

Does air pollution cause cancer?

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During the Utah winters, you can step outside and see a hazy cloud hovering over the valley. Contaminants or chemicals in the air come from a mix of human and natural sources and can harm our health. Air pollution causes a variety of poor health outcomes according to scientists, including increased cancer risk.

"Air pollution is associated with [oxidative stress](#) and inflammation in

cells that can lead to cell and [tissue damage](#)," says Anne Kirchhoff, Ph.D., MPH, researcher at Huntsman Cancer Institute and associate professor of pediatrics at the University of Utah (the U). "Specific types of air pollution can lead to certain types of cancer. For example, there is a lot of evidence now showing that [particulate matter](#), which is [solid particles](#) and liquid droplets in the air, exposure increases the risk of lung cancer."

Not only can pollution increase the risk for lung cancer, but the National Institute of Environmental Health Sciences reports it can also increase the risk for breast cancer, leukemia, and non-Hodgkin's lymphoma.

In 2013, the International Agency for Research on Cancer [declared](#) air pollution as carcinogenic, meaning it can cause cancer. Experts with the National Cancer Institute state that a carcinogen, mixed with other specific factors, such as exposure length and genetics, influence whether a person will develop cancer.

There are two prominent kinds of pollution, outdoor and indoor. Exhaust from cars, smoke from burning wood or forest fires, and industrial pollution are all outdoor pollutants. Indoor pollutants come from radon (a radioactive gas found in homes and buildings), some paints and cleaning supplies, and burning candles or wood in fireplaces. Though [air pollution](#) can certainly be harmful, there are things we can do to reduce our exposure and [cancer risk](#).

Kirchhoff says, "Keep an eye on local air quality reports—pollution levels can vary throughout the day so it's good to check before you head outside, especially if you have a preexisting condition like asthma or heart disease. Also, limit outside exercise during times of poor air quality."

Using a freestanding high efficiency particulate air filter and testing for

radon are ways to limit indoor pollution. Kirchhoff and other researchers also recommend making your voice heard. Advocate for better policies to protect public health.

Provided by University of Utah

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