quality in Helsinki, Finland.

Previously, researchers linked the amount of dust in offices and SBS, but few offices are monitored for man-made mineral fibers (MMMF), and the MMMF factor was unexplored.

"Although many people assume sick building syndrome is related to gaseous air pollutants (such as smoking), many studies, including ours, have been unable to find the link," said Hedge, an associate professor of design and environmental analysis at Cornell. "When we look at MMMF, however, we find much higher reports of SBS where MMMF are high. These findings strongly suggest that MMMF may be a major player in SBS."

Shortly after the study was released, one manufacturer of the type of ceiling tiles implicated in Hedge's study sent two people to visit Hedge and politely discourage him from continuing this vein of research. The North American Insulation Manufacturers' Association, predictably, labeled Hedge's work flawed and unscientific.

Hedge, whose studies included more than 4,000 workers in 27 buildings scattered around nine states, previously investigated relationships between tobacco smoke, carbon monoxide, carbon dioxide, formaldehyde, temperature and humidity on sick buildings, but found no correlation. The idea for studying mineral fibers came from a woman working in one of the sick buildings under study. She kept a small air filter on her desk, and asked Hedge to study what is trapped. Hedge traced the fibers he found in the desktop filter to ceiling tiles over her head.

This study was supported by the Center for Indoor Air Research in Maryland; however, Hedge had not identified funding to continue his research. He does hope to continue because, after 10 years of searching, he is convinced he has finally found an important factor behind SBS.

"I have a very, very strong hunch we have hit upon something of significance," he said. "I don't think it's purely a fluke that we are seeing some association here. There is enough circumstantial evidence that (mineral fibers) are a variable one should look at seriously. It's clear there is *something* going on in the dust in these buildings."

A logical next step would be to standardize ways of analyzing the content of settled dust in buildings, said Hedge. In Sweden, he added, they are experimenting with ways to measure dust accumulation on the human face.

For this study, Hedge sampled dust atop file cabinets and desks, and used scanning electron microscopy to analyze the samples. High-volume air pumps were run for 12 hours at night (because of the noise), and the filters were scanned using the same method. Workers sitting nearest the sample sites were given questionnaires regarding the frequency of occurrence of 15 sick building symptoms.

The only relationship which was found was between the initial sampling of settled dust and reports of sick building symptoms. It is possible, said Hedge, that the air filter pumps run at night may have actually cleaned the air to the point where some workers symptoms were alleviated.

Computer monitors create electrostatic fields which may attract irritating fibers and dust particles, Hedge suggests, and analysis of the dust from computer screens

seems to back that up. This could explain why people who spend the most time with computers report more SBS symptoms. Also, the heat generated by computers and monitors may dry the air around the worker, reducing the ability of the eyes to flush away fibers.

The phenol-formaldehyde binders used on many mineral fiber products also appear to attract dirt, dust and other chemicals, added the Cornell researcher. When you inhale those, you have a "direct route for getting some very nasty chemicals into the body," he said. The fiber acts like a spear to help the substance permeate the body's defenses.

"Many of these fibers are not pristine glass fibers," said Hedge, "they're covered in grunge."

With slag-based mineral fibers being emitted by ceiling tiles, and glass fibers being emitted by insulation, ventilation ducts, ventilation system filters and room divider panels, and perhaps other sources, buildings are constantly shedding mineral fibers into the air, said Hedge. Simply removing ceiling tiles or insulation might not fix the problem.

Hedge recalled a conversation with a ceiling tile salesperson, who noted that American-made ceiling tiles were not allowed to be sold in Europe because they are softer and shed more mineral fibers than European-made tiles.

Air filtration systems should be used in offices whenever possible, Hedge said, in addition to a rigorous office-cleaning regimen to alleviate SBS symptoms. Because mineral fibers are so small; however, vacuums may stir up more mineral fiber dust than they remove from the office.

Vacuums built into buildings, which are more common in Australia and Europe than in the U.S., seem to have advantages in removing MMMF from the office.

"Chances are SBS is triggered by a range of factors, just like most other illnesses," concluded Hedge. "People who report SBS symptoms are being exposed to real irritants, but in many cases they are evidently not from gases in the air. Rather, air can be filthy with fibers and particulates that are not now being measured or considered."

American Lung Association of Georgia® --- East Central Region

THE BAD STUFF
Facts about Fiberglass

Fiberglass

Direct contact with fiberglass materials or exposure to airborne fiberglass dust may irritate the skin, eyes, nose and throat. There is a possibility that these fibers cause permanent damage to the lungs or airways, or increase the likelihood of developing lung cancer. inhaling the fibers may irritate the airways, resulting in cough and production of excess mucus, a condition

known as bronchitis.

Epoxy Resins
Epoxy Resins are chemicals used in lacquers, varnishes and plastics, or in combination with other components to form plastics. They are also used to strengthen, harden, or give flexibility to fiberglass. Breathing epoxy resins may cause chest tightness,
shortness of breath or wheezing. Skin contact can cause rash.

Styrene
Styrene is part of the polyester resin used with fiberglass. It is extremely irritating to the eyes and nose at low concentrations;
at higher concentrations it causes headache, dizziness, and sometimes nausea.

Acetone and MEK (Methyl Ethyl Ketone) **Acetone and MEK are commonly used solvents in fiberglass lay-up and spray-up.**
They are irritating to the eyes, nose and throat. Inhaling the vapors may cause drowsiness, breathing difficulties, and more
serious damage to the lungs and nervous system.

Protective Clothing and Equipment **Gloves and other protective clothing can help prevent skin problems by reducing direct contact with glass fibers. Dust masks can help prevent or reduce the inhalation of small fiberglass particles. Goggles that fit properly can prevent eye irritation. Respirators, if properly selected, used and maintained, reduce the exposure to dusts, fibers and chemicals. Respirator selection is based on the size and concentration of the fiberglass particles. Information on effective**
protective equipment is available from the state and federal Occupational Safety and Health Agencies, the National Safety
Council, and the American Conference of Government Industrial Hygienists' Industrial Ventilation Manual.

Work Practices and Personal Habits **Wash hands before eating and keep food away from the worksite. Eating, drinking and gum chewing at the worksite should be avoided. When using chemicals with fiberglass, always read and follow the manufacturer's**
instructions for reducing exposure. Be alert for possible breathing effects related to your workplace. Look out for chest tightness, wheezing, severe coughing or coughing that does not stop. if these conditions appear, see a doctor. Smoking cigarettes and/or marijuana may increase the risk of developing lung disease when combined with exposure to fiberglass and to chemicals used with it.

POLYESTER - THE GOOD STUFF

Recycled No. 1 Plastic (PET) batts.

PET is the material from which drink bottles, carpeting and even clothing are made. PET batts can be used in the same manner as fiberglass batts: hang, staple or place them any way you like.

A recent study reports that of plastic (PET) items, almost 1 billion wind up in the countries garbage every year. That's **3 million** items **EVERY DAY**.

So it’s good to know that **Auspoly Batts** steps up as a solution to excess since it is made entirely from recycled, post-consumer product.