

Children's Environmental Health Center of the Hudson Valley

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CHILDREN'S ENVIRONMENTAL HEALTH CENTER OF THE HUDSON VALLEY

PROTECTING CHILDREN AGAINST ENVIRONMENTAL THREATS

www.ChildrensEnvironment.org

June 2018: Children's Health Advisory Idling School Buses and Children's Health

June 2018: When school buses are left idling, they emit diesel exhaust into the surrounding environment. These fumes negatively affect the health of children taking the bus, as well as those in the vicinity inhaling these emissions. Children who have asthma and other lung diseases are at higher risk. Diesel emissions are composed of many different gases and particles that pollute the air, some of which labeled as carcinogenic (having the potential to cause cancer).



Exposure: Diesel fuel emissions account for two-thirds of all particulate pollution released by cars, trucks and other road vehicles. School buses release twice the amount of pollution per mile, compared to semi-trucks. This is problematic, as school buses congregate around schools, often idling, allowing the pollution from their emissions to concentrate on school grounds. Exposure is thus increased for those on school campuses, the majority of whom are students. Young children present inside these buses are at even higher risk. Poor maintenance and outdated buses often lead to cracks and leaks in the exhaust system of the vehicle, allowing the concentration of pollution inside the bus to rise to amounts greater than the environmentally acceptable level. Both the Environmental Protection Agency and the International Agency for Research on Cancer classify exhaust from diesel engines as a carcinogen. Children are one of the most vulnerable populations to the ill effects of pollution, making this arrangement dangerous for public health.

Health Effects: Everyone is susceptible to the adverse effects of environmental pollutants, including diesel exhaust. Children are at increased risk from this exhaust pollution because their lungs and respiratory systems are still developing. In addition, children have higher inhalation rates per pound of body weight, making them particularly vulnerable. Children are more susceptible than healthy adults to fine particles. Diesel exhaust can lead to long term effects including decreased lung function, immunologic reactions, and cancer as well as increase susceptibility to infections. Short-term effects to

exhaust exposure include irritation to the eyes, nose, throat and lungs. It can also cause coughs, headaches, lightheadedness and nausea. In addition, the exhaust particles may make people more susceptible to other allergens like dust and pollen. Children with asthma are at risk for more inflammation in their lungs, which can increase the frequency and intensity of their asthma exacerbations and symptoms.

Recommendations: Laws have been put into place in New York State to help decrease the harmful diesel emissions polluting the air our children breathe every day. The New York State Environmental Conservation Law prohibits large diesel vehicles such as school buses from idling more than five consecutive minutes when not stuck in traffic or in an emergency situation. Fines can be issued to those not following the guidelines set by the State. Some towns and cities, including NYC, have even stricter restrictions. Other recommendations include educating bus companies and bus drivers on the harmful pollution that diesel emissions produce, and turning the bus off while waiting for schools to let out. Furthermore, limiting morning warm-up time and turning the bus off when loading and unloading passengers will greatly help decrease diesel fuel emissions. Parents are urged to pay attention to what is happening at your children's school, and speak up if you notice idling buses or trucks!



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