The Air Quality Index

Each day the US EPA monitors levels of air pollutants across the country and uses the Air Quality Index (AQI) to communicate local air quality and help people understand when to take action to protect their health.

<table>
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<th>Air Quality Index</th>
<th>Who Needs to be Concerned?</th>
<th>What Should I Do?</th>
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<tbody>
<tr>
<td>Good 0-50</td>
<td></td>
<td>It's a great day to be active outside.</td>
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</table>
| Moderate 51-100     | Some people who may be unusually sensitive to particle pollution.                | **Unusually sensitive people:** Consider reducing prolonged or heavy exertion. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier.  
**Everyone else:** It's a good day to be active outside. |
| Unhealthy for Sensitive Groups 101-150 | Sensitive groups include people with heart or lung disease, older adults, children and teenagers. | **Sensitive groups:** Reduce prolonged or heavy exertion. It's OK to be active outside, but take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath.  
**People with asthma** should follow their asthma action plans and keep quick relief medicine handy.  
**If you have heart disease:** Symptoms such as palpitations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact your health care provider. |
| Unhealthy 151 to 200 | Everyone                                        | **Sensitive groups:** Avoid prolonged or heavy exertion. Move activities indoors or reschedule to a time when the air quality is better.  
**Everyone else:** Reduce prolonged or heavy exertion. Take more breaks during all outdoor activities. |
| Very Unhealthy 201-300 | Everyone                                      | **Sensitive groups:** Avoid all physical activity outdoors. Move activities indoors or reschedule to a time when air quality is better.  
**Everyone else:** Avoid prolonged or heavy exertion. Consider moving activities indoors or rescheduling to a time when air quality is better. |
| Hazardous 301-500   | Everyone                                        | **Everyone:** Avoid all physical activity outdoors.  
**Sensitive groups:** Remain indoors and keep activity levels low. Follow tips for keeping particle levels low indoors. |

*Sensitive groups include people with heart and lung disease, older adults and children. Source: airnow.gov*
Guide to the Air Quality Index (AQI)

The EPA monitors air quality | Air pollutants monitored by the EPA include particle pollution, ground-level ozone, carbon monoxide, sulfur dioxide and nitrogen dioxide. The EPA has established National Ambient Air Quality Standards (NAAQS) to protect public health from poor air quality.

The EPA reports air quality data to the public using the AQI | Pollutant concentration data from monitoring stations and the NAAQS are used to determine an AQI value for each pollutant, ranging from 0-500. A color-coded scale is used to communicate air quality, from good (green) to hazardous (purple), to help people understand when to take action to protect their health.

Guide to using airnow.gov to monitor air quality

The public can access current AQI conditions or the AQI forecast at airnow.gov | Ground-level ozone and particle pollution are the two categories of air pollution that pose the greatest threat to human health in this country. Each day, the AQI reported at airnow.gov is accompanied by a health message that is determined by the pollutant (ozone or particle pollution) with highest AQI value.

Let’s look at AQI data from a recent summer day in a major metropolitan area to learn how to use the AQI to plan outdoor activities.

Current Air Quality
Under “Current Conditions” you can view the observed AQI (at 11:00am) for ozone and particle pollution along with a health message. In this example the AQI for particle pollution (PM$_{2.5}$) is driving the health message on this day.

Forecasted Air Quality
Weather data as well as information about local air quality events (e.g. wildfires) are used to generate an air quality forecast. Under “Air Quality Forecast” you will see today’s and tomorrow’s forecasted AQI for ozone and particle pollution. In this example you’ll notice that while the forecasted AQI (54) for this day is similar to the observed (“current”) conditions (53), the pollutant predicted to drive the day’s health messaging was ozone rather than particle pollution (PM$_{2.5}$).