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Don't Deck The Halls with Contaminants
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We are in the midst of the holidays: a busy and exciting time of year, when family and friends gather together to celebrate and welcome the New Year. This is also a time, though, when more irritants and allergens can be introduced into your home. And windows remain closed, so these substances can build up inside the rooms in which you live. Here are some tips to help you reduce the level of contaminants in your indoor air:

Candles: Jar candles can emit pleasant, holiday scents, like cinnamon, baked apple, balsam fir, and gingerbread. But candles in jars can also produce a lot of soot, which stains walls and ceilings, and which is irritating to inhale. And if soot particles happen to impact potentially allergenic substances like mold and pet dander, and then become re-aerosolized, they can act as surrogate allergens, the way starch donning powder that has come in contact with latex in gloves can act. If you don't want to give up burning candles during the holidays, burn tapered ones instead. Just don't place a tapered candle in a drafty spot, because a flickering flame also produces a lot of soot. I also recommend that you avoid burning any fragranced candles. Fragrances are chemicals. Why introduce more chemicals into your indoor environment?



Candle-soot stains on a ceiling denoting insulation gaps

Greens: Christmas trees and wreaths can get moldy over time (or may even be moldy when purchased!).

If you or anyone in your family is sensitized to mold, don't keep these greens around for long, or consider having an artificial tree or wreath instead.



Decorations: Many families use the same holiday decorations year after year, and store them in a basement, attic or garage. Unfortunately, these areas accumulate allergenic dust. When you first remove your boxes of decorations from their storage space, clean the outside of the boxes before bringing them into your living space. If the boxes are cardboard rather than plastic, unpack the boxes outside of the house. If the decorations haven't been stored in boxes, clean them individually, and when the holidays are over, pack the decorations into tightly lidded plastic boxes for next year. Any decorations that are cushioned or that smell musty should probably be discarded.

A fireplace or wood stove: A wood or gas stove or fireplace is cozy during the holiday season. Wood can be contaminated with mold, however, so store firewood outside – covered up, off the ground, and not in contact with the siding. Promptly vacuum up any bark or wood bits that fall on the floor when you carry the wood indoors. If you have a gas fireplace, don't use it too often if it vents to the interior, and have a carbon monoxide detector installed nearby.

Your kitchen: You and your family spend a lot of time in the kitchen this time of year – cooking and

chatting with family. But a kitchen can be the source of a lot of indoor air quality problems.

I investigated one home in which the owner's daughter experienced headaches and dizziness over the holidays, when she visited her parents. It ended up that her mother's gas stove was emitting carbon monoxide, and needed maintenance. If you have a gas stove, be sure that it's maintained as recommended. It also makes sense to have a carbon monoxide detector in the kitchen, and an exhaust fan (that vents to the exterior) over the stove/oven.

Your refrigerator is another potential source of contaminants. Refrigerator drip trays (located at the bottom or behind a panel in the back) can become contaminated with microbial growth (bacteria, yeast and mold).



Refrigerator drip-tray contaminated with microbial growth

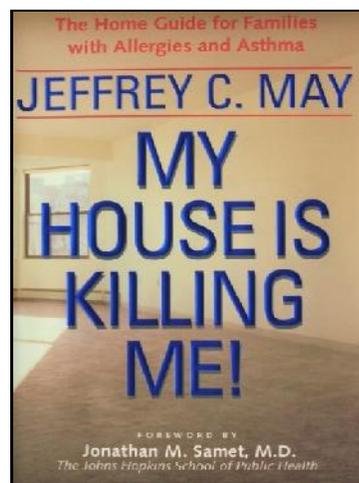
By-products of this growth can become airborne when the refrigerator fan turns on. It's a good idea to roll your refrigerator out annually, so you can clean the top, bottom, back and sides. Use a 36-inch vacuum crevice tool (available on line) to get to hard-to-reach spots (and as always, use a HEPA vacuum for household cleaning – preferably one with a bag). Remove the drip tray for cleaning. If the tray is plastic (not metal), put two or three tablespoons of salt in the tray to help inhibit microbial growth. In newer refrigerators, to get to the tray the appliance must be rolled out and a panel at the rear unscrewed.

You may do a lot of baking over the holidays, but the flour that you buy may be contaminated with flour moths or storage mites. Like all insects, moths and mites can produce allergenic substances in their

fecal matter (not a very “holiday-like” topic!). If you see flour moths fluttering around your pantry, throw away all opened grain produces and cereals, and put unopened jars and cans in airtight containers or zip-lock bags. Kill any flour moths that you see in the containers or bags. Keep the containers or bags sealed for at least two weeks after the last flour moth has appeared. Food in cardboard boxes should probably be discarded. Clean all food shelves.

You will probably be using your oven a lot over the holidays. If your oven is self-cleaning, keep the exhaust fan on and kitchen window open (even in cold weather) when operating the cleaning cycle. If you have a pet bird, move the bird to another room (the fumes may contain carbon monoxide and have been known to kill birds).

Refer to our book, *My House is Killing Me!*, for further guidance. Don't be intimidated by the title; there is a lot of useful information in the book.



I also recommend the book *How to Operate Your Home*, by Tom Feiza (<http://htoyh.com/htoyh/>).

We welcome your ideas for content for future newsletters. One idea we had is a “question and answer” edition. If you have ideas for content, or questions you'd like answered, please e-mail me at jeff@mayindoorair.com.

We wish you and yours a very happy holiday and a happy, productive and healthy New Year.

Jeffrey C. May