



Live Well, Work Well

Health and wellness tips for your work, home and life—brought to you by the insurance specialists at The Reschini Group

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PUBLIC HEALTH: REDUCING AIR POLLUTION

The air around us fills our lungs with oxygen and allows us to live. Clean air is essential for almost every living thing on the planet—both plants and animals. However, while engaging in certain activities, humans release pollutants into the air that are harmful and can cause problems for all living things.

Pollution comes in many forms and exists both outside and within the confines of our homes and workplace. Regardless of the cause, the effects of poor air quality are detrimental.

Outdoor Air Pollution

There are several types of outdoor air pollution that have serious implications for our health and the well-being of the environment.

- Smog
 - Caused by a chemical reaction between pollutants from a multitude of sources (predominantly exhaust and industrial emissions).
 - Urban areas suffer more from smog, especially in the hot summer months.
 - Geographic location, temperature, wind and weather factors affect how smog is dispersed in the atmosphere. Depending on how these factors interact, pollution can build to dangerous levels.

- Acid Rain
 - Sulfuric acid combines with water droplets in the air and becomes acidified. This damages plant leaves, poisons the soil and modifies the chemistry of the earth's water sources.
 - Acid rain can also harm trees and wildlife.
- Global Warming (a.k.a. the Greenhouse Effect)
 - As carbon dioxide is produced when fuels are burned, plants convert the gas back into oxygen. However, there is more carbon dioxide in the air from human activities than the plants can convert.
 - As carbon dioxide increases, the situation becomes worse. The buildup of carbon dioxide traps heat close to the surface of the earth and has traumatic effects on animal, plant and human life.
- Ozone Depletion
 - As chemicals are released into the air from items such as aerosol cans, cooling systems and refrigerator equipment, holes form in the ozone layer in the stratosphere (one of the layers in the earth's atmosphere).
 - Without the protection of the full ozone layer, these holes allow radiation from the sun to reach the earth. Ultraviolet radiation can be harmful to plants and animals, and can cause skin cancer in humans.



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Indoor Air Pollution

Americans spend approximately 80 to 90 percent of their time inside, according to the U.S. Department of Energy, which means that indoor pollutants are a serious concern. Since air circulation is often restricted inside, it is speculated that indoor pollutants are far worse for humans than poor outdoor air quality. In fact, the U.S. Department of Energy speculates that indoor air pollutant levels are 25 to 62 percent greater than outside levels and pose major health risks.

Sources of indoor air pollution include:

- Cigarette smoke
- Cooking fumes
- Heating appliances
- Building material vapors
- Paint fumes
- Furniture
- Radon

Dangers of Air Pollution

There are both short and long-term health problems resulting from poor air quality. Overall, the elderly, young children and people with asthma or heart or lung disease suffer more from poor air quality. However, the extent to which someone is truly affected depends on the amount of total exposure he or she has had. In other words, the harm is dependent on the duration of exposure to air pollution and the concentration of the chemicals in the air.

- Short-term Effects of Air Pollution:
 - Eye, nose and throat irritation
 - Upper respiratory infections (bronchitis and pneumonia)
 - Headaches
 - Nausea
 - Allergic reactions
 - Aggravation of existing medical conditions such as asthma or emphysema
- Long-term Effects of Air Pollution:
 - Chronic respiratory disease
 - Lung cancer
 - Heart disease
 - Brain, nerve, liver and kidney damage
 - Affected growth of the lungs in young children
 - Complicated existing medical problems in the elderly

Prevention

There are many things that you can do to reduce air pollution and restore air quality for future generations.

- Research the household products that you currently use. Determine whether they have harmful effects or interactions with the environment. If they do, discontinue use. If not, follow the safety instructions carefully and do not use them excessively.
- Before using building materials, review the harmful effects of each product and select those that are less harmful to the environment and your health.
- Monitor home and working environments to make sure that there are adequate air flow and proper exhaust systems installed. Adequate ventilation will significantly control indoor air pollution.
- Do not smoke, and steer clear of secondhand smoke.

Remember, this is a problem that affects us all. Through the efforts of scientists, legislators and citizens like you, air pollution can be reduced, and the environment can be preserved for generations to come.