# The impacts of air pollution on physical and mental health

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## Health burden

- Urgent public health emergency<sup>1</sup>
- Greatest environmental risk to public health in the UK<sup>2</sup>
- Mortality burden of long-term exposure to outdoor air pollution in England in 2019 estimated to be equivalent to 26,000 to 38,000 deaths a year<sup>3</sup>







Before birth	•	*Low birth weight <sup>1,2</sup> *Premature birth <sup>1,2</sup> *Pregnancy loss <sup>1,2</sup> *Impacts on foetal lung development <sup>3</sup>
Childhood		Suppression of lung growth <sup>4</sup> New-onset asthma <sup>4</sup> New-onset wheeze <sup>4</sup> Bronchitis/problematic respiratory symptoms <sup>4</sup> *Insulin resistance <sup>4</sup> *Decreased brain development <sup>4</sup> *Increased risk of ADHD <sup>4</sup> *Cardiovascular impacts <sup>2</sup>
Adulthood		Irritation of the eyes, nose and throat <sup>3</sup> Development of cardiovascular disease (stroke, heart attack, heart rhythm problems, heart failure) <sup>2</sup> Worsening of heart conditions <sup>2</sup> Breathing problems <sup>3</sup> (asthma, reduced lung function, COPD)  Lung cancer <sup>2,3</sup> *Dementia and cognitive decline <sup>3</sup> *Parkinson's disease <sup>3</sup> *Impacts on the reproductive system <sup>3</sup> *Metabolic effects e.g., type 2 diabetes <sup>3</sup>

### Ella Adoo-Kissi-Debrah

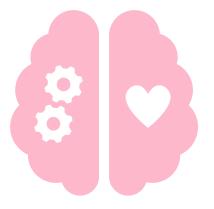


"Ella's mother was not given information by health professionals about the health risks of air pollution and its potential to exacerbate asthma"<sup>5</sup>





- \*Increased risk of developing anxiety and depression<sup>6</sup>
- \*Increase in anxiety and depression symptoms<sup>7</sup>
- \*Changes in brain structure and function, including in the regions linked to mental health<sup>7</sup>



# Health inequalities

- Children
- Pregnant women
- Those with cardiovascular and/or respiratory conditions
- Communities living in poor air quality
- Low income communities<sup>2</sup>





# Thank you!

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Clean up our air to look after your mind this #CleanAirDay

People who breathe polluted air are more likely to develop mental health and brain conditions.

