**Key Health Information**

Risk factors increasing risk of health conditions associated with air pollution:
- High levels of PM$_{10}$ or smaller
- Pre-existing health problems
- Allergies / sensitivities

Groups particularly vulnerable to air pollution:
- Outdoor workers and athletes
- Children and elderly
- Pregnant women and their unborn children

### Actions to Reduce Your Contribution

#### Manage waste:
- Minimise waste & recycle inorganic trash

#### Cook and heat clean:
- Avoid burning coal or biomass (e.g. wood)

#### Move mindfully:
- Use public transport, low or no emission vehicles or try to cycle or walk if possible

#### Conserve energy:
- Turn off lights and electronics. Use LED bulbs, if available

#### Call for change:
- On policies for national air quality & emissions standards to meet WHO guidelines

#### Where to find further air quality information

Air quality info by city can be found at [www.cnemc.cn](http://www.cnemc.cn), or using dedicated APPs

The US Embassy locally monitors PM$_{2.5}$ at its compound in Chaoyang with real-time AQI published at [www.aqicn.org/city/Beijing/us-embassy/](http://www.aqicn.org/city/Beijing/us-embassy/)

For more info & advice on air pollution, its health effects & ways to protect yourself, see the UN in China’s dedicated webpage at [www.un.org.cn/article/content/view?id=479](http://www.un.org.cn/article/content/view?id=479)

In-depth guides on Air Pollution by the US Environmental Protection Agency can also be found at [www.epa.gov/environmental-topics/air-topics](http://www.epa.gov/environmental-topics/air-topics)

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**AQI**

<table>
<thead>
<tr>
<th>AQI</th>
<th>Air Quality</th>
<th>Health Concern &amp; Actions Advised</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 50</td>
<td>Good</td>
<td>Little or no concern – no action needed</td>
</tr>
<tr>
<td>51 - 100</td>
<td>Moderate</td>
<td>Mild concern for HSI: limit prolonged outdoor exertion and consider protection</td>
</tr>
<tr>
<td>101 - 150</td>
<td>Unhealthy for VSG</td>
<td>Moderate concern for VSG: limit outdoor exertion and use protection</td>
</tr>
<tr>
<td>151 - 200</td>
<td>Unhealthy</td>
<td>Mild concern for GP: consider protection</td>
</tr>
<tr>
<td>201 - 300</td>
<td>Very Unhealthy</td>
<td>High concern for VSG: avoid prolonged outdoor exertion and use protection</td>
</tr>
<tr>
<td>301 - 500</td>
<td>Hazardous</td>
<td>High concern for GP: avoid prolonged outdoor exertion and use protection</td>
</tr>
<tr>
<td>&gt; 500</td>
<td>Beyond Index</td>
<td>Extremely high levels of PM$_{2.5}$</td>
</tr>
</tbody>
</table>

HSI: Highly-Sensitive Individuals | VSG: Vulnerable & Sensitive Groups | GP: General Public

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**Symptoms & Signs to Watch for**

**General problems** include sore eyes, nose & throat, nausea, headaches, fatigue and poor athletic performance

Repeat coughs, wheezing & difficulty breathing or shortness of breath may indicate a lung condition

Shortness of breath with chest tightness or pain can also be associated with some heart problems

Air pollution may also affect immune systems increasing risk of infections, and has been shown to increase the risk of cancer and stroke

**What to Do**

- If you have any health conditions:
  - Keep your doctor informed
  - Take your medicine regularly
  - Keep inhalers handy

- If you develop new persistent and inexplicable symptoms:
  - Seek a doctor’s professional medical advice

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Air pollution doesn't just kill; it also causes some of the most common health problems found across all age groups
What Makes Air Pollution a Problem?
It Causes 1 in 9 Deaths

Annually, as many as 6.5 million global deaths are associated with indoor and outdoor air pollution. Air pollution is the greatest environmental health crisis we face and causes some of our most common illnesses.

Air pollution may not always be visible, but it can be deadly.

Pollutants of major health concern include Particulate Matters (PM), Ozone (O₃), Nitrogen Dioxide (NO₂), and Sulphur Dioxide (SO₂), amongst others.

The Air We Breathe

8 out of 10 people living in cities globally breathe air that’s bad for health. In Beijing, average PM₂.₅ in 2016/2017 was 73μg/m³ --- that’s 7.3x WHO air quality guidelines!

Where does air pollution come from?

In China, main sources of ambient air pollution are emissions from industry, traffic & household fuel burning. Pollutants of major health concern include Particulate Matters (PM), Ozone (O₃), Nitrogen Dioxide (NO₂), and Sulphur Dioxide (SO₂), amongst others.

What is AQI?

Air Quality Index (AQI) is a number based on the level of major pollutants in the atmosphere at any time & indicates how polluted the air is. The higher the AQI, the more people likely to experience increasingly severe health effects.

Protecting Yourself against Air Pollution

Assess your Risk

A quick checklist for assessing risk to air pollution is:

- **Location**: will you be indoors or outdoors?
- **Air Quality**: what’s the AQI in your home & local area?
- **Activity**: prolonged strenuous activity can increase inspiration of pollutants in the air
- **Equipment**: can help protect from inhaling pollutants

Monitor the Air you Breathe

Various smartphone apps and online websites show real-time **Outdoor Air Quality readings**

- These are gathered from official sources that measure AQI across different areas

**Indoor Air Quality** can be checked with Indoor Air Quality Monitoring Devices

- Try to pick one that’s easy to use and has sensors for the main pollutants, such as PM₂.₅

Reduce Exposure to Pollutants with some Simple Steps

- Make sure there’s good ventilation at home/work
- Avoid fuel-burning appliances & smoking indoors
- Vacuum regularly
- Keep windows & doors closed when AQI is high
- Sleep & exercise in a clean room indoors
- Wash your face after being outside

Use Effective Equipment

Two key pieces of equipment that can help cut exposure are:

- **Facemasks**: which should make a tight seal over nose & mouth, as gaps allow pollution in and so reduce their effect
  - Check both filter AND mask material are able to keep out PM₂.₅ (quality is measured by US NIOSH/EU FFP ratings)
  - Make sure masks are well-ventilated
  - Ensure you pick appropriate mask sizes for your children and consider child-friendly designs
  - Consider changing your facemask if and when:
    - It gets harder to breathe through the mask
    - The mask gets dirty
    - The frame becomes deformed

- **Air Purifiers or ‘Cleaners’**: are typically portable devices, designed to remove pollutants from the air
  - Purifiers can easily be moved between rooms and used as needed
  - Make sure they’re kept clean & filters are changed regularly
  - Try to choose devices that:
    - Are suitable for the size of your home (capacity of air purifiers is measured by CADR ratings)
    - Operate by mechanical filtration (these are considered safer than electronic versions)
  - Air purifiers might rarely be built into a home’s central heating, ventilation & air-conditioning (HVAC) system

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