Understanding AQI Levels

AQI levels are typically categorized into ranges with corresponding color codes and health advisories:

AQI Value	Level	Health Implications
0–50	Good	Air quality is considered safe; no health impacts expected.
51–100	Moderate	Acceptable air quality; some pollutants may affect sensitive individuals.
101–150	Unhealthy for Sensitive Groups	Sensitive groups (children, elderly, people with respiratory conditions) may experience health effects.
151–200	Unhealthy	Health effects may be felt by everyone; sensitive groups may experience more serious effects.
201–300	Very Unhealthy	Health alert: serious effects possible for everyone; sensitive individuals at high risk.
301+	Hazardous	Emergency conditions: everyone may experience severe effects, avoid outdoor activities.

Each range reflects potential health impacts and suggests precautions individuals should take to minimize exposure.

Personal Precautions and Remedial Measures Based on AQI Levels

When AQI levels are above normal, here's how individuals can respond at each level:

AQI 51–100 (Moderate)

- **Precautions**: Sensitive groups (those with asthma, respiratory conditions, or heart disease) should avoid prolonged outdoor activities.
- **Actions**: Limit outdoor exercise to times when pollution levels are lower (e.g., early morning or late evening).

AQI 101–150 (Unhealthy for Sensitive Groups)

- **Precautions**: Sensitive groups should minimize outdoor exertion; people with respiratory or cardiovascular conditions should stay indoors if possible.
- **Actions**:
    - Wear a mask if going outside is necessary.
    - Keep windows closed and use an air purifier indoors.
    - Limit physical activity outdoors.

AQI 151–200 (Unhealthy)

- **Precautions**: Everyone should avoid prolonged outdoor activities; sensitive individuals should stay indoors.
- **Actions**:
    - Stay indoors, especially in air-conditioned spaces with air filters.
    - If possible, work from home or avoid commuting during peak pollution hours.
    - Avoid smoking, burning candles, or using gas stoves without ventilation indoors.

AQI 201–300 (Very Unhealthy)

- **Precautions**: Health warnings apply to all individuals; everyone, particularly sensitive individuals, should remain indoors.
- **Actions**:
  - Limit opening doors and windows to prevent outdoor air from entering.
  - Use high-efficiency particulate air (HEPA) purifiers indoors to filter fine particles.
  - Avoid any form of outdoor physical exertion, including exercise.

AQI 301+ (Hazardous)

- **Precautions**: Emergency conditions apply; all individuals should avoid outdoor activities. Sensitive groups should take extra precautions indoors.
- **Actions**:
  - Consider wearing an N95 mask if going outside is unavoidable.
  - If possible, set up air purifiers in multiple rooms, focusing on spaces where you spend the most time.
  - Avoid cooking or activities indoors that may generate smoke or fumes.

General Tips for Individuals to Reduce Exposure and Improve Indoor Air Quality

1. **Use Air Purifiers**: High-quality air purifiers with HEPA filters can significantly reduce indoor pollutants. Choose air purifiers rated for the room size where you spend most of your time.
2. **Seal Gaps and Ventilate Smartly**: Close windows and doors when AQI levels are high. During lower AQI periods, ventilate to let in fresh air and clear indoor pollutants.
3. **Wear Masks**: Use N95 or N99 masks when stepping outdoors in high AQI conditions. Cloth masks do not provide sufficient filtration for PM2.5 particles.
4. **Create Indoor Green Spaces**: Houseplants like spider plants, aloe vera, and peace lilies can absorb some pollutants and improve indoor air quality, though their effect is limited.
5. **Limit Indoor Pollution Sources**: Avoid burning candles, incense, or smoking indoors. Reduce the use of gas stoves, and use exhaust fans if you need to cook during high AQI days.
6. **Use Wet Cleaning Techniques**: Dusting and vacuuming can stir up particles; instead, use wet mops and cloths to clean surfaces to minimize airborne dust indoors.
7. **Stay Hydrated and Eat Antioxidant-Rich Foods**: Air pollution can increase oxidative stress in the body. Drinking plenty of water and eating foods rich in antioxidants, like fruits and vegetables, may help mitigate some of these effects.

Additional Personal Actions to Support Long-Term Air Quality Improvement

1. **Reduce Car Usage**: Carpool, use public transportation, cycle, or walk when possible to reduce vehicular emissions.
2. **Avoid Open Burning**: Refrain from burning waste materials, as it contributes to local air pollution.
3. **Advocate for Green Spaces**: Support or volunteer for tree-planting initiatives in your community, as green spaces help absorb carbon dioxide and filter air pollutants.

Supporting Broader Community and Policy Efforts

Air quality improvement requires collective action. Support policies and community programs aimed at reducing pollution, such as green transportation initiatives, enforcement of industrial emission standards, and promotion of renewable energy sources. Engaging in community efforts and advocating for policies that address air pollution can amplify these efforts, leading to better air quality for all.