

Understanding the Exposome: Priorities for Policy and Practice

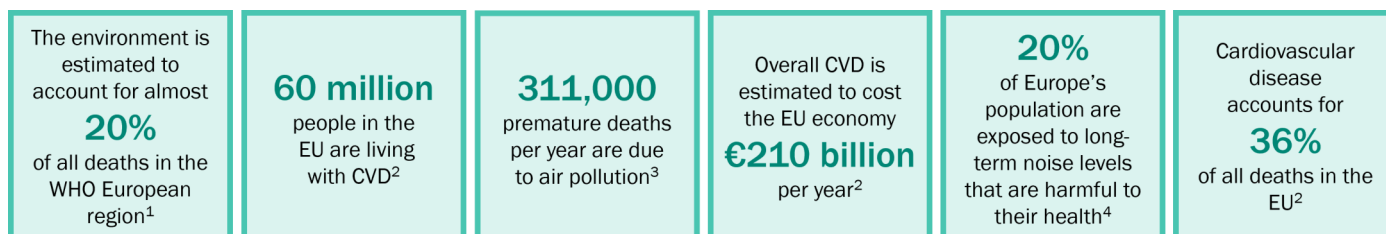


Figure 1. Environmental risk factors and cardiovascular disease burden in Europe

Despite medical advances, more than half a billion people around the world are affected by cardiovascular diseases⁵. Efforts continue to focus heavily on treatment, yet many of the risks come from the environment around us. This policy brief summary draws on insights from the LongITools project to inform policymakers about the exposome and its relevance for preventive, equitable, and effective health policy.

What is the exposome?

The exposome refers to the environmental, social, and lifestyle factors we are exposed to across our lives - including air pollution, food, housing, green space, transport, noise, and stress. These exposures build up over time and influence our health, often unequally.

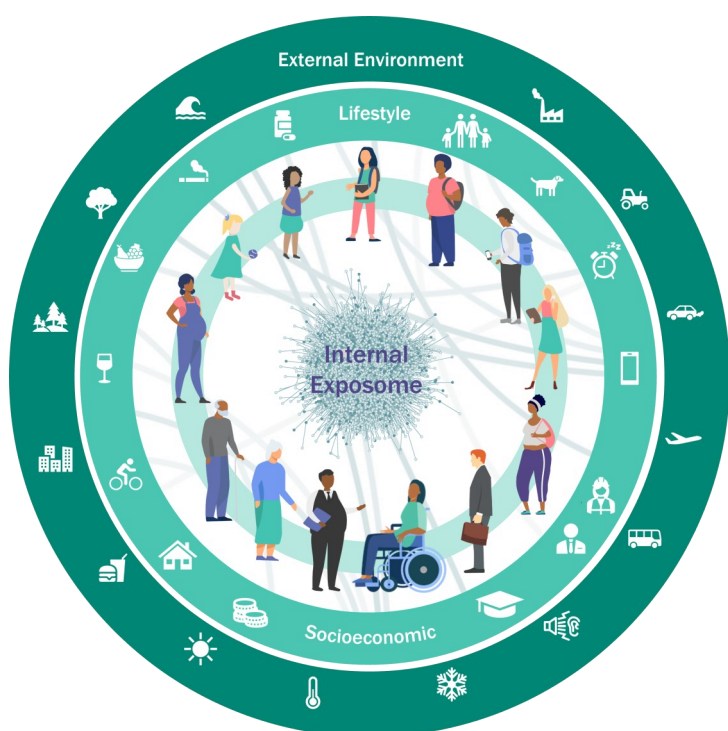


Figure 2. The LongITools exposome

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Why treat people and send them back to the conditions that made them sick?

The Health Gap: The Challenge of an Unequal World
by Sir Michael Marmott, 2015

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Why take a life-course approach?

Exposures accumulate and interact differently at each stage of life, from the womb to old age. Policies that recognise this can better protect health, reduce risk, and target support where and when it's needed most.



What did LongITools find?



- **Air pollution** is linked with changes in [blood pressure](#), metabolism, and [depressive symptoms](#) - even at low exposure levels.
- **Green space** is linked with [better mental](#) and [respiratory health](#) across children, adolescents, and adults.
- **Diet** may help [reduce the negative effects of air pollution](#).
- **Noise exposure** was associated with [greater risk of depression and anxiety](#).
- **Socioeconomic conditions** influence how environmental risks [affect health across the life-course](#).
- **Obesity risk** can [begin before birth and build over time](#), supporting early and sustained prevention.

Policy call to action

1

Make the exposome central to health policy

Address factors shaping health across sectors beyond healthcare- including transport, food, housing, and urban planning

2

Apply a life-course approach to policy

Shape prevention and care strategies around key life stages and vulnerabilities

3

Make health and environment data FAIR-ER

Invest in inclusive, interoperable, and population-representative data systems

4

Accelerate research into real-world impact

Test interventions on the ground, adapt, and scale with communities, practitioners and scientists

5

Deliver timely, targeted interventions

Design local, cross-sector solutions that address everyday environmental factors to protect and promote cardiovascular health

6

Act on environmental health inequalities

Prioritise action in communities facing the greatest risks and worst outcomes

For references and to read the full policy brief, please visit the LongITools website [policy page](#).

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