

2008 Monthly ES&H Campaign: March

Exercising on “Bad Air Days”

Monday, 17th

During warmer weather, many areas experience days with elevated levels of ozone in the air we breathe. Nearly half the population of the United States resides in an area where the air sometimes fails to meet existing health-based standards. Ozone irritates lung tissue and can cause shortness of breath, wheezing, and coughing. Those with existing lung impairment (e.g., asthma, bronchitis, emphysema) are particularly susceptible to increased health concerns during periods of elevated ground-level ozone.

General Considerations- Exercise and Ozone

- Exercise and strenuous work require the body to intake more air for oxygen, making one more vulnerable to lung damage from ozone when elevated levels of this pollutant are present in the air.
- Even healthy adults may experience a 15 to 20 percent reduction in lung function from exposure to elevated levels of ozone over a several hour period. Repeated exposure to elevated levels of ozone may even cause lung tissue damage.
- Children have a faster rate of breathing than adults, so they have a greater potential for exposure to ozone.
- Ozone levels increase during the day because sunlight fuels the chemical reaction that forms it. As a result, it is best to exercise in the early morning on those days when elevated ozone levels are anticipated. If this isn't feasible, consider delaying your exercise until the late evening.

What is an “Ozone Action Day?”

An ozone action day is announced by government weather forecasters when atmospheric conditions promoting the formation of elevated levels of ozone are anticipated. The reason for announcing an “action day” is not only to encourage folks to exercise wisely (e.g., limit activity, workout indoors- or outdoors only in the early morning or late evening) but also to consider changes in other planned activities to help limit the potential for ozone to form. Voluntary actions that will help reduce the potential for ozone formation include:

- Limit driving- share a ride and/or combine errands into one trip. Take public transit if possible.
- Avoid refueling a vehicle during daylight hours and don't “top off” the fuel tank.
- Avoid using gasoline-powered equipment if possible. Lawn mowers and other gasoline-powered lawn and garden equipment emit more pollutants than many newer automobiles.
- Look for ways to reduce your energy consumption during the time of peak demand (e.g., consider running the dishwasher at bedtime rather than in the early evening) to minimize emissions from power plants.

Additional information regarding ozone action days in your specific location can be obtained by registering for a free daily e-mail on air quality provided by the United States Environmental Protection Agency. Visit <https://enviroflash.epa.gov/airnow/subscriber/Subscriber.do?method=start> for more information and to sign up.

By remaining abreast of local air quality forecasts and adjusting your actions (e.g., exercise regimen, driving habits) accordingly, you can help protect your respiratory health and minimize the extent of pollution in our air. Small changes in habits by each of us can have a dramatic, positive effect towards reducing and eventually eliminating ozone action days and the hazards that accompany these events.

Resources

<http://www.epa.gov/ARD-R5/naqs/o3info.htm>

<http://www.ozoneactiondays.org/health.htm>



Visit the Communications ES&H website for more information.