

Daily Union Article

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Title: Clear the Air – Part 1 of 2

For people with lung disease, the air quality in their outdoor environment can have a dramatic, if not extreme, effect on their health and well-being. Even for folks that don't have lung problems, the quality of the air we breathe can affect our health depending on the Air Quality Index (AQI) rating that is assessed daily throughout the country.

AQI is calculated daily by the Environmental Protection Agency (EPA) to identify the level of air quality in hundreds of locations across the country. This index tells you how clean or polluted your air is, and what associated health effects might be a concern for you. These health effects may occur in a matter of hours or may occur over a few days after breathing the polluted air. The EPA calculations for air quality are based on data collected on five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter), carbon monoxide, sulfur dioxide, and nitrogen dioxide. Each of these pollutants have had air quality standards assigned to them by EPA as a way to protect public health. Of these five major air pollutants, ground-level ozone and airborne particles are the greatest threat to human health in the United States.

There are 6 levels of AQI ratings running from good to hazardous. The Environmental Protection Agency (EPA) identifies each of the six levels with a descriptive word, a color, and a definition as it relates to the health impact it can have. The six levels and their descriptions follow:

- **"Good"** AQI is 0 to 50. Air quality is considered satisfactory, and air pollution poses little or no risk.
- **"Moderate"** AQI is 51 to 100. Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people. For example, people who are unusually sensitive to ozone may experience respiratory symptoms.
- **"Unhealthy for Sensitive Groups"** AQI is 101 to 150. Although general public is not likely to be affected at this AQI range, people with lung disease, older adults and children are at a greater risk from exposure to ozone, whereas persons with heart and lung disease, older adults and children are at greater risk from the presence of particles in the air.
- **"Unhealthy"** AQI is 151 to 200. Everyone may begin to experience some adverse health effects, and members of the sensitive groups may experience more serious effects.

- **"Very Unhealthy"** AQI is 201 to 300. This would trigger a health alert signifying that everyone may experience more serious health effects.
- **"Hazardous"** AQI greater than 300. This would trigger a health warning of emergency conditions. The entire population is more likely to be affected.

The Bureau of Air, as subdivision of the Kansas Department of Health and Environment (KDHE), provides real-time reports on the air quality in our state based on the five air pollutants EPA uses with the addition of a sixth monitored air pollutant, lead.

We are fortunate to have good overall air quality in Kansas. However, there are those occasional "bad air days" that result from our central location, prevailing southerly winds, and hot summer temperatures that tend to lead to an increase in airborne particles. One of the most effective ways Kansans can maintain good air quality is to maintain our vehicles to keep emissions as clean as possible. If you would like to check the air quality in Kansas on any given day, go to the following KDHE website to see the real time AQI in your area: <http://keap.kdhe.state.ks.us/airvision/>

Even though Kansas has an overall good AQI ranking, I wouldn't doubt that leaving my windows open during dry windy days may contribute to my own allergy-like symptoms I have experienced for the first time this year. But perhaps I should consider indoor air quality as a contributor, as well.

The Consumer Product Safety Commission (CPSC) reports there is *"a growing body of evidence indicating that the air within homes and other buildings can be more seriously polluted than the outdoor air in even the largest and most industrialized cities."*

Our American lifestyle results in the average person spending 90% of their time indoors. This can have significant implications for those with respiratory or cardiovascular diseases as well as for those people who spend the most time indoors such as the young, and the elderly.

The primary cause of poor indoor air quality is tied to the indoor pollution sources that release gases or particles into the air. When homes or buildings are poorly ventilated, there is not enough outdoor air coming in to dilute emissions from indoor sources and indoor pollutants are not carried out of the home or building, either.

There are a several things that could be indicators of poor air quality in a home. 1) occupants are experiencing health effects similar to those from colds or other viral diseases – especially if they appear after a person moves into a new residence, remodels or refurnishes a home, or treats a home with pesticides; 2) there are known

sources of air pollution in the home; 3) a person's lifestyle and activities contribute to indoor pollution, and; 4) there are signs of problems with the ventilation in your home.

Making sure your home is absent of air pollutants will help you feel better and rest easier. In next week's article, I will share some tips on what to do to ensure your home's indoor air has a "Good" AQI rating. Until next time, keep living resourcefully!