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What is AQI?

Guide to understanding the Air Quality Index



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AQI, or Air Quality Index, is a system for translating sometimes confusing or unintuitive pollutant concentration measurements, into one easy-to-understand scale to clearly represent the health risk posed by ambient air pollution. The index formula usually considers up to 6 main pollutants (PM2.5, PM10, carbon monoxide, sulfur dioxide, nitrogen dioxide and ground level ozone), and calculates the respective health risk (or AQI number) for each one at any given time. The overall AQI number at a given moment is dictated by the "riskiest" pollutant, with the highest AQI number.

The index ranges from 0 to 500, where high index values indicate higher levels of air pollution and higher potential for adverse health effects. Any value larger than 300, for example, is considered to be hazardous, while an AQI value of 0-50, on the other hand, represents good air quality.

AQI is computed in different ways around the world. China and America have the two most widely used systems. Both are calculated weighting the six key pollutants. The results of these two functions differ only in AQI scores of 200 and below.

Since the American index system yields higher scores for AQI's under 200, it is thought to be more strenuous. For this reason, the American index has become the general world standard.

AirVisual uses the US EPA National Ambient Air Quality Standards to calculate AQI and attribute code color. Both US and Chinese AQI systems are available on the AirVisual app and Node.

The standards are as follows:

0-50, "Good"

Air quality is satisfactory and poses little or no health risk. Ventilating your home is recommended.

Recommendations

Enjoy your usual outdoor activities. We recommend opening your windows and ventilating your home to bring in fresh, oxygen-rich air.

51-100, “Moderate”

Air quality is acceptable and poses little health risk. Sensitive individuals should avoid outdoor activity as they may experience respiratory symptoms.

Recommendations

Sensitive groups should greatly reduce outdoor exercise. Ventilation is discouraged, and windows should be closed to avoid dirty outdoor air.

101-150, “Unhealthy for Sensitive Groups”

General public and sensitive individuals in particular are at risk to experience irritation and respiratory problems.

Recommendations

The general public should greatly reduce outdoor exertion. Sensitive groups should avoid all outdoor activity and should take care to wear a pollution mask outdoors. Ventilation is discouraged. Air purifiers should be turned on if indoor air quality is unhealthy.

151-200, “Unhealthy”

Increased likelihood of adverse effects and aggravation to the heart and lungs among general public - particularly for sensitive groups.

Recommendations

Everyone should avoid outdoor exercise and take care to wear a pollution mask outdoors. Ventilation is discouraged. Air purifiers should be turned on.

201-300, “Very Unhealthy”

General public will be noticeably affected. Sensitive groups will experience reduced endurance in activities. These individuals should remain indoors and restrict activities.

Recommendations

Everyone should avoid outdoor exercise and take care to wear a pollution mask outdoors. Ventilation is discouraged. Air purifiers should be turned on.

301-500+, “Hazardous”

General public and sensitive groups are at high risk to experience strong irritations and adverse health effects that could trigger other illnesses. Everyone should avoid exercise and remain indoors.

Recommendations

Everyone should avoid outdoor exercise and take care to wear a pollution mask outdoors. Ventilation is discouraged. Air purifiers should be turned on.

***Sensitive groups include children, elderly and pregnant people or those suffering from cardiac or pulmonary diseases.*

Air Quality Index (AQI) icons*

**Good**

0 - 50

Little to no health risk**Unhealthy**

151 - 200

Harmful for sensitive groups, reduced outdoor activity**Moderate**

51 - 100

Sensitive individuals may experience irritations**Very Unhealthy**

201 - 300

Everyone can be affected. Avoid heavy outdoor activity**Unhealthy for Sensitive Groups****

101 - 150

Sensitive groups should limit outdoor exertion**Hazardous**

301+

Serious risk of respiratory effects. Everyone should avoid outdoor activities

** Following US EPA Standards for Particle Pollution to calculate AQI*

***Sensitive groups include people with respiratory or heart disease, children and the elderly*

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Did this answer your question?



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