

# UK air pollution 'puts lives at risk'



By Richard Black Environment correspondent, BBC

News



The EU-permitted number of high-pollution days for 2011 was exceeded in April

The government's failure to meet EU standards on air pollution is "putting the health of UK residents at risk", says the Environmental Audit Committee.

Bad air quality costs the nation £8.5-20bn per year via poor health, it says, and can cut life expectancy by years.

Continued failure to meet EU standards could result in swingeing fines.

The committee says ministers' "apparent tactic" to avoid fines is to ask the European Commission for repeated extensions rather than curb pollution.

The government needs to act now, as government did in the 1950s, to save the health of the nation"

Environmental Audit Committee report

The government's latest request to the commission - to delay having to meet standards on nitrogen dioxide (NO<sub>2</sub>) until 2015 - is being taken to judicial review by environmental lawyers ClientEarth.

By some measures, the UK has been in breach of EU rules since 2005, **the committee's report** notes.

It last reported on air pollution 18 months ago, and says that since then, there is "no meaningful evidence" to suggest progress towards meeting standards.

Yet evidence on the health impacts, it says, has become clearer.

Nationally, the government accepts that air pollution takes seven or eight months off Britons' life expectancy. But for the 200,000 people most directly affected, the shortfall is two years.

"It is a national scandal that thousands of people are still dying from air pollution in the UK in 2011 - and the government is taking no responsibility for this," said committee chair Joan Walley MP.

"It is often the poorest people in our cities who live near the busiest roads and breath in diesel fumes, dangerous chemicals and bits of tyre every day."

Recent UK research indicated that tyres and brakes are a significant source of airborne particles, in addition to vehicle exhausts.

### **'Not taken seriously'**

On particulates, the UK is improving. Six years ago, eight places in the country exceeded EU standards.

Now, only London does; but the London picture is startling. EU regulations allow legal limits to be exceeded for 35 days per year. This year, the quota was reached in April.



The committee urges policies that would change transport methods in UK cities

A more problematic area is nitrogen dioxide. Currently, 40 out of 43 "assessment zones" across the country exceed the EU standard.

**The government's own projections, released in June,** indicate that 17 will still be in breach in 2015, with Greater London taking even longer to clean up, despite the avowed intention of everyone connected with the Olympics to make them the "greenest games ever".

Government plans for curbing NO<sub>2</sub> pollution include financial incentives for switching haulage from road to rail, research on how retailers could deliver goods outside peak times, and differential pricing for vehicles emitting lower levels of pollutants.

And the London administration of Mayor Boris Johnson has set age limits for black cabs, invested in cycling, and implemented the London Low Emission Zone.

The Environmental Audit Committee says that even so, the air pollution issue is just not taken seriously in government.

"There are no air quality actions for Defra or the Department for Transport in their departmental business plans," it says, and few government departments "appear to understand the importance of the issue".

A spokeswoman for the Department of Environment, Food and Rural Affairs said the government was working towards full compliance with EU standards, and that significant progress had been made.

"We are investing significant sums of money to facilitate further reductions in pollution around transport, including over £1bn to promote the uptake of ultra low emission vehicle technologies and to support local transport authorities to deliver sustainable transport measures," she said.

"We welcome the committee's continued interest in this work, and we will fully consider their recommendations before providing a written response in due course."

## **Local zero**

The government's response to the committee's previous report was rooted in the localism principle, with responsibility being devolved downwards to local authorities.

The committee warns that this could mean EU fines being passed down to local authorities as well.

"Under the banner of its localism agenda, the government is dumping the problem on local authorities who simply do not have the resources to tackle what is a national problem," said Alan Andrews, air quality lawyer at ClientEarth.

"It is simply putting off taking action while behind the scenes it lobbies the EU to weaken limits."

The committee says government should urgently implement incentives to retrofit old vehicles with equipment to reduce pollution and set up a network of Low Emission Zones in the worst-affected areas.

And it warns that meeting the NO<sub>2</sub> standard would be impossible in the event of a third runway being constructed at Heathrow - an option that is currently ruled out by Coalition policy.

The committee's call to action is partly couched in historical terms; air pollution in London causes as many deaths now as in the bad old days of the "pea-souper" smogs, it calculates.

"It is estimated that around 4,000 people died as a result of the Great Smog of London in 1952. That led to the introduction of the Clean Air Act in 1956.

"In 2008, 4,000 people died in London from air pollution and 30,000 died across the whole of the UK.

"The government needs to act now, as government did in the 1950s, to save the health of the nation."

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## Car fumes 'raise heart attack risk for six-hour window'

By **Michelle Roberts** Health reporter, BBC News



Studies show exhaust fumes can thicken the blood making it more likely to clot

Breathing in heavy traffic fumes can trigger a heart attack, say UK experts.

Heart attack risk is raised for about six hours post-exposure and goes down again after that, researchers found.

They say in the **British Medical Journal** that pollution probably hastens rather than directly cause attacks.

But repeated exposure is still bad for health, they say, substantially shortening life expectancy, and so the advice to people remains the same - avoid as far as is possible.

Prof Jeremy Pearson, associate medical director at the British Heart Foundation, which co-funded the study, said: "This large-scale study shows conclusively that your risk of having a heart attack goes up temporarily, for around six hours, after breathing in higher levels of vehicle exhaust.

Unhealthy diets and smoking et cetera are much bigger heart attack risk factors, but car fumes are the cream on the cake that can tip you over"

Prof Jeremy Pearson of the British Heart Foundation

"We know that pollution can have a major effect on your heart health, possibly because it can 'thicken' the blood to make it more likely to clot, putting you at higher risk of a heart attack.

"Our advice to patients remains the same - if you've been diagnosed with heart disease, try to avoid spending long periods outside in areas where there are likely to be high traffic pollution levels, such as on or near busy roads."

## **Early peak**

The research looked at the medical records of almost 80,000 heart attack patients in England and Wales, cross-referencing these details with air pollution data.

This enabled the investigators to plot hourly levels of air pollution (PM10, ozone, CO, NO2, and SO2) against onset of heart attack symptoms and see if there was any link.

Higher levels of air pollution did appear to be linked with onset of a heart attack lasting for six hours after exposure.

After this time frame, risk went back down again.

Krishnan Bhaskaran from the London School of Hygiene and Tropical Medicine, who led the research, said the findings suggested that pollution was not a major contributing factor to heart attacks.

For example, being exposed to a spell of medium-level rather than low-level pollution would raise heart attack risk by 5%, by his calculations.

"If anything, it looks like it brings heart attack forward by a few hours. These are cardiac events that probably would have happened anyway."

But he said the findings should not detract from the fact that chronic exposure to air pollution was hazardous to health.

Prof Pearson from the BHF agrees: "Unhealthy diets and smoking etc are much bigger heart attack risk factors, but car fumes are the cream on the cake that can tip you over."

14 July 2011

## **Diesel fume particles 'could raise heart attack risks'**



Minuscule particles produced by burning diesel could can increase the chance of blood clots

Chemical particles in diesel exhaust fumes could increase the risk of heart attacks, new research has suggested.

Edinburgh University scientists found minuscule particles produced by burning diesel can increase the chance of blood clots forming in arteries.

The blood clots can then lead to heart attacks or stroke.

The team measured the impact of diesel exhaust fumes on a group of healthy volunteers at levels found in heavily polluted cities.

The volunteers' reaction to gases found in diesel fumes, such as carbon monoxide and nitrogen dioxide, were compared with their reactions to tiny chemical particles found in the exhausts.

It was found that the particles, and not the gases, impaired the function of blood vessels.

## **Blood pressure**

Dr Mark Miller, of Edinburgh University's centre for cardiovascular science, said: "While many people tend to think of the effects of air pollution in terms of damage to the lungs, there is strong evidence that it has an impact on the heart and blood vessels as well.

"Our research shows that while both gases and particles can affect our blood pressure, it is actually the minuscule chemical particles that are emitted by car exhausts that are really harmful.

Their findings suggest that lives could be saved by cutting these harmful nanoparticles out of exhausts"

Jeremy Pearson British Heart Foundation

"These particles produce highly reactive molecules called free radicals that can injure our blood vessels and lead to vascular disease."

He added: "We are now investigating which of the chemicals carried by these particles cause these harmful actions, so that in the future we can try and remove these chemicals, and prevent the health effects of vehicle emissions."

The particles, which are thinner than a millionth of a metre, can be filtered out of exhaust emissions by fitting special traps to vehicles.

The researchers said environmental health measures designed to reduce emissions should now be tested to determine whether they reduce the rate of heart attacks.

Professor Jeremy Pearson, associate medical director at the British Heart Foundation, said: "We've known for a long time that air pollution is a major heart health issue, and that's why we're funding this team in Edinburgh to continue their vital research.

"Their findings suggest that lives could be saved by cutting these harmful nanoparticles out of exhausts, perhaps by taking them out of the fuel, or making manufacturers add gadgets to their vehicles that can trap particles before they escape.

"The best approach isn't clear yet.

"For now our advice remains the same, people with heart disease should avoid spending long periods outside in areas where traffic pollution is likely to be high, such as on or near busy roads."

The research, funded by the British Heart Foundation, has been published in the European Heart Journal.