



Improving the Health of Our Children

Exposure to pollution caused by traffic threatens the health of our children.

- It causes asthma in some children and triggers asthma attacks.
- Asthma is a chronic and usually life-long disease.
- Children who attend school near a major roadway are 45% more likely to develop asthma¹

The rate of childhood asthma in Massachusetts is higher than in the nation.

- The 2013 asthma rates were 8.3% in the nation and 11.4% in Massachusetts.²
 - In Springfield the rate was almost 17% in 2012.³
- 54 schools in the state are less than 250 meters from a Class 1 road.⁴
- Two schools are less than 75 meters from a Class 1 road.⁴
 - Gerena Elementary School – 21% asthma rate

Preventing asthma has large savings for families.

- The cost of health care plus lost wages is approximately \$3,500 a year per child with asthma in Massachusetts.⁵
- The value of the quality of life impacts of asthma is \$1,500 a year.⁶
- 18% of maternal caregivers experience job loss due to missing work to care for their child's asthma.⁵

Reducing exposure to traffic pollution benefits society.

- The cost to Los Angeles County for traffic-related asthma in one year was over \$441 million.⁷
 - The costs to Springfield are likely to be proportionally higher because of the substantially higher rates of asthma compared to Los Angeles.
- Asthma costs reduce resources for other child health programs.
- The amount spent in 2007 to treat pollution-caused asthma exacerbations in Los Angeles could have paid for⁷:
 - 135,000 chicken pox vaccinations, or
 - public insurance for 33,000 children, or
 - full-time preschool for 2,000 children.

How to improve the lives of our children and *prevent* new asthma cases

- Limit exposure to traffic pollution by
 - enforcing existing anti-idling laws.
 - constructing barriers between roadways and existing schools.
- Prevent exposure to traffic pollution by
 - building new schools at a minimum of 150-meters (500 feet) but ideally more than 200 meters (650 feet) from highways and major roadways.

For more information contact:

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1. McConnell, et al. Childhood incident asthma and traffic-related air pollution at home and school. *Environmental Health Perspectives* <http://dx.doi.org/10.1289/ehp.0901232> (2010).
2. CDC, http://www.cdc.gov/asthma/most_recent_data_states.htm
3. MDPH, <https://matracking.ehs.state.ma.us/Health-Data/>
4. Analysis by Sylvia Brandt and Eric Koegler. Work in progress.
5. Derived from Brandt's study in *European Respiratory Journal* (2012).
6. Brandt's study in *Value in Health* (2012).
7. Brandt's study in *Journal of Allergy and Clinical Immunology* (2014).