



4550 Jackson Street Denver, CO 80216
FAX (303) 355-3516 / (800) 447-8326

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For More Information, Contact Steam Way International at (303) 355-3566

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SICK BUILDING SYNDROME AND THE CLEANING INDUSTRY

by: R. Doyle Bloss
Vice President of Corporate Development

I knew I was in trouble when I received a box full of official-looking manuals with "Environmental Protection Agency" on them. While I was waiting for Morley Safer and the rest of the "60 Minutes" team to show up, I decided I'd better glance through the 2,000 or so pages of material to see what I was in trouble for. To my relief, it was material that Mike Berry had promised to send me after a short conversation at a Mid-South Professional Carpet Cleaners Association Convention. Mike Berry is the Deputy Director of the Environmental Criteria and Assessment Office of the United States Environmental Protection Agency. That was my introduction (over two years ago) to the incredibly complex issues surrounding "sick building syndrome." Since that time, research has been taking place at all different levels, probably raising more questions than it seems to be answering about these issues.

So you may ask yourself, "What is sick building syndrome and what does it have to do with the professional carpet cleaning industry?" Well, believe me, there are many people far more qualified than I to speak on this subject, but I'm good at coming up with questions to be answered so I'm writing this article perhaps to define the issues and some of the potential problems, and leave the question-answering to more qualified individuals.

The research that we have done on sick building syndrome seems to take us in two directions:

1. Environmental pollutants that can cause very real documented health hazards and problems to the occupants of the building; and
2. Psychological reactions to an environment that cause perceptions of very "real" health problems.

These two problems can be in the very short term or they can develop over an extended period of time. Obviously, the concentrations of research that have been done in this area are in the areas of potential health hazards. But an even larger area of potential research lies in the business environment. How do environmental pollutants affect the productivity and performance of the workers who are subjected to these pollutants? The huge potential of lost dollars in lost productivity and performance may become the main focus of studies of "sick building syndrome." These "real" problems caused by indoor environmental pollutants are addressed by the medical, chemical and cleaning industries. The psychological reactions are very difficult to deal with. There are many documented cases of the occupants of an entire building having dizzy spells, breathing difficulties and even passing out, sometimes requiring hospitalization; yet, the E.P.A. and other organizations could find nothing in the environment that would have caused the problem. The question lies in how much of this is "mass hysteria" and how much of this may be caused by the indoor environment.

Research by Mike Berry and others with the E.P.A. has led to a basic outline of where problems come from in causing "sick building syndrome." During the first few months a building is open, the majority of the problems are linked to the building itself, indicating the problems might be linked to anything and everything in the construction environment. These might include glues and adhesives, preservatives, chemical ingredients, finishes and paints, etc. As the life of the building gets older, however, "building-related" complaints decrease while "maintenance-related" complaints increase. This indicates a direct link between the maintenance methods, procedures and habits and potential problems. "Ah-ha," you say, "that's where I come in." That may very well be. Inefficient or absent cleaning and maintenance procedures are linked to sick building syndrome and its importance should not be underestimated.

So just what is this sick building syndrome? We know it can be real or imagined. We know it can be building-related or maintenance-related. But what is it? And just what are the direct sources? Obviously, these questions cannot be fully answered here, but a short introduction to the sources of the atmospheric and environmental pollutants that cause sick building syndrome may be the best way to define it. Simply put, we know that if an outdoor environment is polluted with contaminants, it can have an effect on plants, wildlife, and people. We also know much about the sources of outdoor pollutants—automobiles, factory waste and emissions, chemicals and chemical waste, litter, etc. Sick Building Syndrome simply addresses the issue of what effect these same pollutants are having on the indoor environment and, in addition, what pollutants are inherent to the indoor environment. According to research done by Mr. Berry and his associates, there are many sources of indoor air pollutants—air-conditioning and heating systems, air handling systems, building materials, copy machines, furnishings, household products, insulation, tobacco, etc. There are also many sources of pathogenic (disease-causing) bacteria—heating and air conditioning systems, shower heads, pets and their urine and feces, contaminated foods, humans, mites, cockroaches, and even water damage. Combustion products are produced by tobacco, cooking, unvented heaters, natural gas appliances, wood burning fireplaces, fire damage, and candles and fuel lamps. Spore growth from prolonged moisture can produce fungal irritation. Finally, contamination may come from chemical products used within the building, creating volatile organic compounds such as furnishings, smoke, fuels and solvents, pesticides, and cleaning products. No doubt our professional interest should be turned to atmospheric migration of cleaning agents during cleaning, as well as the amount and type of post residues. Here is where the worthwhile processes and technology of cleaning programs help to protect both operator and occupant.

The potential hazards and costs of these contaminants should be addressed on many levels. If they are creating an unhealthy atmosphere that produces potential health hazards for the building's occupants, then the occupants must be protected. If these contaminants can be linked to health hazards, then the building owner is exposed to a massive liability problem. The resulting litigation might be as costly as any "real losses." Secondly, how do these pollutants affect the productivity and performance of the building's occupants? Can we create a more productive atmosphere by removing contaminants?

What we've attempted to do here is to introduce the problem. But ongoing research has concluded that proper maintenance techniques and methods are one of the major solutions to "sick-building syndrome." Perhaps the best way to define this potential for professional cleaners is to quote from Mike Berry's research again:

"Based upon what I have learned in recent months from researchers working in the United States, Canada, and Western Europe, I have reached the conclusion that carpeting and fabrics not cleaned and properly maintained have the potential to cause a variety of health problems inside the building environment. From a public health perspective, I would find it impossible to justify the installation of carpets indoors without the existence of effective cleaning methods using environmentally-sound cleaning technology by individuals properly trained in the application of those methods and technology. I am very certain in my statement that carpets do serve as 'sinks' and collect pollutants of all kinds both from the indoor environment as well as the ambient environment. Humans in turn are exposed to those sinks through direct contact, such as children on the floor, or by the release of a contaminant from the sink. The 'sink' when loaded or filled becomes a releasing 'source.'"

Work in this area has just begun. The professional cleaning industry should be ready and able to lend support in solving the problem.