

Giving Carpets A



When Health Takes Precedence Over Decor (Part I)

By Ellie Goldberg, MEd

If you or your child has asthma that is triggered by indoor allergens, your health care provider has probably advised against carpeting. He or she may have even told you to remove carpets from your home, or at least from the allergic person's bedroom—where he or she typically spends the greatest amount of time. But what about the places people spend their waking hours—at school or work? It seems as if carpets are everywhere...in homes, schools, offices, stores and even hospitals!

The problems with carpets are twofold: First, they emit chemical irritants due to the products used to manufacture and install them. Second, they harbor biological allergens, such as dust mites and mold. Most asthma patient education programs teach the importance of managing the environment to avoid asthma flares, and most specifically advise against carpeting.

Second Thought

Chemical Irritants

For the first few weeks or months of a carpet's life, it may emit chemicals into the air by a process called "off-gassing." These chemicals come from the carpet fiber bonding materials, backing glues, anti-static and anti-stain treatments, fire retardants, deodorizers, fragrances, and applied pesticides and fungicides. They can be quite toxic for those who are sensitive to them. But not all people are affected to the same degree. Some may have serious reactions, which may include eye, nose and throat irritation; headaches; skin irritations; fatigue; or asthma. Others spending time in the same environment may experience little to no effect.

Joan and Bill Stokely's bedroom renovations called for new energy-efficient windows and wall-to-wall carpeting. As is typical of most home renovation projects, their's was over budget and took longer than scheduled. Joan and Bill were eager to occupy their bedroom as soon as the contractors were gone. The combination of new carpet fumes and tightly-sealed windows sent Joan's asthma out of control. After almost a full year of frequent doctor visits, a variety of new medications, and many late-night trips to the emergency room, they finally got rid of the carpet. The result? Her asthma is again under control. "The difference was immediate," Joan says. "Now I'm a big fan of hardwood floors."

Allergens

In addition to chemical irritants, carpets provide the ideal environment to harbor certain organic allergens. Dust mites—microscopic organisms that thrive in a humid, warm environment and feed on flakes of dead skin—inhabit carpets by the millions. Their waste and dead bodies



are potent allergens, and no amount of vacuuming effectively removes these. (Dust mites also flourish inside pillows, mattresses and bedding.)

Carpets become moist in a variety of ways, and moisture is a harbinger not only of dust mites but also of mold. If a carpet is placed directly on a concrete floor, moisture from the concrete gets absorbed into the carpet. The carpet then creates an ideal environment for the growth of mold. Also, carpets inevitably get dirty, causing well-intentioned owners to have them steam-cleaned. Pumping gallons of moisture into a carpet and then letting it sit wet assures the rampant growth of mold.

Finally, since carpets cannot be effectively cleaned, they become laden with chemical and biological pollutants, including pesticides, cleaning agents and animal dander. These potent substances become airborne every time someone walks across the carpet, causing constant exposure for those in the room.

What Can Be Done?

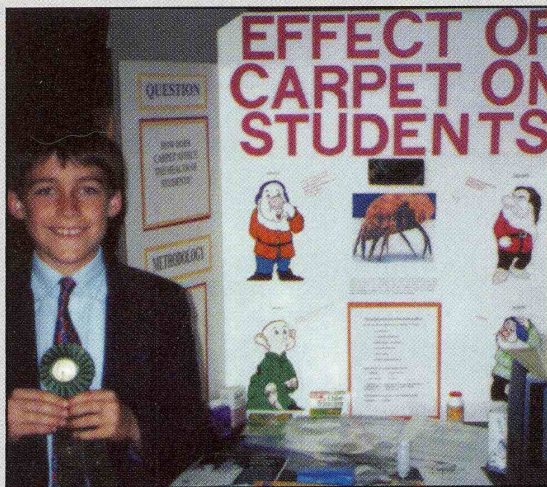
If carpets must be installed, steps can be taken during installation to reduce their potential health threats. The

Environmental Protection Agency (EPA) ranks poor indoor air quality as one of the nation's greatest health risks. It is helpful to look at the guidelines the EPA uses when installing carpeting in their own buildings and offices.

At the EPA's new headquarters they required that all finish painting and sealant applications be applied and fully cured prior to carpet installation. This prevents the carpeting from absorbing the chemical fumes and then subsequently off-gassing them. The contractor also monitored a 21-day flush-out period after the carpets were installed and before tenants moved in. During this time, the ventilation system was run 24 hours a day, using 100 percent outside air to completely flush the interior air. See the EPA's web site at www.epa.gov/iaq for more information about indoor air quality.

Dust Mite Control Efforts for Carpets

Carpet "treatments" are a poor solution for carpet allergens. There are sprays and powders on the market which tout their ability to control dust mites in carpets. Scientific stud-



In April, 1999, sixth grader Forrest Hayes from Adrian, Georgia, won the "Best in State" award at Georgia's State Social Science Fair for his project "The Effect of Carpet in Schools on Students." He explained how carpets are a source of allergy problems. His exhibit featured Disney characters Sneezy, Grumpy, Dopey and Sleepy. "Allergies make you feel horrible," Forrest wrote. He cited many experts to make the case that carpets worsen allergic rhinitis, conjunctivitis and asthma. He also described his own first-hand experience in carpeted classrooms. "Sinus and lung congestion, headaches, runny nose, breathing problems, sore throat, coughing and fatigue make it difficult for you to concentrate. You are not happy when you have allergies and are congested. Being sick affects your behavior...Some medicines you take make you sleepy, dopey, irritable, disoriented or hyper, which affects your concentration. If you are absent from school, you get behind in your work and miss the teacher's instruction."

ies show varying results in testing their effectiveness. Furthermore, the carpet treatments themselves can cause health problems. SC Johnson recently recalled their products, AllerCare™ Dust Mite Carpet Powder and AllerCare™ Dust Mite Allergen Spray, designed with the pesticide benzyl benzoate to target dust mites in carpets and upholstery. These products were found to cause significant respiratory problems for people with asthma and allergies.

Lowering humidity levels in a room can be helpful in limiting dust mites. Dust mites need a humidity level of more than 50 percent to survive. Dampness in carpeting, however, can develop from other sources, such as steam-cleaning, leaks and cement floors. The only real solution to protecting occupants' health is to refrain from installing new carpets and remove the old ones. The American Academy of Allergy, Asthma, and Immunology advises reducing dust mites by removing wall-to-wall carpeting, controlling humidity through the use of a dehumidifier or air conditioning, and regularly washing throw rugs in very hot water.

Carpeting in Schools

Children typically spend six to eight hours a day in their classroom(s), creating the opportunity for intense exposure to the irritants and allergens present. Younger children may spend time sitting on carpeted floors during classroom activities. School budgets often don't allow for the level of maintenance required to prevent water leaks into classrooms, or to replace carpeting that has become contaminated. As a result many children spend their days with chronic symptoms that are uncomfortable and distracting, or constantly medicated, which can also detract from their ability to learn.

In Reading, Massachusetts, parents of students with asthma and others pleaded unsuccessfully with school administrators to reconsider the decision to install carpeting throughout the school. During this process, they presented letters from doctors, air quality engineers and sadder-but-wiser school officials in other school districts.

In a letter to the school superintendent, David W. Bearg, a specialist in indoor air quality systems, wrote: "Carpets have found their way into

schools because of their perceived benefit in noise reduction and aesthetics. However, I contend that these benefits are more than offset by the potential for harm." John Saryan, MD, president of the Massachusetts Allergy Society, wrote, "There is no justification for the use of carpeting in schools since this is a clear-cut health hazard."

Whether in the home, office or school environment, carpets can pose serious health risks for many people. Unfortunately, people with asthma and indoor allergies are at greatest risk. Carpeting is one area where most in the medical community agree. If you have asthma or allergies, carpeting exposes you to a myriad of possible triggers. Therefore, it should be removed from the indoor environment or used in a limited way. It is time to give carpeting a second thought!

Ellie Goldberg, MEd, is the founder of Healthy Kids: The Key to Basics, based in Newton, Massachusetts, an educational consulting service specializing in the needs of students with asthma and other chronic health conditions.

Look for Part II of this series in our next issue, focusing on carpeting in schools.