State of Illinois
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CHRONIC DISEASE BURDEN UPDATE

This update focuses on Air Quality Index, and how air quality affects health.

Air pollution comes from many sources, including fires, wood stoves, road dust, crushing or grinding operations, and tailpipes. It also can form in the atmosphere from pollution from power plants, industries, cars, trucks and construction equipment. Pollutants in the air take many forms. They can be gases, solid particles or liquid. Air pollution can be a health hazard to the population.

The Environmental Protection Agency (EPA) recognizes six commonly found particle air pollutants (often referred to as particulate matter, ozone, carbon monoxide, nitrogen oxides, sulfur dioxide and lead). These pollutants are able to get deep into the body and cause serious problems ranging from aggravated asthma, to heart attacks, to early death in people with heart or lung disease. Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in the United States. In general, exposure to air pollutants increases the likelihood of respiratory symptoms and breathing discomfort in sensitive groups. These symptoms include:

- Narrowing of the airways (bronchoconstriction)
- Asthma attacks
- Wheezing, chest tightness and shortness of breath

AIR QUALITY AND YOUR HEALTH

EPA has the Air Quality Index (AQI) for reporting daily air quality. It tells how clean or polluted the air is and the associated health effects of concern. The EPA calculates the AQI for five major air pollutants regulated by the federal Clean Air Act - particle pollution, carbon monoxide, nitrogen dioxide, ground-level ozone and sulfur dioxide. As shown in the table, EPA has established national air quality standards for these pollutants to protect public health.

AQI Value	AQI Category	AQI Color
0 - 50	Good	Green
51 - 100	Moderate	Yellow
101 - 150	Unhealthy for Sensitive Groups	Orange
151 - 200	Unhealthy	Red
201 - 300	Very Unhealthy	Purple
301 - 500	Hazardous	Maroon

Daily Air Quality Standard

Source: http://www.epa.gov/international/public-participation-guide/workshopPDFs/zell-aqi.pdf

AVOID EXPOSURE TO UNHEALTHY AIR

Simple steps can be taken to reduce exposure to unhealthy air. In general, you can reduce risk by reducing prolonged or heavy exertion.

Prolonged exertion is an activity that occurs over several hours and makes you breathe slightly harder than normal. Reducing prolonged exertion means reducing the time you spend on this type of activity and changing the activity, such as walking instead of jogging or jogging for half your usual time.

Heavy exertion: Is more intense activities that cause you to breathe hard.

* For more information on how the AQI is calculated, see "Guidelines for the Reporting of Daily Air Quality—the Air Quality Index (AQI)" in the "Publications" section of www.airnow.gov.