

# Air Quality: Frequently Asked Questions



#brumbreathes

## Is air quality worse walking and cycling than in a car?

Studies have shown that people in cars experience higher levels of pollution than those on foot or bicycle because they are in an enclosed environment stuck in traffic. The health benefits of walking and cycling outweigh the potential risks.<sup>1</sup>

## How can I reduce the amount of dirty air I breathe?

You can reduce your exposure to poor air quality by finding routes away from roads that have lots of motorised vehicles.

## What are the main things that cause polluted air?

Most pollutants in Birmingham come from motorised transport. Other sources include industry and the burning of fuels including in wood burning stoves.<sup>2</sup>



## What can bad air quality do to my body?

There are short term and long term impacts. In the short term poor air quality can make it more difficult to breathe, especially if you have asthma. Long term it is associated with reduced life expectancy due to impacts on the respiratory and circulation systems. Poor air quality has been linked to higher risks of strokes, heart attacks and cancer. There is emerging evidence that air pollution may increase the risk of dementia, low birth-weight and diabetes.

## Is air quality better indoors?

It is different but there are pollutants in our homes from how we live i.e. cooking, aerosols and humidifiers. Poor air quality can also enter our homes from the outside.

## How far does air pollution travel?

Air pollution reacts to wind and also the immediate environment where it is produced. A strong wind and no buildings can disperse air pollution. In a cities, tall buildings and narrow streets affect air flow reducing the dispersion of air pollution. However, air pollution levels are lower the further away you are from the source of the air pollution.<sup>3</sup>

Continued overleaf...

<sup>1</sup> [https://www.researchgate.net/publication/310466891\\_Air\\_quality\\_inside\\_motor\\_vehicles'\\_cabins\\_A\\_review](https://www.researchgate.net/publication/310466891_Air_quality_inside_motor_vehicles'_cabins_A_review)

<sup>2</sup> DEFRA

<sup>3</sup> <https://www.ncbi.nlm.nih.gov/books/NBK361807/>

## How does the weather affect air pollution?

Generally air pollution is worse during periods of high atmospheric pressure i.e. stable conditions. So sunny days with clear skies and low winds are worse, as compared to cloudy and windy days with rain. It can also be bad during long periods of cold weather. Sunlight can also create ground level ozone. Air pollution levels are generally higher during the summer and during heatwaves.<sup>4</sup>

## What are the legal limits for air pollution in the UK?

This depends on which pollutant you are measuring and whether you are considering measurements averaged over an hour, day or year.<sup>5</sup> Yearly averages of NO<sub>2</sub> at some sites in Birmingham are illegal.

## What are the safe limits for air quality in the UK?

The safe limit is different to the legal limit. There are no safe limits especially in the case of particulate matter. The government has made a commitment to reduce PM<sub>2.5</sub> by 50% by 2040.

## What are the government and local council doing to improve air quality in Birmingham?

The most common things are to try to remove cars or change the type of cars people are driving. There are plans to encourage more walking and cycling and reduce the amount of fuel burnt including wood in stoves. Birmingham City Council are also introducing a Clean Air Zone (CAZ), which will charge the most polluting vehicles when driven into the city centre.

## I don't think we have a problem in Birmingham, what is the fuss about?

People think that poor air quality is only an issue when you can see or smell it. However, in the UK the danger has changed from the burning of coal to the pollution from vehicles. This is more difficult to see or smell due to microscopic particles, but it is still very damaging for our health. These can pass through our lungs and enter our bloodstream.

## What effect does air quality have on soil and water?

Air pollution can significantly damage the quality of our soil and water. When we pollute our air, we are also polluting the rain that falls onto the lakes, rivers and ground. Particulate matter and NO<sub>x</sub> can impact on the soil and plants.

## What impact will climate change have on pollution?

The UK is set to experience more extreme weather events such as heatwaves. Generally air pollution levels are higher during heatwave conditions. This means that climate change will most likely increase the levels of air pollution.



<sup>4</sup> <http://www.air-quality.org.uk/06.php>

<sup>5</sup> The UK legal limits for each pollutant can be found at: [https://uk-air.defra.gov.uk/assets/documents/Air\\_Quality\\_Objectives\\_Update.pdf](https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update.pdf)