References:

* <https://en.wikipedia.org/wiki/Air_quality_index>

Different countries have different national air quality standards like Canada, Singapore and Malaysia. Thus they have different air quality indices. An air quality index (AQI) is used by government agencies to tell the citizens about how polluted the air they breathe in is or how polluted it can get. The AQI values are received from an air monitor, which gathers an air pollutant concentration over a specified average time period. The AQI varies in different time; it can increase due to an increase of emissions (during rush hours like school recess time) and might be less in number during the night time.

AQI values by the agencies are typically grouped into ranges. All the ranges are assigned a color code. They also provide a general standardized public health advice and descriptions.

**India:**

The AQI values are categorized in six different categories. The categories are Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe. AQI have proposed eight pollutants to be considered in a 24-hourly average time they are:

* PM10
* PM2.5
* NO2
* SO2
* CO
* O3
* NH3
* Pb(lead)

|  |  |
| --- | --- |
| **AQI** | **Associated Health Impacts** |
| Good (0–50) | Minimal impact |
| Satisfactory (51–100) | May cause minor breathing discomfort to sensitive people. |
| Moderately polluted (101–200) | May cause breathing discomfort to people with lung disease such as asthma, and discomfort to people with heart disease, children and older adults. |
| Poor (201–300) | May cause breathing discomfort to people on prolonged exposure, and discomfort to people with heart disease. |
| Very poor (301–400) | May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases. |
| Severe (401–500) | May cause respiratory impact even on healthy people, and serious health impacts on people with lung/heart disease. The health impacts may be experienced even during light physical activity. |

**Canada:**

The Air Quality Health Index provides a number from 1 to 10+ to indicate the level of health risk associated with local air quality. When the amount of air pollution is abnormally high, the number may exceed 10.

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| --- | --- | --- | --- |
| **Health Risk** | **Air Quality Health Index** | **Health Messages** | |
|  |  | **At Risk population** | **\*General Population** |
| **Low** | **1–3** | **Enjoy** your usual outdoor activities. | **Ideal** air quality for outdoor activities |
| **Moderate** | **4–6** | **Consider reducing** or rescheduling strenuous activities outdoors if you are experiencing symptoms. | **No need to modify** your usual outdoor activities unless you experience symptoms such as coughing and throat irritation. |
| **High** | **7–10** | **Reduce** or reschedule strenuous activities outdoors. Children and the elderly should also take it easy. | **Consider reducing** or rescheduling strenuous activities outdoors if you experience symptoms such as coughing and throat irritation. |
| **Very high** | **Above 10** | **Avoid** strenuous activities outdoors. Children and the elderly should also avoid outdoor physical exertion. | **Reduce** or reschedule strenuous activities outdoors, especially if you experience symptoms such as coughing and throat irritation. |