Primary Pollutants

The following indoor air pollutants pose health risks to people and pets.

Tobacco Smoke

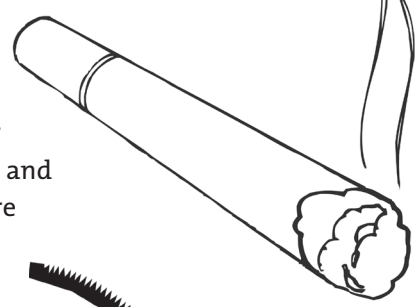
Smoke from cigarettes, pipes, and cigars contains many pollutants including inorganic gases, heavy metals, particulates, volatile organic compounds, and aromatic hydrocarbons. Unfortunately, people who don't smoke are still faced with the bad effects of breathing these pollutants. The latest EPA report says that secondhand tobacco smoke may cause 6,000 deaths and cases of cancer and heart disease each year in otherwise healthy nonsmokers.

Combustion By–Products

The fuels we use in our homes for heat, hot water, and cooking can release pollutants into our homes. Kerosene, natural gas, and oil can give off nitrogen and sulfur dioxides, carbon monoxide, and formaldehyde. Even wood burned in fireplaces gives off very fine particulates, which can be unhealthy to breathe.

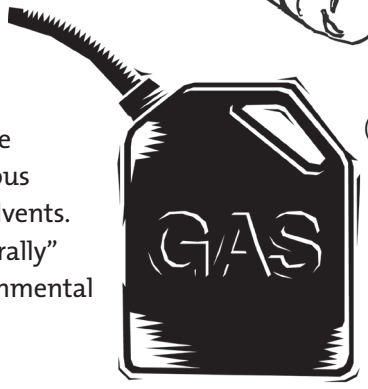
Biological Pollutants

Fungi and bacteria will grow in humidifiers and heating, ventilating, and air conditioning systems if these systems are not properly cleaned and maintained. These systems can also bring biological contaminants indoors and circulate them throughout a building. The contaminants can cause people to have allergic reactions to pollen, fungi, and animal dander (dandruff from animal hair, feathers, or skin); bacterial and viral infections; and reactions to chemical toxins that are released by fungi.



Formaldehyde and Other VOCs

Volatile organic compounds (VOCs) are made of atoms that are found in various products such as glues, paints, and solvents. Although these compounds are "naturally" derived, they may pose serious environmental and health threats when in high enough concentrations or in poorly ventilated enclosures. Formaldehyde, for example, is a common VOC found in furniture, foam insulation, plywood, carpets, drapes, particleboard, glues, and other building supplies. It irritates the eyes and nose, may cause respiratory ailments, and has been linked to cancer in laboratory studies. Other sources of VOCs are household cleaners and paints, wood finishes, pesticides, air fresheners; chemicals in carpeting and fabric; and dry-cleaned clothes. (Perchlorethyene, a VOC, is among the solvents used in the dry-cleaning process.)



Radon

Radon is a colorless, odorless radioactive gas that occurs naturally in certain types of bedrock and soils. Radon can be found almost anywhere in the United States and enters buildings through cracks and holes in foundations. Radon gas forms tiny radioactive particles that people can inhale and cause damage to lung tissue that can lead to lung cancer. According to the Environmental Protection Agency, testing your home is the only way to know if your health is threatened by radon.

Asbestos

Asbestos was once a commonly used building and insulation material (until the 1970s in the United States). It was often mixed with a cement-like substance and could be conveniently sprayed or plastered on ceilings or other surfaces. With time, asbestos starts to disintegrate and it releases tiny fibers that float in the air. They can be inhaled and can lodge deep in lung tissue, which may cause lung cancer and asbestosis, a chronic scarring of the lungs that hinders breathing.

(Adapted from *Environmental Resource Guide—Air Quality* for Grades 6-8 by permission of Air and Waste Management Association.)