

How Indoor Air Quality Affects Lung Health

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Poor air quality indoors and out can have a serious impact on your health, especially your lungs. While smoking is the biggest risk factor for respiratory issues and cancer, daily exposure to airborne toxins can also increase your risk of developing both asthma and lung cancer.

There might not be much you can do to get rid of smog and wildfire smoke outdoors, but improving your home's indoor air quality can go a long way toward protecting your lung health and helping you breathe easier.

Indoor Air Quality

When we think of air pollution, we generally think of outdoor sources, such as smog from factories and traffic. But indoor air quality (IAQ) can be two to five times worse than the air outside, and multiple studies show that people spend between 80% to 90% of their time indoors during the day, primarily at home.

Industrial substances like VOCs (volatile organic compounds), radon, and asbestos, can be commonly found inside the home. In addition to increasing the risk of lung cancer, these carcinogens also contribute to asthma, as do indoor allergens such as pet dander, dust, and mold.

Although improved medical treatments have decreased the number of asthma-related deaths over time, asthma is becoming more common in both kids and adults. Scientists are not certain what is causing the rise in asthma rates. But the triggers for asthma attacks are well known. Read on to learn the steps you can take to reduce your exposure to them at home.

Indoor pollutants

Radon – From a health standpoint, radon may be the most significant indoor air pollutant. Radon is a radioactive gas generated naturally in the soil that enters the house from the ground. About 30% of lung cancer deaths in nonsmokers are linked to radon exposure. Fortunately, radon levels are low in Snohomish County, but testing your home for radon can give you peace of mind.

Asbestos – Asbestos is a naturally occurring mineral that forms into microscopic fibers. When asbestos fibers are disturbed, they can easily be inhaled and become lodged in the lungs. If your home was built before 1980, you can assume that it contains asbestos. Since this substance is only dangerous when disturbed, consider having a trained and accredited asbestos professional inspect your home before you undertake any kind of remodeling project.

VOCs – Volatile organic compounds include a wide variety of chemicals that are emitted as gases from thousands of commercial products in a process called “off-gassing.” Most off-gassing takes place when products are new (think of that new car or new furniture smell). Exposure to VOCs is most likely during renovation projects or after major purchases such as engineered woods, upholstered furniture, carpets, and many finishes.

In addition, VOCs are also commonly found in many cleaning agents, aerosols, and all scented products (including laundry detergent, fabric softeners/dryer sheets, lotions, candles, scented hand sanitizers, and more).

Common Allergens – Indoor allergens include pet dander, mold, and dust. Pet dander is microscopic bits of skin shed by furry or feathered animals. It is found even in homes where there are no pets because it attaches to fabrics and can be transported unknowingly. Mold thrives in the humid Pacific Northwest but is still most common in homes that have been flooded or where there have been leaks. Dust is ubiquitous and contains more than just small particles of dirt. Dead skin cells are a key component of dust, as well as the droppings and dead bodies of dust mites and other insects.

How to improve indoor air quality in your home

The most effective way to reduce exposure to indoor air pollutants in your home is source control. Choose cleaning and laundry products, paints, glues, and solvents that are certified as low-VOC or no-VOC.

Candles, incense, and essential oils

If you're a fan of scented candles or incense, be aware that the smoke from these items can generate hazardous levels of pollutants. Beeswax and soy candles may burn cleaner than paraffin, but the American Lung Association recommends LED flameless candles as the safest option.

If you use essential oils, know that these are, by definition, VOCs, so vaporizers and other oil-based scenting mechanisms are potential irritants as well.

For a safe way to add fragrance in your home, choose fresh flowers, preferably a variety that you and your family members aren't allergic to.

Laundry and cleaning products

Synthetic chemicals are still irritants, even if you're not allergic to them. To lower your VOC exposure with laundry and cleaning products, check out EWG's Healthy Living App and look for the Asthma and Allergy Friendly Certification logo.

Construction and remodeling

When you renovate, consult the EPA's Energy Savings Plus Health IAQ guidelines.

To avoid introducing asbestos to your home, shop for insulation and roofing from sustainable building suppliers and choose linoleum or other sustainable flooring materials instead of vinyl.

To minimize exposure to VOCs, avoid purchasing products that contain vinyl, foams, and engineered wood. When you do buy such products, let them off gas outdoors or in the garage before bringing them into the home.

If you replace your HVAC system, consider an energy-efficient heat recovery ventilator, also called air-to-air heat exchangers.

Allergens

To reduce the amount of indoor allergens in your home, practice good home hygiene: keep pets out of the bedroom to reduce your exposure to dander; wash curtains and bedding and vacuum and dust the whole house frequently; and clean HVAC filters regularly. Keep doors and windows open whenever temperatures and outdoor air quality allow.

Mold and dust

To reduce the chance of mold, check for leaks from the roof, plumbing fixtures, and sprinklers, and take care of them promptly. Keep an eye on upholstered furniture, curtains, rugs, and other places that dust and mold spores can collect. When you find mold, clean it up where possible, and replace items that cannot be properly cleaned.

Don't overwater plants – mold can grow and release spores from wet potting soil. (Although pleasant, houseplants are not really effective at cleaning indoor air.)

If you want to purchase an air purifier, look for one that does a good job of collecting pollutants (also known as a “high percentage efficiency rate”) and high airflow.

The importance of getting your lungs checked

After tobacco smoke and a family history, exposure to environmental air pollutants is a leading cause of lung cancer. We’re not just referring to outdoor pollution – indoor air quality (IAQ) can be 2-5x worse than the air outside and contributes to asthma, bronchitis, and other respiratory issues, and can increase a person’s risk of developing lung cancer (even for non-smokers).

Improving your home’s indoor air quality can go a long way toward protecting your lung health.

If you have chronic asthma, persistent cough or recurring respiratory problems, talk to your primary care provider about treatment for your breathing issues. If you are or have ever been a smoker, it’s important to get screened for lung cancer. A WWMG primary care provider or a pulmonary specialist can address any issues of concern and provide individualized treatment to help you breathe easier.

All, Family Practice, Pulmonary / Asthma

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