Panhandle Public Health District

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Air Quality and Your Health, Breathe Easier

The air we breathe is essential to living a healthy life. Understanding what can affect your air quality can ensure that you are taking all the necessary steps to keep your home and family healthy. This is part one of a three part series on air quality to help address some common issues that can occur that affect your air indoors and out.

Mold

Molds are very common in buildings and homes and can be found indoors and outdoors. Mold will grow in places with a lot of moisture, such as around leaks in roofs, windows, or pipes, or where there has been flooding. Mold can enter your home through open doorways, windows, vents, and heating and air conditioning systems. Large mold infestations can usually be seen or smelled. Mold growing in homes and buildings indicates that there is a problem with water or moisture. This is the first problem to address. Remove moldy items from living areas. Once mold starts to grow in carpet, insulation, ceiling tiles, drywall, or wallboard, the only way to deal with the problem is by removal and replacement. It is important to properly clean and dry the area as you can still have an allergic reaction to parts of the dead mold and mold contamination may recur if there is still a source of moisture.

Exposure to damp and moldy environments may cause a variety of health effects, or none at all. Some people are sensitive to molds. For these people, exposure to molds can lead to symptoms such as stuffy nose, wheezing, and red or itchy eyes, or skin. Severe reactions may occur among workers exposed to large amounts of molds in occupational settings, such as farmers working around moldy hay. Severe reactions may include fever and shortness of breath.

Mold growth, which often looks like spots, can be many different colors, and can smell musty. Color is not an indication of how dangerous a mold may be. Any mold should be removed and the moisture source that helped it grow should be removed. If you can see or smell mold, a health risk may be present. You do not need to know the type of mold growing in your home, and there is no recommended test for checking for mold. No matter what type of mold is present, you should remove it. Mold growth can be removed from hard surfaces with commercial products, soap and water, or a bleach solution of *no more than* 1 cup (8 ounces) of bleach in 1 gallon of water to kill mold on surfaces. Never mix bleach with ammonia or other household cleaners.

Inside your home you can control mold growth by:

- Controlling humidity levels by keeping it between 30%-50% all day long.
- Promptly fixing leaky roofs, windows, and pipes.

- Thoroughly cleaning and drying after flooding.
- Ventilating shower, laundry, and cooking areas.

Radon

Radon is a naturally occurring radioactive gas produced by the breakdown of uranium in soil, rock, and water. The amount of radon found in the soil depends on the soil chemistry, which can vary from house to house. The amount of radon that escapes from the soil to enter a house depends on the weather, soil porosity, soil moisture, and the suction within the house. Air pressure inside your home is usually lower than pressure in the soil around your home's foundation. Because of this difference, your home acts like a vacuum, drawing radon in through foundation cracks and other openings.

There are no immediate symptoms from exposure to radon. Smokers are at higher risk of developing Radon-induced lung cancer. Lung cancer is the only health effect which has been definitively linked with radon exposure. Lung cancer would usually occur years (5-25) after exposure. Radon is dangerous because it is undetectable; you cannot see, smell or taste it. High radon levels have been found in every state and problems can vary from area to area.

Testing is the only way to know if radon is present in your home. Short-term and long-term test kits can help homeowners test levels in their home and help them make informed decisions on possible mitigation. Mitigation systems involve a suction point, plastic ventilation pipe, and radon fan. A mitigation system must be installed by a licensed professional. Panhandle residents can request a free test kit from PPHD by calling 308-487-3600 ext. 108 or going online: https://tinyurl.com/2p9d97pn.

Wildfire Smoke

Wildfire smoke is a mixture of gaseous pollutants, hazardous air pollutants, water vapor, and particle pollution. Particle pollution is the cause of health hazards. Particle pollution is a mixture of solid and liquid droplets which are suspended in the air.

Health effects from wildfire smoke can be minor to relatively serious. Particle pollution affects the body's ability to remove inhaled foreign material and can worsen pre-existing conditions. Certain groups of people are at higher risk of health effects from wildfire smoke such as people with asthma or heart disease and:

- Children under 18
- Pregnant women
- Older adults
- People of lower socio-economic status
- Outdoor workers

Wildfire smoke during short-term exposure can cause breathing difficulties such as coughing or wheezing. Effects of a few days of exposure can cause bronchitis and reduced lung function as well as potential heart effects such as heart failure or heart attack. Exposure to smoke over longer periods of time can cause a drastic reduction in lung function and those with pre-existing conditions can have worsening health effects.

Air Quality Index

While mold and radon can be generally fixed to improve air quality, it is harder to predict the air quality during a wildfire due to wind, weather, and terrain. To monitor your air during a wildfire event, using the Air Quality Index (AQI), is the best way to stay informed about what activities or precautions need to be taken. The AQI is a nationally uniformed color-coated index that measures ozone and particle pollution. Typically, the higher the AQI number, the greater level of pollution and the greater the health concern. There are six categories on the AQI;

- Green (0-50): Good air quality, little or not air pollution risk.
- Yellow (51-100): Moderate, acceptable air quality but some risk for those unusually sensitive to air pollution.
- Orange (101-150): Unhealthy for sensitive groups, the general public is usually less affected.
- Red (151-200): Unhealth, some members of the general public may now experience health effects while sensitive groups can experience more serious health effects.
- Purple (201-300): Very unhealthy, there is an increased health risk for everyone
- Maroon (301 and higher): Hazardous, this is considered a health emergency condition and everyone is more likely to be affected.

Reducing exposure during poor air quality events is key to minimizing the impacts of particle pollution. Some steps can include consistently checking the air quality, checking to ensure your HVAC (heating, ventilation, and air condition) unit is filtering properly, using respirators, or buying portable air cleaners. Air quality can be monitored through the AirNow site from the EPA or by checking on air monitors installed throughout the Panhandle.

Several schools in the Panhandle area have installed PurpleAir monitors which show air quality in real-time. The general public can monitor these at any given time by visiting: https://map.purpleair.com. PurpleAir monitors measure real-time particulate matter concentrations and use the same color index as the AQI to show air quality.

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Source: https://www.cdc.gov/mold/faqs.htm
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