

AIR POLLUTION HEALTH ALERTS

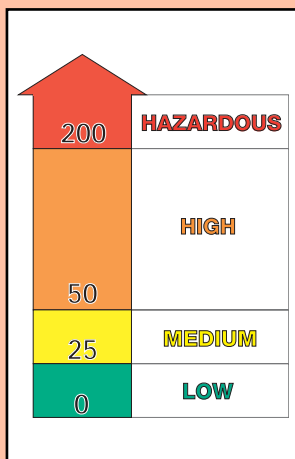
What they mean to you

Take note of regular air pollution reports and health alerts. Learn about the health effects of air pollution and the steps you can take to reduce those effects.

While air pollution levels in the Sydney region are generally quite low compared to large cities overseas, there are a number of days each year when people sensitive to the effects of air pollution are likely to feel its impacts. Extreme episodes of air pollution, such as during prolonged bushfires, can affect everyone's health.

How to get up-to-date air quality reports

The Department of Environment and Conservation¹ (DEC) issues air pollution reports for Sydney, Illawarra and the Lower Hunter twice daily. These reports are in the form of the Regional Pollutant Index (RPI) and are available on the internet², via a freecall line³ and in the *Sydney Morning Herald*. They can also be heard on some TV and radio broadcasts.



The RPI rates air pollution as LOW, MEDIUM or HIGH by comparing pollutant levels to health guidelines or environmental goals. On clear windy days the RPI is usually in the LOW range (0–24). When the air is still during hot weather or on cold nights, the RPI is often in the MEDIUM range (25–49), and on several days a year is in the HIGH range (50 or higher). The RPI is usually only considered HAZARDOUS for health when pollutant levels are very high, such as during bushfires.

Are there different types of air pollution?

Air pollution is a complex mixture of chemicals and particles. Its composition can vary greatly, depending on the season, the weather and the different types and numbers of sources. Three air pollutants, ozone⁴, nitrogen dioxide and fine particles, are taken into account in the calculation of the RPI. These pollutants have associated health effects.

Ozone at ground level is the product of the interaction between sunlight and emissions from sources such as motor vehicles and industry. Ozone is more readily formed during the summer months and reaches its highest concentrations in the afternoon or early evening. If we breathe in too much ozone, it can irritate the lungs and can cause coughing, pain on taking a deep breath or reduced exercise tolerance.

Nitrogen dioxide arises from the combustion of fuel in motor vehicles and industry. It is found at highest concentrations near busy roads and can also be high indoors when unflued gas appliances are used. Nitrogen dioxide also irritates the lungs and makes people with asthma more susceptible to lung infections and reactions to pollens and exercise.

Fine particle pollution is mainly from motor vehicles, wood burning heaters and industry. It can reach extremely high concentrations during bushfires. Fine particles irritate the lungs, but can also have a negative impact on the blood and the heart.

Who is affected by air pollution?

Everyone can potentially be affected by air pollution when concentrations of pollutants are very high. Research shows that different groups of people are sensitive to different types of air pollution. The types of air pollution that reach HIGH concentrations in our region are most likely to affect people with:

- asthma
- cardiovascular disease (angina, partially blocked arteries, strokes)
- chronic obstructive pulmonary disease (emphysema, chronic bronchitis).

Different pollutants affect these groups differently. For example, several of the pollutants may trigger symptoms in people with asthma, whereas people with cardiovascular disease are most likely to be affected by particle pollution.

What is an 'air pollution health alert'?

When the RPI is likely to be in the HIGH or HAZARDOUS range, a health alert is issued. When in the HIGH range the alert targets the group(s) known to be sensitive to that type of pollution, and provides advice to watch for symptoms, have reliever medicine nearby, and seek medical advice if any symptoms that do arise don't settle by using reliever medication and resting. The alert also states whether remaining indoors will help to reduce exposure.

If the RPI is in the HAZARDOUS range, the alert is relevant to everyone. For sensitive groups the advice given in the HIGH alert still applies, but additionally it includes advice on staying inside and limiting exercise.

Six simple steps to help protect you from air pollution

1 Get to know how sensitive you are to air pollution

- Take note of the RPI – as you do the daily temperature or UV index.
- See if you get symptoms on days when the RPI is higher – or one or two days after – and whether you feel better when the RPI is low.

2 Plan activities when and where air pollution levels are lower

- If you are sensitive to ozone, try exercising in the mornings or indoors on summer days when the RPI is HIGH due to ozone.
- Fine particle pollution is harder to avoid, but it will be lower away from busy roads and even lower in air-conditioned buildings.

3 Change your activity level

- If pollutant levels are HIGH you can reduce how much air pollution you breathe by choosing an activity that is less demanding – for example, walk instead of jog; or exercise for a shorter time.

4 Listen to your body

- If you get symptoms during exercise, stop your activity. Find a less demanding activity or wait until pollution levels drop.
- Take note of air pollution health alerts – they include information on who is likely to be affected and advice on what to do.
- Make sure you have reliever medication at hand to use on HIGH pollution days if you need to.

5 Create a clean 'indoor air zone'

Eliminate sources of air pollution from inside your home:

- Don't allow anyone to smoke inside.
- Use electric or **flued** gas heating.
- Choose low emission paints; for other home decorating needs, choose low emission products, if available.
- Open windows when cooking or use a kitchen exhaust that is ducted outdoors.

If you can eliminate air pollution from the indoor sources listed above, closing windows and doors and using a reverse cycle air conditioner may help reduce pollution levels in your home.

6 Talk with your doctor

- You could include actions to follow on air pollution alert days in your management plan.
- If you will be exercising more than usual, discuss this with your doctor to make sure that air pollution levels are taken into account.
- If you have symptoms during a certain activity, ask your doctor if air pollution could be affecting you.

An example of a health alert you may hear

'The Department of Environment & Conservation report that air pollution levels today were HIGH with an index of 52 due to ozone in Sydney's South West. Ozone levels are predicted to be HIGH tomorrow. NSW Health advise that this level of air pollution is unhealthy for sensitive people, and could cause symptoms, especially in people with asthma. Levels will be lower indoors. People with asthma should avoid exercising outdoors. If you have symptoms of asthma, shortness of breath, or coughing, you should rest and use your reliever medication. If symptoms persist, seek medical advice.'

For more information

- NSW Health website
<http://www.health.nsw.gov.au/living/airpollution.html>
- Air pollution reports and health alerts
<http://www.environment.nsw.gov.au/airqual/aqupd.asp>
- NSW State of the Environment Report
<http://www.environment.nsw.gov.au/soe/soe2003/chapter3/>
- Bushfire Smoke fact sheet
http://www.health.nsw.gov.au/pubs/factsheet/pdf/bushfire_fs.pdf
- Wood Smoke fact sheet
http://www.health.nsw.gov.au/pubs/factsheet/pdf/wood_smoke_pub.pdf
- Unflued Gas Heater fact sheet
http://www.health.nsw.gov.au/pubs/2004/pdf/gas_heaters_fs.pdf
- Smokefree Zone
<http://www.smokefreezone.org/>
- Asthma & Air Pollution. How you can reduce exposure. Australian Government Department of Health and Ageing. Access at www.NationalAsthma.org.au or contact your local Asthma foundation on 1800 645 130 (Publication date February 2005).
- Asthma Foundation of NSW
<http://www.asthmansw.org.au/> or 1800 645 130 (toll free)
- The Australian Lung Foundation
<http://www.lungnet.com.au/>
- The National Heart Foundation
<http://www.heartfoundation.com.au/>

¹ The Environment Protection Authority (EPA) is now part of the new Department of Environment and Conservation

² <http://www.environment.nsw.gov.au/airqual/aqupd.asp>

³ Sydney: 1300 130 520 – Newcastle: 1800 817 838 – Wollongong: 1800 819 112

⁴ The 'ozone layer' is in the stratosphere, 10 to 15 kilometres above the surface of the earth, and protects humans from the effects of the sun; ozone that is found closer to the ground, in the air that people breathe, has adverse health effects.