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J. West / MSNBC

Cleaning up our dirty laundry

**'Greener' cleaners offer
an alternative to dry cleaning**

By **Francesca Lyman**
SPECIAL TO MSNBC

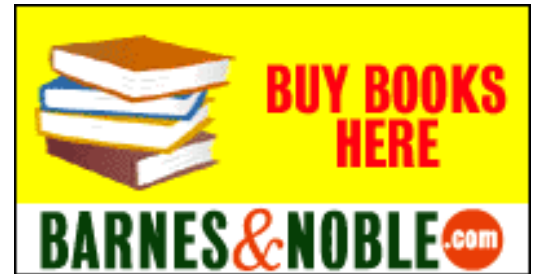
May 23 — Dry cleaners say their chemicals are the most effective solvents for cleaning our clothes. But the widely used dry cleaning solvent known as perchloroethylene has been linked to health and environmental hazards, and a recent study confirms that dry cleaning workers are more prone to certain cancers than the general population. But there is an alternative: “Greener” cleaners popping up around the country claim they’re the healthy answer.

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ENTER THE typical dry cleaning shop, and even if it's clean and tidy, there's usually a long front desk, lines of people, racks of plastic wrap and only three feet of airspace — inescapably bathed in the sharp, sweet odor of chemicals.

Not so in the Cleaner by Nature stores in Los Angeles and Santa Monica, Calif., where proprietor Deborah Davis goes out of her way to make her shop “look, feel, smell and sound” different, with such touches as wood counter tops, earth-toned walls, hanging plants and classical music.

Gone are the chemicals typically used to dry clean clothes and fabrics, particularly perchloroethylene, or “perc” for short, classified as a hazardous substance by the Environmental Protection Agency. Her shop uses a new technology called “wet-cleaning” that goes back to simple soap and water but, she says, is nevertheless capable of handling delicate fabrics like silk.

For customers, the difference between her shop and others is hardly cosmetic. Davis's clients, Beverly Hills and Hollywood film people like actress-singer Pia Zadora, are her most ardent fans. Zadora, a mother of three, goes a half hour out of her way in L.A. traffic to get the service.

“I'm doing everything to eliminate my family's exposures to chemicals like this, not because I'm sick or allergic but because I want a healthy family, and a healthy planet,” she says.

“I love how my clothes have no more dry cleaning smells, aren't scratchy or itchy, and don't get me sneezing,” says another customer, Troy Stratos. A film director, Stratos says he already gets a big enough dose from the ubiquitous tuxes and

gowns at Hollywood parties and events he attends. And, he appreciates that Davis enlists customers in recycling the polyethylene bags and metal hangers.

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Despite its name, dry cleaning is not actually dry — it's just that it doesn't use water. And, as critics point out, it's hardly clean — mainly due to perc.

A chlorinated hydrocarbon that was originally developed as a metal degreaser for airplane parts, perc was adopted for the dry cleaning industry some 50 years ago. It worked so well that it spawned a neighborhood mom and pop industry that has ballooned to more than 34,000 shops nationwide today.

Since the 1970s, however, perc has been regarded as a potential health hazard, with workers at particular risk.

Worse than its dizzying smell, perc is regarded as a probable human carcinogen, based on animal studies that link long-term exposure to liver cancer, kidney damage and other diseases. Workers who come into frequent contact with the liquid solvent and its vapors can experience eye irritations, respiratory ailments, headaches and fatigue, according to some studies.


A 1994 study by the National Institute for Occupational Safety and Health found that dry cleaning workers had seven times the average rate of esophageal cancer and twice the rate of bladder cancer.

More recently, a study published in February's American Journal of Industrial Medicine found excess deaths among 1,708 dry cleaning workers exposed to perc for at least a year before 1960. Their risks of some cancers, including those of the tongue, bladder, esophagus, intestine, lung and cervix, pneumonia and other diseases were also elevated.

NOT JUST WORKERS

Workers aren't the only people at risk, some research suggests. People living near dry cleaners can be exposed to potentially high levels of perc, when vapors can move up through apartment buildings or office buildings. New York recently forced dry cleaning shops in residential buildings to meet strict new standards for equipment, pollution prevention and ventilation, or relocate.

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In 1996, Consumers Union estimated that there are 150 excess cases of cancer among every million people who wear freshly dry cleaned clothing once a week for 40 years. For the study, a panel of volunteers was given a garment to wear — a blazer, a silk or charmeuse blouse, or a heavy cotton sweater — that had been picked up from the dry cleaner the day before. A sampling device — a strip of activated carbon inside a porous plastic covering — attached to the lapel was used to measure perc emissions. Based on the perc levels, cancer risk was estimated.

Another study by the Silent Spring Institute suggested that exposure to solvents used in dry cleaning could increase breast cancer risk.

TIGHTENED CONTROLS

Although the government tightened controls on emissions of the chemical in the 1990s, it remains a major health concern.

The industry uses some 57 million pounds of toxic perc each year. That's a dramatic reduction of about 73 percent from 10 years ago, and the regulations in the 1990's stopped dry cleaners from routinely dumping perc and venting it into the air.

But, says Cindy Stroup of EPA's Garment and Textile Care Program, it can and does leak into the air. And it produces a very toxic sludge that shop owners are required to incinerate or dispose of at hazardous waste dumps.

And it is still legal to dump water that has been partially contaminated with perc down a drain, says Bill Fisher, head of the International Fabricare Institute, the industry's trade group, despite the fact that it can leak from sewer pipes. The industry is contending with the fact that up to 95 percent of shops have already contaminated the ground beneath them, as well as many public groundwater supplies.

A GREEN REVOLUTION

These concerns are driving something of a quiet revolution in the dry cleaning industry. Since 1992, EPA has been working with the industry on a voluntary basis to reduce exposures to perc and encourage new technologies, Stroup says.

Fisher hesitates to call it "a revolution" but admits that "fewer and fewer cleaners are getting into perc."

Instead, he says, cleaners are considering the newer cleaner technologies opening up, including not just wet-cleaning, but a process that uses liquid carbon dioxide, and another based on a silicone fluid.

There's some consolation that "all this [research into perc's risks] has spurred the innovation of new technologies that bypass hazardous chemicals altogether," says Henry Cole of the Center for Environmentally Advanced Technologies in Washington, D.C.

A bill re-introduced in Congress in March proposes tax credits for "dry and wet cleaning" using "non-hazardous primary process solvents." The industry opposes the bill.

Although EPA is studying these technologies as well as petroleum solvents, such as DF-2000, it is promoting the more benign, environmentally friendly methods that don't require regulation because they produce no waste or health effects.

"Virtually every garment labeled 'dry clean only' can be cleaned with wet cleaning and other alternative technologies," says Stroup, "so we're encouraging dry cleaners to consider these first as they phase out their old perc machines."

Greenpeace, Sierra Club and other environmental groups also urge consumers to give these new technologies a try. If they're not available, they add, avoid buying clothing that requires dry cleaning and hand-wash when possible.

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Recognizing that some people will continue to dry clean at least some of their garments, Consumers Union experts advise taking them out of the bag as soon as you get

home. Hang them outside or in a seldom-used room for a few days to give perc residues time to dissipate, they say.

While you cannot tell by smell alone whether all the perc has been removed from your clothes, dry cleaning that has an odor is a tip-off that some residue remains, the EPA adds.

So, if your newly dry-cleaned clothing carries an odor, return it to the cleaner, says Stroup. By drying the clothes longer and/or at higher temperatures, the cleaners should be able to remove more of the chemical.

Write a letter to the Editor