PRESS RELEASE

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EnergyWise[SM] Tip: HVAC Filters

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The end of the year is a busy time. In addition to several holidays squeezed into the final sixty days, we have winter to worry about. Of course, I always forget to prepare the snow blower for its first use of the season until at least three inches have fallen and the thermometer is way south of 32 degrees Fahrenheit. But when this season rolls around, I always remember to check and change the furnace filter in my heating and cooling (HVAC) system. Those who forget both the filter and the snow blower may find the snow-packed driveway is the least of their problems.

How important could a filter be? Consider the following potential impacts:

Inefficient heating and cooling
The whole reason you have an HVAC system is to keep comfortable inside. Dirty filters reduce airflow and the system's ability to condition the air in your home. According to the Department of Energy, a furnace or air conditioner with a clogged filter can use 15 percent more energy than one operating with a clean one.

Higher cost of utility bills
Every year, energy efficiency professionals like me start hearing concerns about the high cost of utilities after homeowners and renters receive their January or December bills. Incidentally, these two months have the highest heating requirements respectively and on a historical average. An inefficient HVAC system only makes these bills higher.

Uneven temperatures inside
Most duct systems are designed with the assumption that, with a clean filter, the furnace or air handler will move an adequate volume of air to keep temperatures balanced throughout your home. Diminished air flows due to a dirty filter often result in a room or rooms not receiving the same amount of conditioned air as others.

Short cycling or equipment failure
Reduced air flow due to a dirty filter can cause your heat exchanger to overheat and shut off before your thermostat's setpoint is reached. In a relatively short period of time, it will continue to cycle on and off. If this happens too often, the electronic "limit switch" safeguard can fail, and the furnace won't fire up at all. Now, you'll have a bill from a HVAC technician for parts and labor. Of course, Murphy's Law states this will occur on the coldest day of the year outside of normal business hours to optimize the technician's fees.

A similar problem can occur in the middle of summer. A clogged filter can cause the evaporator coil to freeze up because not enough air is moving through it to remove the condensation produced during the cooling process. If I had to predict, this will inevitably occur to filter abusers over the Fourth of July weekend in order to once again, optimize the HVAC technician's fees. (By the way, the dirt that gets past a filter can also make its way into the fan motor and other parts, causing damage to those components.)

Puts the pressure on your lungs
Relying on your lungs to filter out all the contaminants that can potentially be in indoor air could mean you find yourself sick or feeling ill more often. Those contaminants might include: dust, mites, spores, mold, ash, pollen, pet dander, bug parts, hair, lint, tobacco smoke, food particles, pesticides, paint vapors or fumes from cleaning products. A clean filter removes portions of most of these contaminants to create a healthier home.

Is once a year often enough to change your filter? No, probably not. However, if you're not currently changing your filter at all, this is a start. Some heating and cooling experts recommend changing your filter every month. While this practice may ensure you never operate your system with a dirty filter, you may be throwing a good filter away prematurely. If you're serious about addressing the issues discussed above, I recommend checking filters monthly for one year until you understand how often and after how much use changes are needed. Some filters may require replacement each month, but if your system runs very little, such as during mild months, you may get additional use from the same filter. Also note that some filters are designed to last multiple months. Only through observation and following manufacturers' recommendations can you best gauge optimal replacement frequency.

Not sure which filter to select? Visit with your HVAC technician or retail expert to assure your selection provides the best filtration possible without negatively impacting your system's performance.

For additional information on how to make your home, business or school EnergyWise℠, contact Loup Power District, Cornhusker Public Power District, Nebraska Public Power District, or your local public power utility. While you're at it, check out the EnergyWise℠ programs designed to help you save money. Find energy efficiency information online at **www.loup.com**, **www.cornhusker-power.com**, and **www.nppd.com/save-energy**.

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