



UPDATED: Call out the instigator, because there's something in the air

In this blog post, senior analyst David Lemon talks about the dangers posed by air pollution and how more research will help find ways to monitor and reduce it. It has been updated with a video of David Lemon talking about pollution and the risks it poses to people in Dorset as well as a link to our data visualisation.



By [David Lemon](#)

Breathing clean air is good for you. Perhaps not the most controversial thing ever said but it is nevertheless true. So what is it about dirty air that makes it bad for you and what can it do to your health?

Well there are several pollutants that can harm your health, but perhaps the most common is what is called particulate matter. This is basically any small bit of grit or dirt than can get into the air and then breathed in by you. And when I say small, I mean really small, the size of these things can be anything up to about 10 micrometers, a human hair is typically only 70 micrometers wide! It's because of this small size that they can bury themselves deep inside your lungs, the smallest ones can even cross into your blood stream.

Because of this ability to get into you your lungs and blood they can cause blockages, increasing the risk of heart and lung diseases, as well making life worse for people already living with these conditions.

So where do these horrible little things come from? Well unfortunately they can come from many sources - from the chimneys on factories and energy plants and car exhausts, to industrial and garden fires and wood burning stoves, and even more natural events like the red dust we saw last year.

Often it is the more dramatic pollution events that are talked about as they will clearly cause large amounts of particulate matter to be thrown up into the atmosphere... other than ruining your neighbours washing and getting in your eyes the typical bonfire is not likely to do you much harm.

However, it is the low concentrations around us every day that are perhaps more concerning. While this constant low level exposure can aggravate conditions like childhood asthma, for most people it will not cause any immediate problems, after all we don't see hundreds of people dropping down dead on their way to work (however much you might want those people who text and walk too!), but they can build up in you over your life and make you



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more prone those heart and lung problems in older age.

Well, that all sounds a bit depressing, doesn't it? But we are trying to help. Public Health Dorset is now working with local government environmental health professionals to look at how we can fund research into monitoring and reducing air pollution to try to improve things across Bournemouth, Poole and Dorset. Also, the [World Health Organisation](#) and the [Department for Environment, Food and Rural Affairs \(Defra\)](#) have published guidance on the limits of air pollution that local councils should aim for. As well as this you can find [estimates](#) of the overall air pollution levels in your area.

It should be noted that, although there is no totally safe level of pollution, across Bournemouth, Poole and Dorset, the pollution levels are below that set by the European Union and estimated by Defra to continue falling. So while there is still some risk to health it is only those with serious existing conditions that are likely to be effected and only on days when pollution levels are unusually high. To try to get a better understanding of when these times of high pollution may be and to better understand the health risks, we are working with Southampton university to develop a novel technique to measure pollution levels using satellite data.

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