Cambridgeshire County Council

Air Quality and Health

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Cambridgeshire County Council

Public Health England

Health Matters

Scale of the problem

It is estimated that **long-term exposure to man-made air pollution in the UK** has an annual effect equivalent to:

28,000 to 36,000 deaths

Over the following 18 years a **1 µg/m³ reduction in fine particulate air pollution in England** could prevent around:

50,900 cases of coronary heart disease

16,500 strokes

9,300 cases of asthma

4,200 lung cancers

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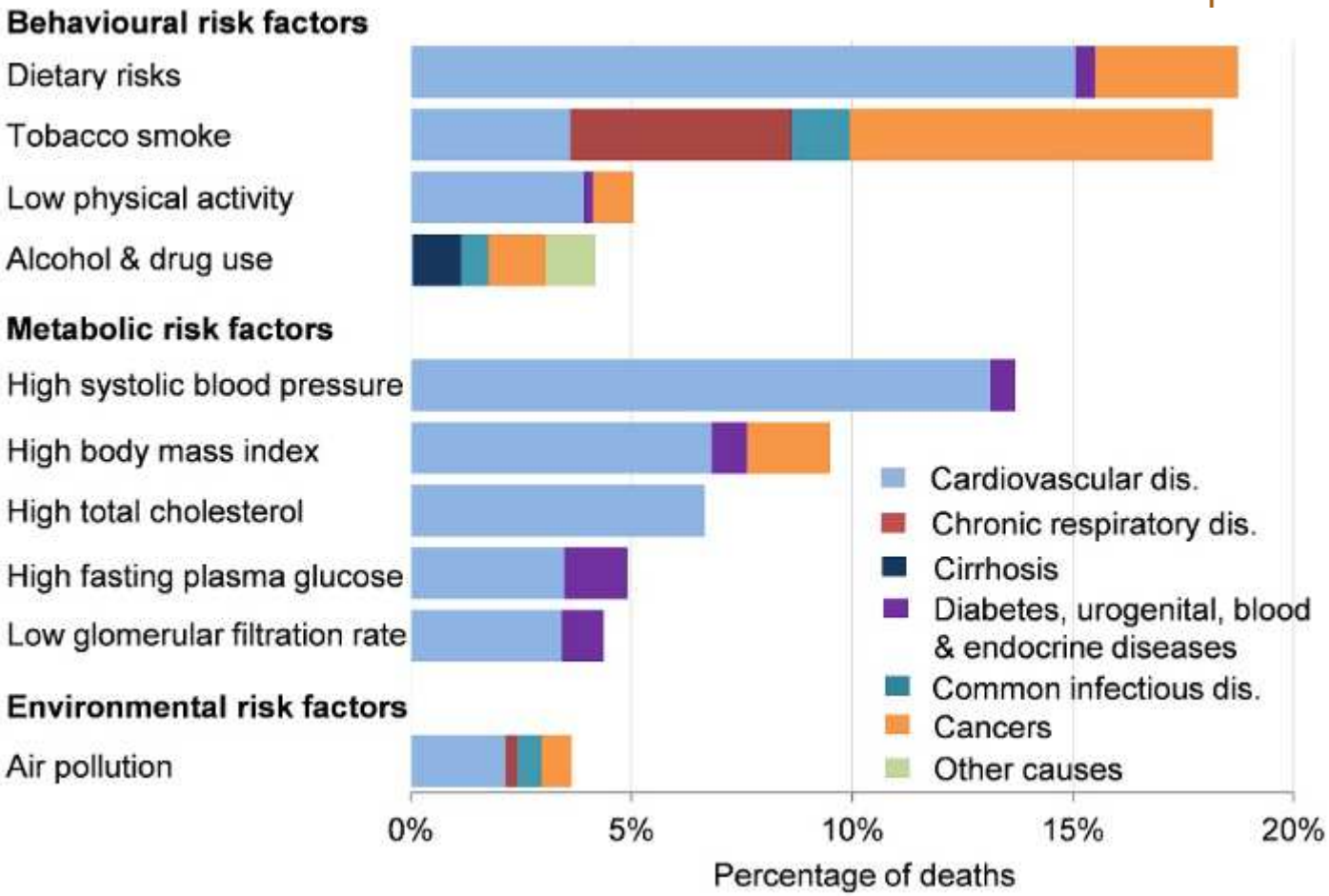

The Key Air Pollutants

- Air pollution is a complex mix of particles and gases of both natural and human origin.
- Particulate matter (PM) and nitrogen dioxide (NO_2) are both major components of urban air pollution.
- Currently, there is no clear evidence of a safe level of exposure below which there is no risk of adverse health effects. Therefore, further reduction of PM or NO_2 concentrations below air quality standards is likely to bring additional health benefits.

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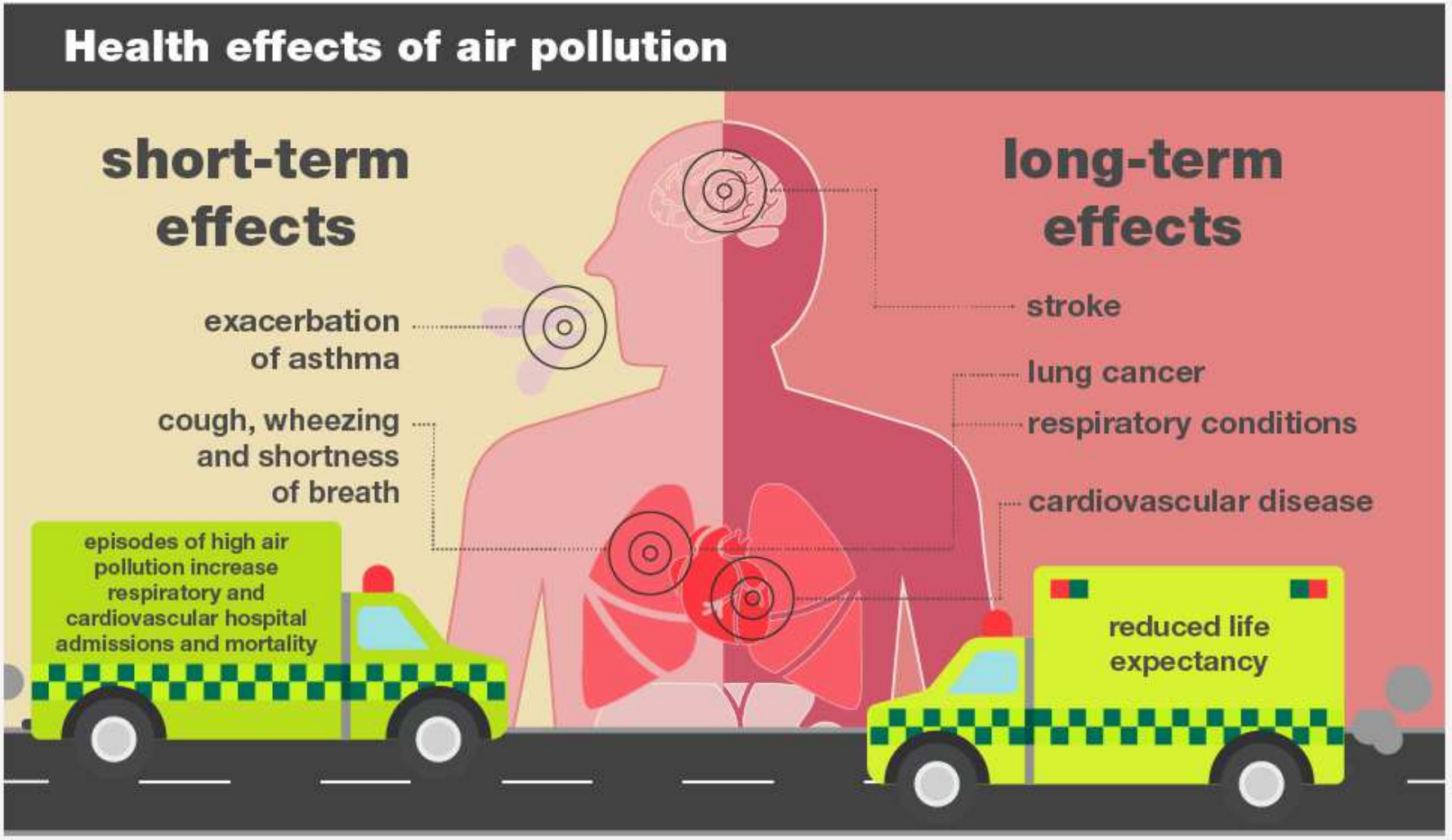

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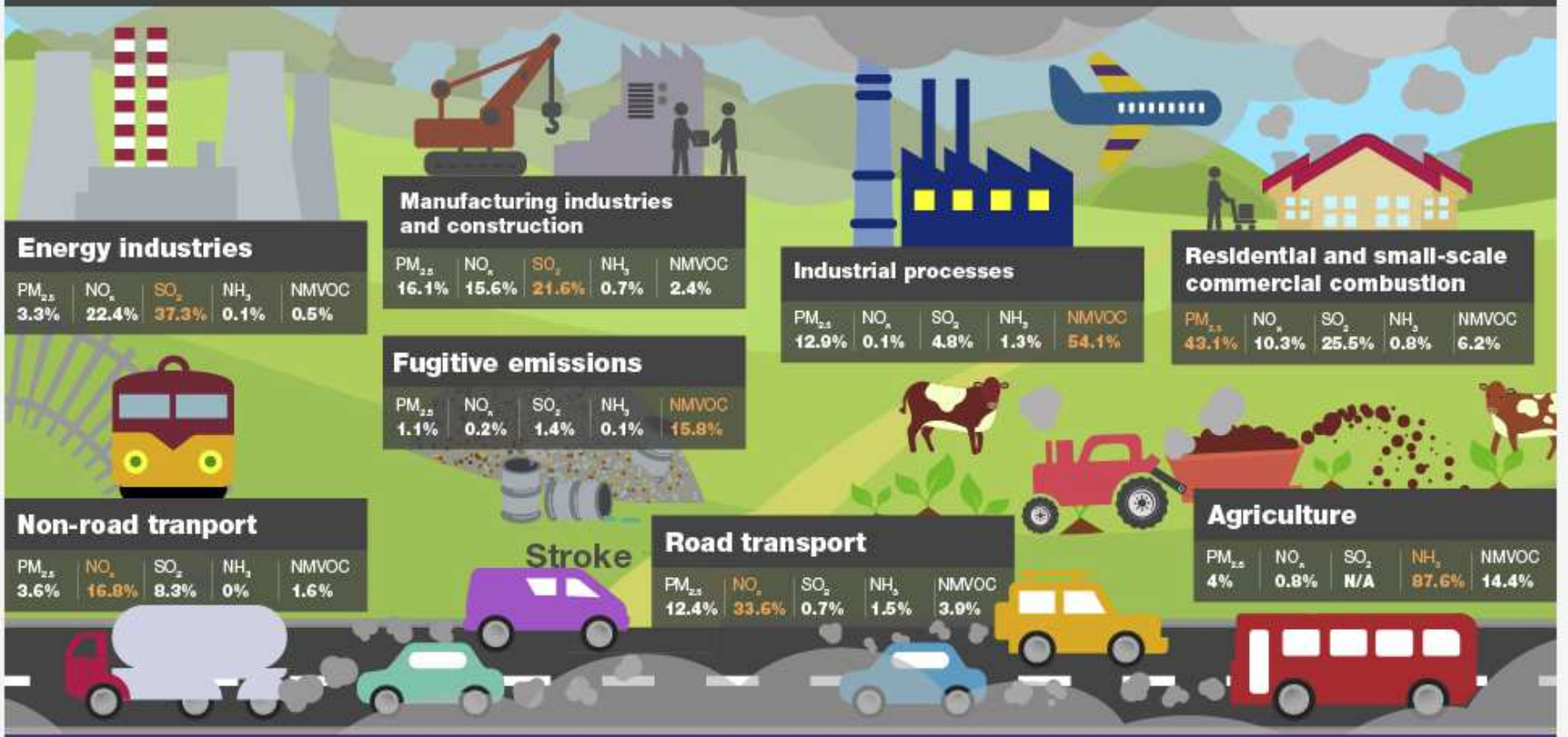
Sources of air pollution



Pollution substances:

SO_2 - Sulphur dioxide

NO_x - Nitrogen oxides

NH_3 - Ammonia

$PM_{2.5}$ - Primary particulate matter

NMVOCs - Non-methane volatile organic compounds

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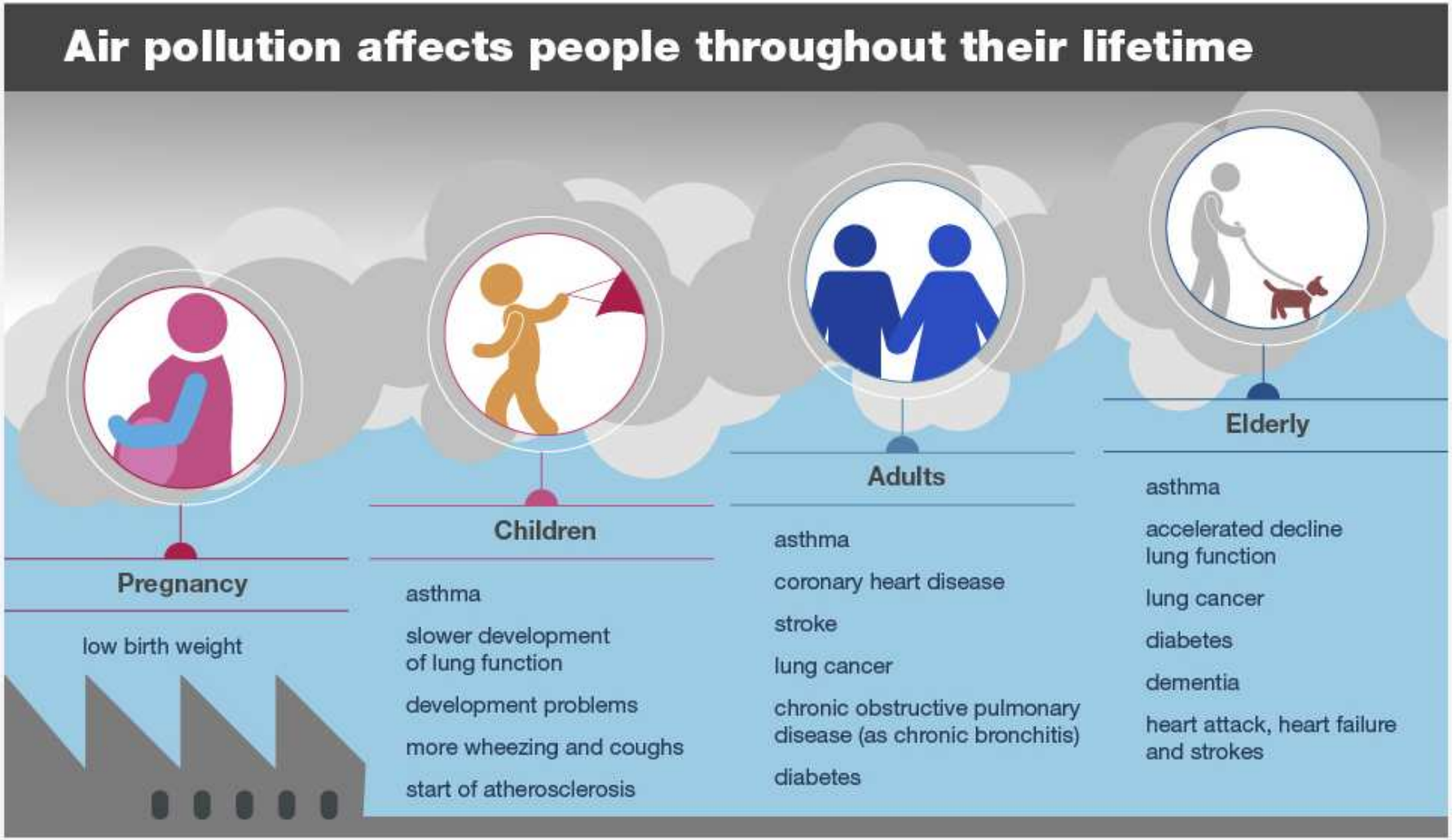

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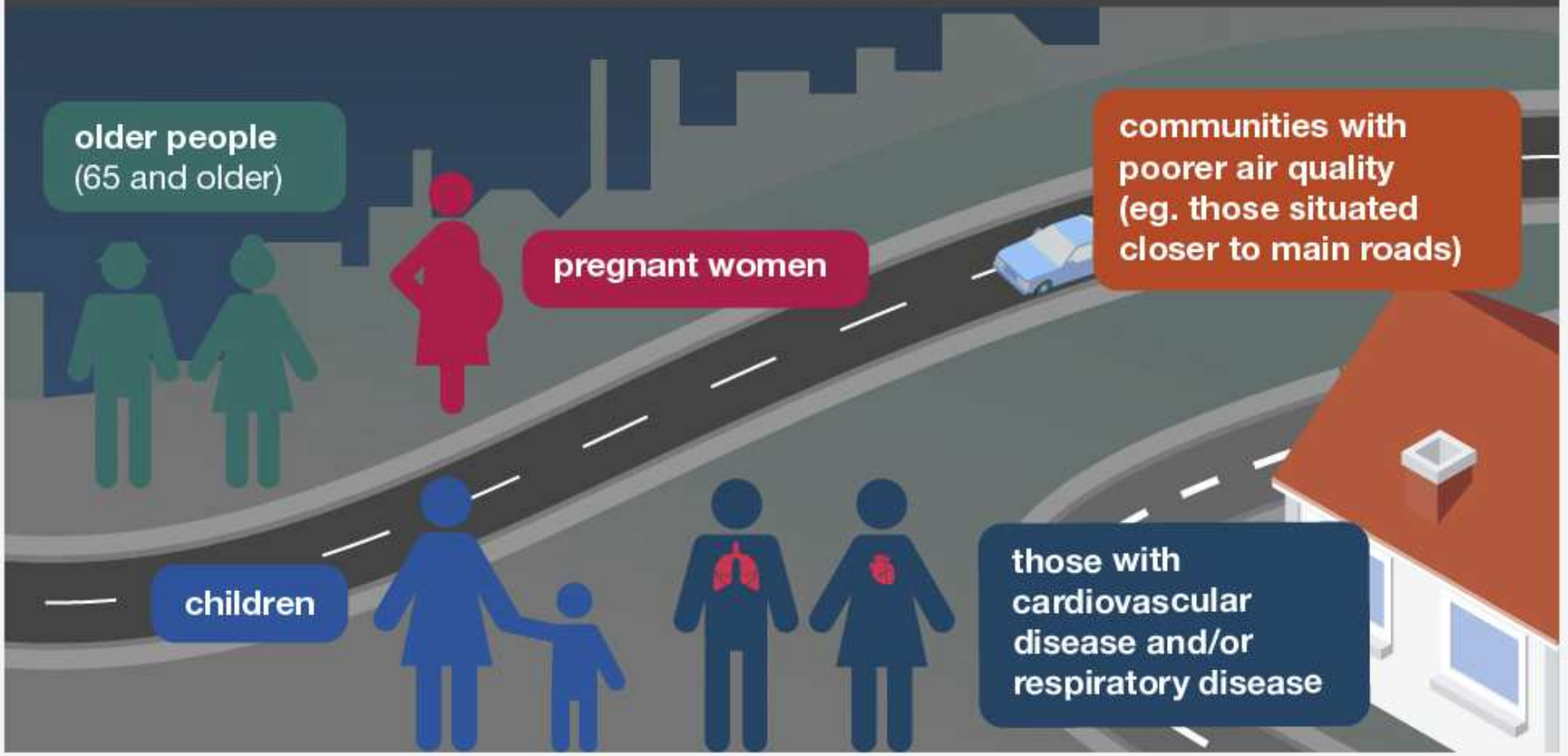
Air pollution affects everyone but there are **inequalities in exposure** and **the greatest impact on the most vulnerable**



Health and Wellbeing Co-benefits

- Air pollution is not an issue that occurs in isolation. Pollution can be associated with other environmental hazards that affect health, and it can contribute to health inequalities. However, measures that improve air quality can also offer wider public health and wellbeing co-benefits, including:
  - an improvement in overall environmental quality,
  - increased physical activity,
  - noise reduction,
  - greater road safety and
  - climate change mitigation.
- Multiple interventions, each producing a small benefit, can act cumulatively to produce significant overall benefits.

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Create opportunities and promote active travel

Addressing air pollution by providing **good quality infrastructure** and **public transport** and encouraging people **to walk** and **cycle** rather than drive can help people to become fitter and healthier.