

Duct Cleaning: Good Idea, Or Just a Lot of Hot Air?

By Jeanne Huber
Special to The Washington Post
Thursday, November 3, 2005; H04

Q Is duct cleaning for furnaces a good idea or, in most cases, an unnecessary scam?

A In most cases, it's unnecessary. The Environmental Protection Agency has been saying this at least since 1997, and the American Lung Association echoes the advice. Yet the duct-cleaning industry continues to grow. John Schulte, executive director of the National Air Duct Cleaners Association, says that one recent study found that of the \$15.9 billion that Americans spend each year on indoor air services, \$4 billion goes for duct cleaning -- equal to what's spent on asbestos and lead abatement, and more than the \$3.4 billion spent on remediation, such as fixing leaks that lead to mildew growth. Clearly, something is out of whack. Either the officials' message isn't getting through or consumers don't believe it.

The idea that ducts need to be cleaned seems to make sense, especially when you realize that forced-air heating systems run as a loop unless they are equipped with heat-recovery ventilators or other devices that automatically vent some of the stale air and replace it with fresh outside air. Otherwise, the furnace generates hot air, which flows through one set of ducts to registers in rooms. There, the heated air increases the air pressure, forcing some of the rooms' colder air through return grates and back to the furnace. Inevitably, the circulating air picks up dust, hair, pet dander, dust mites, and whatever else is lightweight and capable of becoming airborne. The furnace filter is supposed to trap most of this before the air warms up for a new circuit through the house. But dust still inevitably collects on the registers (especially the return-air grates) and perhaps also in the ducts. Schulte says his association's members frequently find ducts padded with two inches of dust. "If you're the kind of person who would leave two inches of dust sitting on a desk, you might be willing to leave two inches of dust sitting in your ducts," Schulte says. His point: Cleaning away the dust blanket makes sense.

But does it? In the mid-1990s, before the EPA came out with its advice to be skeptical, the agency and the National Air Duct Cleaners Association teamed up on a research program aimed at determining how indoor air quality is affected by duct cleaning. In 1997, the EPA released a 16-page handout based on that research. It was pretty damning. "Duct cleaning has never been shown to actually prevent health problems," the report said. "Neither do studies conclusively demonstrate that particle (e.g., dust) levels in homes increase because of dirty air ducts or go down after cleaning. This is because much of the dirt in air ducts adheres to duct surfaces and does not necessarily enter the living space." The report went on to say that duct cleaning could be useful if there is visible mold inside ducts, but only if they are metal or other solid material, and only if the cleaning is done properly. Ducts with interior insulation can't be adequately cleaned and must be replaced if they become moldy.

At the time, the EPA noted that the duct-cleaning industry was still in its infancy. So while the report noted a lack of evidence to back up the need for duct cleaning, a reader might conclude that evidence would point out the usefulness of the procedure if only the right tests were done. Now, though, nearly 10 years have elapsed, and the evidence still doesn't exist.

The trade association, which represents 856 companies, publishes standards, sponsors

training programs and serves as a referral agency for cleaners who agree to follow the association's protocols unless they inform the client of a change, perhaps because the customer doesn't want to pay for the whole procedure. The standards and training do reflect problems that the mid-'90s research uncovered. For example, duct cleaners now turn on their vacuum systems before they begin scrubbing at any dust built up inside ducts so that it is siphoned away rather than spewed into the indoor air. There is also a protocol to ensure that every part of the system is cleaned.

Although there has been recent talk about it, Schulte says, the association has not commissioned any studies to answer the basic question of whether the air inside a house becomes cleaner once ducts are cleaned. Given that so much money is being made without evidence showing a need, you have to conclude that someone doesn't want to ask the question for fear of getting the wrong answer. Or maybe the answer's known, but no one dares to reveal it.

Which brings us back to the limited circumstances where the EPA says that duct cleaning might be useful: when there is mold within metal ducts or when residents have unexplained allergies or other health problems that might be linked to dirty indoor air. Mold, a term that refers to a great many kinds of fungi, grows only on surfaces that are persistently damp, so if you have mold within ducts, there something is clearly wrong with your heating system. It could be a humidifier linked to the heating system, an issue related to an air conditioner that uses the same ducts to deliver cold air, or a leak. Whatever the cause, your first step should be calling in a heating and air conditioning expert to diagnose the problem. Cleaning the ducts won't, by itself, solve the problem. And if your ducts are made of insulated board rather than metal, they have fiberglass insulation on the inside and should not be cleaned aggressively because doing so might free the fibers and send them through your house. This type of ducting, once moldy, must be replaced. The EPA cautions that there is no evidence to support spraying ducts with biocides or encapsulants, which some duct-cleaners recommend.

If health problems are what are prompting you to consider duct cleaning, the EPA recommends you visit a doctor for help in sorting out the numerous possible causes.

Whether you have health problems or are just trying to prevent them, certain steps do make sense. Get a good furnace filter and change it regularly, or consider investing in an air cleaner. If you have a humidifier, make sure to empty and clean the pan regularly, or have a plumber connect it to a drain system so it empties automatically. And have a heating and air-conditioning expert check whether your ducts are sealed so that air can't leak out, or in. This is primarily an energy-saving measure, but it also can improve air quality because leaky connections can allow insulation fibers to get into the ducts in certain circumstances.

For more information, "Should You Have the Air Ducts in Your Home Cleaned?" summarizes the Environmental Protection Agency's advice on this issue. Go to <http://www.epa.gov/> and type "duct cleaning" into the search box.

From that page, you will find a link to advice about sealing gaps in ducts. From that document, you also will find a link to an overview of health problems that can be triggered by dirty indoor air and to air cleaners.