

Natural and anthropogenic emissions

PM_{2.5}, PM₁₀, O₃, NO₂, NO_x, CO, SO₂, VOCs, sulfate, nitrate, ammonia, black carbon, UFPs, PAHs, dust, CFCs, heavy metals, CH₄



Aircraft



Biomass burning



Residential



Shipping



Wildfires



Cattle



Agricultural



Ground transportation



Volcanic eruptions



Industrial

Outcomes

Pregnancy and birth

- Term low birth weight
- Preterm delivery
- Spontaneous abortion
- Infertility

Children

- Asthma onset
- Acute lower respiratory infections
- Neurodevelopmental disorders

Adults and elderly

- Central nervous system
- Respiratory/ cardiovascular/ metabolic disorders
- Cancer
- Kidney/genitourinary
- Immune/allergic

Personal exposure mitigation



Wear a respirator



Stay indoors



Use air purifier



Avoid polluted areas

Fig. 1. Air pollutant emission sources, detrimental life-span health impacts, and personal-level risk mitigations.

CREDIT: K. HOLOSKI/SCIENCE