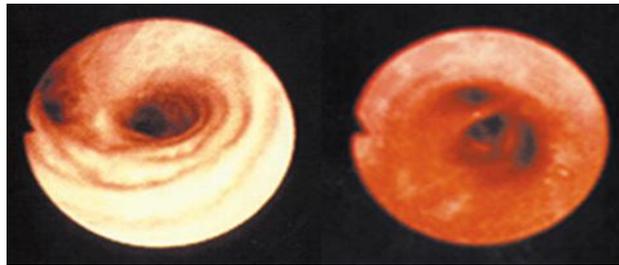


# HEALTH AND ENVIRONMENTAL IMPACT OF OZONE

Several groups of people are particularly sensitive to ozone—especially when they are active outdoors—because physical activity causes people to breathe faster and more deeply. In general, as concentrations of ground-level ozone increase, more and more people experience health effects, the effects become more serious, and more people are admitted to the hospital for respiratory problems. When ozone levels are very high, everyone should be concerned about ozone exposure.



Ozone can inflame the lung's lining. These photos show a healthy lung air way (left) and an inflamed lung air way (right).

## **Below is a listing of Health Effects of Ground Level Ozone**

- **Ozone can irritate your respiratory system**, causing you to start coughing, feel an irritation in your throat and/or experience an uncomfortable sensation in your chest.
- **Ozone can reduce lung function** and make it more difficult for you to breathe as deeply and vigorously as you normally would.

When this happens, you may notice that breathing starts to feel uncomfortable. If you are exercising or working outdoors, you may notice that you are taking more rapid and shallow breaths than normal.

- **Ozone can aggravate asthma.** When ozone levels are high, more people with asthma have attacks that require a doctor's attention or the use of additional medication. One reason this happens is that ozone makes people more sensitive to allergens, which are the most common triggers for asthma attacks. Also, asthmatics are more severely affected by the reduced lung function and irritation that ozone causes in the respiratory system.
- **Ozone can inflame and damage cells that line your lungs.** Within a few days, the damaged cells are replaced and the old cells are shed—much in the way your skin peels after sunburn.
- **Ozone may aggravate chronic lung diseases** such as emphysema and bronchitis and reduce the immune system's ability to fight off bacterial infections in the respiratory system.
- **Ozone may cause permanent lung damage.** Repeated short-term ozone damage to children's developing lungs may lead to reduced lung function in adulthood. In adults, ozone exposure may accelerate the natural decline in lung function that occurs as part of the normal aging process.

Source: <https://www.e-education.psu.edu/egee102/node/1977>