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Secondary pollutants are not emitted directly. They form in the air when primary pollutants react or interact. One example is ground level ozone.

There are also pollutants that are both primary and secondary: that is, they are both emitted directly and formed from other primary pollutants. About 4 percent of deaths in the United States is the result of air pollution, says a study.

Air pollution can cause skin and eye allergies, cancer, lung disease, etc.

Primary pollutants produced by human activity include sulfur oxides, nitrogen oxides, carbon monoxide, carbon dioxide, volatile organic compounds, particulate matter, toxic metals like lead, cadmium and copper, chlorofluorocarbons, foul odors (from garbage, sewage and industrial processes) and radioactive pollutants. Secondary pollutants include particulate matter formed from gaseous primary pollutants and compounds in photochemical smog.

Smog is a form of air pollution. Nowadays it is caused by vehicular and industrial emissions. Ground level ozone and peroxyacetyl nitrate are other secondary pollutants. Persistent organic pollutants (POPs) are organic compounds that can withstand environmental degradation. Many activities are responsible for the formation of air pollutants.

These sources can be classified into two major categories. One is Anthropogenic sources (human activity) mostly related to burning different kinds of fuel and the other is Natural sources. The first includes power plants, factories, waste incinerators, furnaces, motor vehicles, marine vessels, aircraft, dust and controlled burn practices in agriculture and forestry

management. Fumes from paint, hair spray, varnish, aerosol sprays and other solvents are also responsible. Others include waste deposition in landfills, which generate methane and the military (nuclear weapons, toxic gases, germ warfare and rocketry). Natural sources include dust from natural sources, Methane (emitted by the digestion of food by animals like cattle), Radon gas from radioactive decay, etc.

Radon gas from natural sources can accumulate in buildings, especially in confined areas like the basement. It is the second most frequent cause of lung cancer, after cigarette smoking. Smoke and carbon monoxide from wildfires and volcanic activity, which produce sulfur, chlorine, and ash particulates, also cause air pollution.