

**Q. Are there health problems associated with exposure to diesel exhaust?**

A. Yes. Diesel exhaust contains more than forty hazardous air pollutants, of which twenty-one have been identified by the U.S. Environmental Protection Agency (EPA) as known or suspected carcinogens. These include benzene, formaldehyde, acetaldehyde and 1,3 butadiene. Exposure to diesel exhaust has also been proven to exacerbate asthma symptoms and recent findings suggest that it may be a causal agent for this disease. Most experts agree that there is no safe level of diesel exhaust exposure.

Q. How are children exposed?

A. Diesel exhaust from idling buses enters vehicles through doors and windows when children are loading and unloading. The amount of exhaust entering buses depends on how many buses are queued up one behind the other, how long they idle and whether the proximity of buildings or overhangs helps to trap diesel fumes. The exhaust may also enter the school building through open doors and windows or through air ventilation systems.

Q. Are children more vulnerable than adults to diesel exhaust exposure?

A. Yes. Children are especially vulnerable to air pollution because their lungs are still developing - a process which is not complete until they reach their late teens. Respiratory development includes rapid rates of cell differentiation, cell division and airway branching. The average diameter of diesel particulates is tiny (0.2 micrometers), which means they can penetrate deeper into a child's lungs where they are more likely to be retained. Children also breathe at a higher rate, taking in 50% more air per pound of body weight than adults.

Q. Who else should be concerned?

A. Bus drivers, teachers and school administrators who regularly monitor bus traffic at school are at risk, as are adults with underlying heart

disease. Pregnant women should be extremely careful about their exposure to diesel exhaust, as recent studies have shown that the developing fetus is highly vulnerable to airborne toxins.

Q. Is there any reason that buses must idle to function properly?

A. No. With today's technology, properly maintained diesel buses have no problem starting up, even during winter months (except in extremely cold conditions - below 0 degrees F). Heat or air conditioning are not necessary for embarking or disembarking.

In cases when engine operation is necessary to operate safety equipment, buses can be easily altered to permit battery operation. New York State and other government agencies have grants available to retrofit diesel engines to make them less polluting.

Q. Will it cost more money to shut off bus engines?

A. No. According to the EPA, the adoption of a no-idling policy in a district with a fleet of 50 buses would save up to \$2,250 per year in reduced fuel costs. Additionally, since school aid formulas are measured in part on school absenteeism, this effort to help keep our children healthy would also help the district: asthma and related respiratory illnesses are the leading cause of school absenteeism and the number one cause of hospitalization of children in the United States.

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