



Department
for Environment
Food & Rural Affairs

Air Quality: overview

Air Quality: what causes pollution and why it matters



- Poor air quality is the largest environmental risk to public health in the UK.
- Air pollution has social costs and threatens economic growth.
- Air pollution also results in damage to the natural environment.

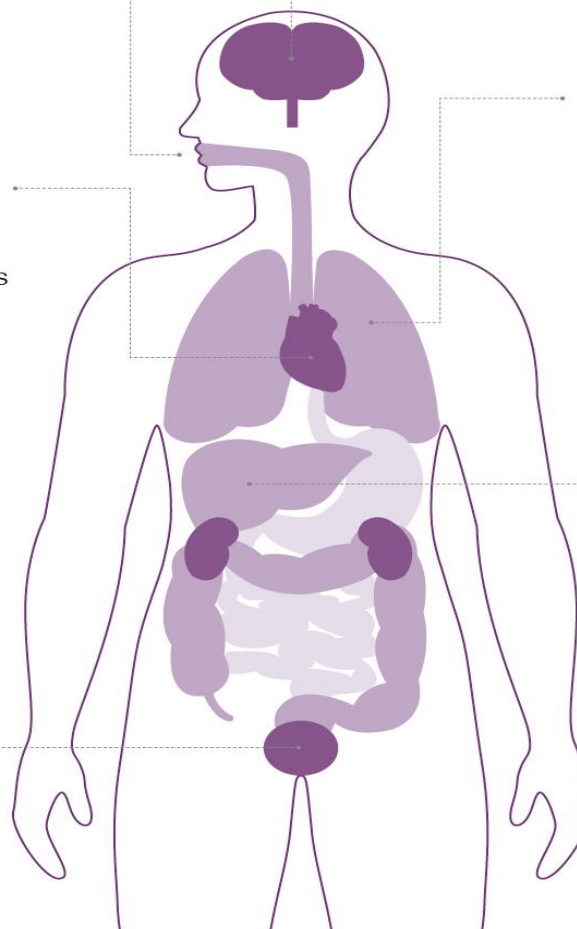
Air Quality: health effects of particulate matter (PM)

A few hours of $PM_{2.5}$ over $35 \mu\text{g}/\text{m}^3$ or NO_2 over $200 \mu\text{g}/\text{m}^3$ irritates the eyes, nose and throat.

Heart and blood vessel diseases like strokes and hardening of the arteries are one of the main effects of air pollution. These can be caused by a few years exposure to even low levels of $PM_{2.5}$.

Exposure for a few hours to high levels of $PM_{2.5}$ can bring on existing illness or strokes and heart attacks in ill people.

PM has been found in the reproductive organs and in unborn children.

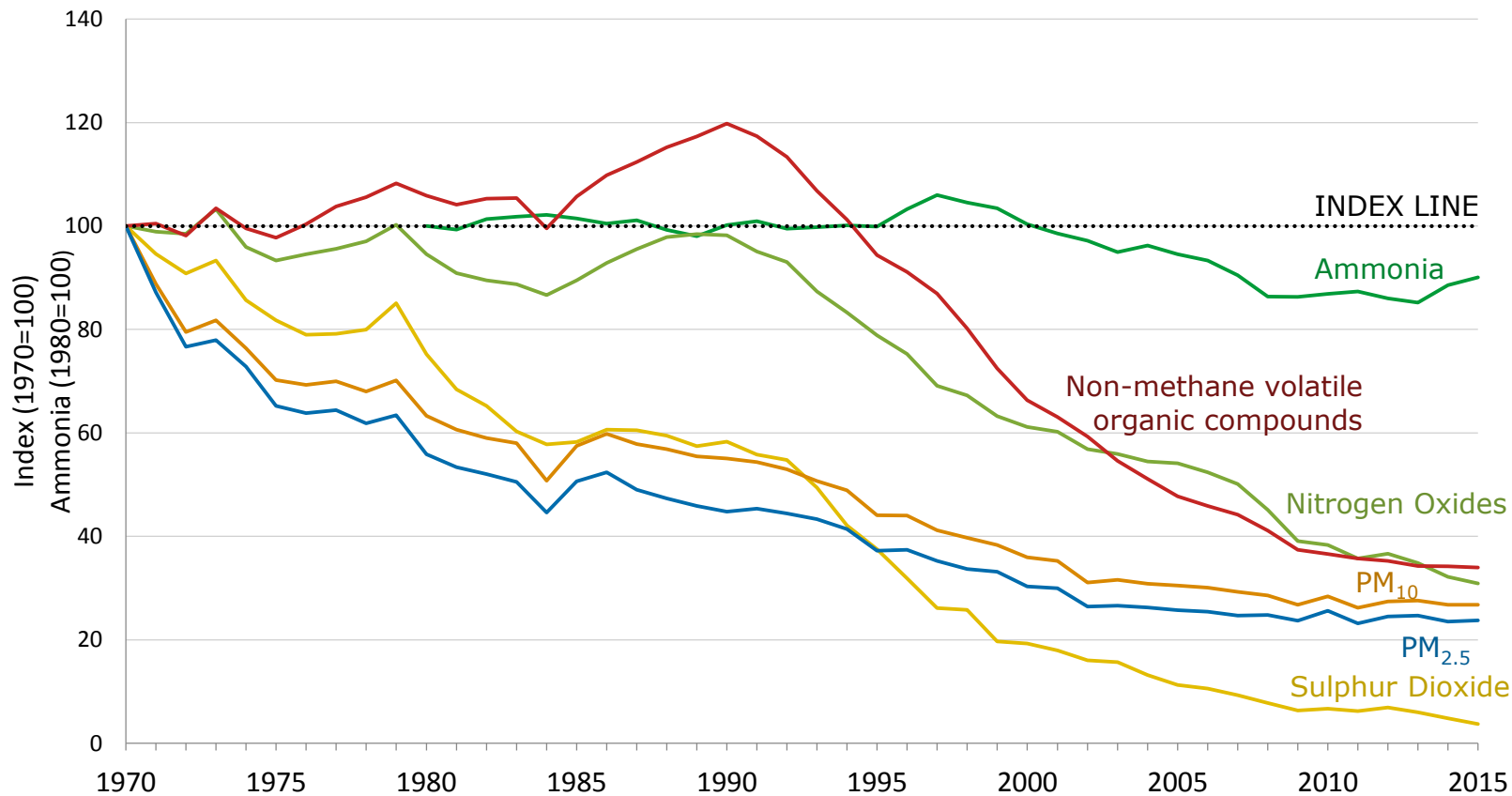


PM can cause strokes. Ultrafine PM has been found in samples of brain and central nervous system tissue.

Poor air quality affects everyone. It can have long term impacts on all and immediate effects on vulnerable people, with a disproportionate impact on the young and old, the sick and the poor.

Ultrafine PM can get into the blood then throughout the body. Ultrafine particles have been found in body organs.

Air Quality: progress so far



- There has been a long-term decline in air pollution since 1970.
- Between 1970 and 2015, emissions of sulphur dioxide fell by 96%, nitrogen oxides by 69%, NMVOCs by 66%, PM₁₀ by 73% and PM_{2.5} by 76%. Ammonia emissions from agriculture decreased by 19% between 1990 and 2015.
- With the exception of ammonia and PM_{2.5}, emissions of all pollutants continued to decrease in 2015.