

CLEAN AIR WEEK

Science Sheet



Clean Air refers to air that is free from harmful pollutants, which can negatively affect human health and the environment.

Among the key pollutants of concern are:

Nitrogen Dioxide (NO₂) and **Particulate matter (PM)**.

These two pollutants are significant indicators of air quality and have different sources and effects.

What is Nitrogen Dioxide (NO₂)?

Nitrogen dioxide (NO₂) is a pollutant gas that mainly comes from vehicle traffic.

Being exposed to NO₂ gas, even just for short periods, can have harmful effects on our health and wellbeing.

It will be important to remain vigilant to increasing NO₂ levels, particularly from transport in urban centres as the economy grows.

NO₂ can irritate the lungs and lower resistance to respiratory infections like the flu, making asthma and other lung conditions worse and lead to airway inflammation.



What is Particulate Matter (PM)?

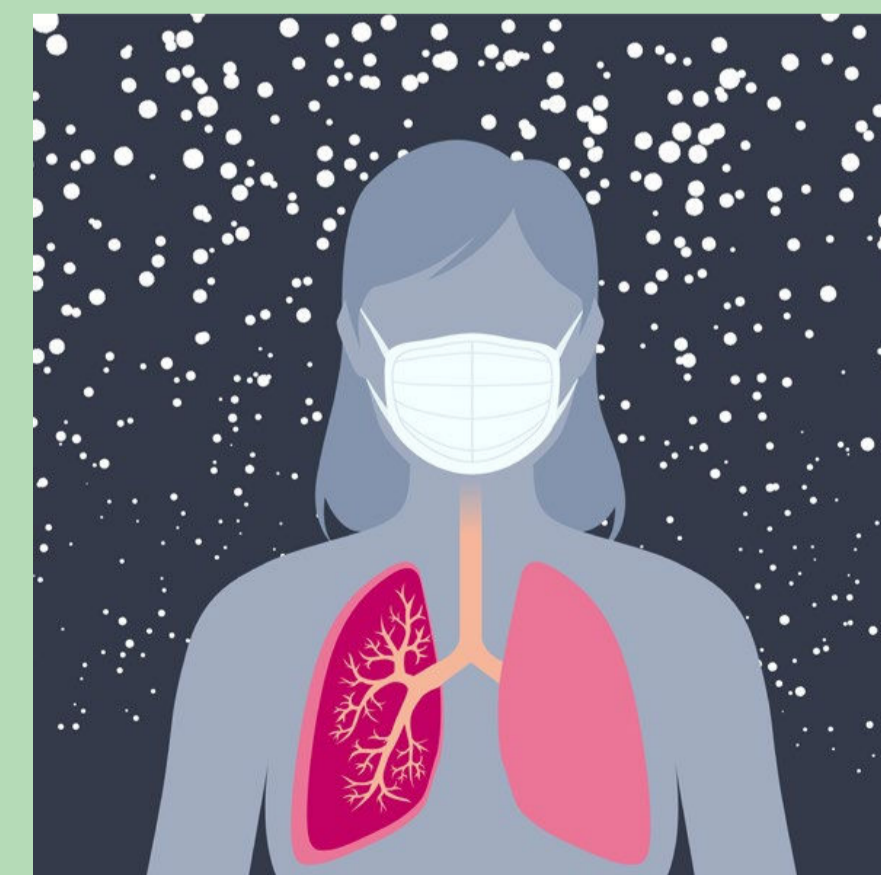
PM refers to tiny particles suspended in the air, made up of a mix of solid and liquid substances. Vehicle emissions, particularly diesel engines, are a source of PM.

The size of these particles is key to understanding their health impact:

- **PM₁₀**: Particles with a diameter of 10 micrometers or smaller.
- **PM_{2.5}**: Finer particles with a diameter of 2.5 micrometers or smaller.

Because PM_{2.5} is small enough to penetrate deep into the lungs and even enter the bloodstream, it can cause serious health problems, especially to heart and lung diseases.

Children, elderly people and those with pre-existing health conditions are particularly vulnerable to the effects of PM.



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Why are NO₂ and PM a concern for Clean Air?

Both NO₂ and PM contribute significantly to poor air quality and pose substantial public health risks. They are often found together in areas with heavy traffic and industrial activity.

Monitoring and regulating these pollutants are crucial to improving air quality, particularly in urban areas where exposure levels can be high.

Check out the EPA's website to see what the NO₂ levels are near where you live:

[Air | Environmental Protection Agency \(epa.ie\)](https://www.epa.ie)

