

[Science](#). 1980 Aug 22;209(4459):931-3.

Ozone selectively inhibits growth of human cancer cells.

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Abstract

The growth of human cancer cells from lung, breast, and uterine tumors was selectively inhibited in a dose-dependent manner by ozone at 0.3 to 0.8 part per million of ozone in ambient air during 8 days of culture. Human lung diploid fibroblasts served as noncancerous control cells. The presence of ozone at 0.3 to 0.5 part per million inhibited cancer cell growth 40 and 60 percent, respectively. The noncancerous lung cells were unaffected at these levels. Exposure to ozone at 0.8 part per million inhibited cancer cell growth more than 90 percent and control cell growth less than 50 percent. Evidently, the mechanisms for defense against ozone damage are impaired in human cancer cells.

PMID: 7403859

[Indexed for MEDLINE]