Health Impacts of Air Pollution

The environment has a direct impact on our health and can be broken down into four different types: social, cultural, built and natural, which all interact together having a direct impact on our health. Traffic-related air pollution is created by burning fuel, such as in cars, trucks, trains, ships, and other engines. Some of the pollutants are gases, and some are solid particles. Many of the pollutants are too small to be seen, such as tiny particles in traffic exhaust that are smaller than a human hair. The poor air quality that many Californians know as smog is caused by the six criteria air pollutants labeled by government regulators.

**CRITERIA AIR POLLUTANTS**
- Particulate Matter (PM)
- Nitrogen Oxides (NOx)
- Sulfur Oxides (SOx)
- Carbon Monoxide (CO)
- Ozone (O3)
- Lead

**Air Pollution in the Body**
As we breathe, gases and particles of traffic exhaust are drawn into the lungs, where they contribute to a range of health problems. Pollutants can damage the lungs, as well as get into the bloodstream and travel to organs throughout the body.

**WHEN AIR POLLUTION LEVELS GO UP, THERE ARE MORE:**
- emergency room visits
- hospital admissions
- asthma attacks
- children absent from school
- deaths from lung and heart illnesses

**RESPIRATORY (LUNG) IMPACTS**
- Increased respiratory (lung) illnesses
- Asthma exacerbations (makes asthma worse)
- Decreased lung function in children
- Chronic respiratory illnesses
- Cancer
- Premature death

**CARDIOVASCULAR (HEART) IMPACTS**
- Myocardial infarction (heart attack)
- Stroke
- Hypertension (high blood pressure)
- Atherosclerosis (artery disease)
- Arrhythmia (irregular heartbeat)
- Thrombosis (abnormal clotting)

**REPRODUCTIVE (BIRTH) IMPACTS**
- Preterm babies (born earlier than they should be)
- Low birth weight
- Slow growth in the womb
- Miscarriage
- Still birth
- Premature birth
- Infant mortality

Studies have found:
- A 10% increase in PM and SO2 pollution associated with a 1% increase in infant deaths
- Breathing high levels of urban air pollution almost tripled a mother’s chances of having a low birth weight baby

**CONTINUED ON OTHER SIDE**
Diesel:
Diesel exhaust is produced when an engine burns diesel fuel. Diesel exhaust is a “Toxic Air Contaminant” and is linked with causing cancer. 70% of the cancer risk from air pollution is from breathing diesel exhaust (ARB estimate). Long-term exposure to diesel exhaust at work is linked with higher rates of lung cancer.

The effects of air pollution on children:
- Current levels of air pollution slow down lung growth, leaving children in more polluted communities with smaller lungs.
- Air pollution is linked to new cases of asthma, and making asthma symptoms worse.

Traffic Pollution:
Higher levels of pollution from busy roads and freeways means people who live nearby breathe more pollution. Living near busy roads and freeways is linked to:
- Smaller lung growth and function in children
- More school absences
- Higher risk of asthma
- More respiratory illness

Further Information:
Air Resources Board
(800) 363-7664
www.arb.ca.gov

American Lung Association of California
(800) LUNG USA (586-4872)
www.californialung.org

Southern California Environmental Health Sciences Center
(USC and UCLA)
www.usc.edu/medicine/scehsc
(323) 442-1096

Air pollution forecasts
www.airnow.gov

Office of Environmental Health Hazard Assessment
(510) 622-3200
www.oehha.ca.gov

Air Quality Management District
(800) CUT-SMOG
www.aqmd.gov
REFERENCES:


