AIR QUALITY TIPS

Same Air, Different Story

Why air quality apps don't always agree, and how to find the reading that matters for you

Know the official scale

EPA's Air Quality Index (AQI): one number, one color. Higher means worse air.

0–50 Good	Enjoy time outside.
51–100 Moderate	Unusually sensitive people: consider lighter outdoor activity.
101–150 Unhealthy for Sensitive Groups	Sensitive groups: cut back on long or intense outdoor activity.
151–200 Unhealthy	Everyone: cut back. Sensitive groups: avoid long or intense outdoor activity.
201–300 Very Unhealthy	Everyone: avoid long or intense activity. Sensitive groups: stay indoors.
301+ Hazardous	Everyone: avoid outdoor activity.

Sensitive groups include people with asthma or heart or lung disease, children and teens, older adults, pregnant people, and people who work or exercise outdoors.

One number, one pollutant

The AQI number represents just one pollutant at a time, such as ozone or particles (smoke and dust). When several are measured, the overall AQI shows the worst one as a summary.

Check which pollutant you're seeing. It changes how to protect yourself:

Ozone: Builds on hot, sunny afternoons across a whole region. Wildfire smoke can make it worse. Plan outdoor activity for mornings.

Particles (smoke, dust): Can spike any time and be very local. They get indoors too: close windows and run an air purifier if you have one.

More than one pollutant can be elevated at a time. Check individual pollutant values if you're sensitive.

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Why your apps may disagree

Different monitors. Official monitors and low-cost sensors measure air quality differently (see below).

Different scales and labels. Some commercial apps use their own scales, so “Poor” or “Moderate” may not mean the same thing everywhere.

Unknown data sources. Some commercial apps mix monitor types or use their own methods without saying how, so you can’t always tell what the number is based on.

Different timing. Some maps update every few minutes; others average over hours. During fires or fireworks, one map may show bad air hours before another.

Sensors can show a trend; official monitors provide the official AQI

A low-cost sensor near you can show that the air on your block is getting worse, often before official maps do. But its exact number may be off. Every kind of monitor reads a little differently. Low-cost sensors can read too high in heavy smoke or humidity, so EPA corrects their data. The AirNow Fire and Smoke Map shows these corrected sensor readings alongside official monitors, so you can compare them. Official monitors are the most accurate, but there are few in each area and they can miss some local pollution, like from a fire, a busy road, or an industrial site.

Use sensors to spot changes. Use official sources for the official AQI.

4 smart habits

1

Start with official sources.

AirNow.gov for the AQI and forecasts, including ozone. **Fire and Smoke Map** (fire.airnow.gov) for smoke and particles.

2

Look for the EPA scale.

If an app uses different words, compare its number to the chart.

3

When in doubt, play it safe.

If sources disagree or several pollutants are high, and you or your child is sensitive, follow the more protective reading.

4

Check again.

Air changes hour to hour. Check before you head out and again later.

Based on the AIRI study *Same Air, Different Story* (2026). Developed by the Atmospheric Interdisciplinary Research Institute (AIRI) · airiconsulting.com

General information only. Follow guidance from your health care provider and local health and air quality agencies.