

The Importance of Environments on Children's Health

Why We Need SET Project In Our Schools

Fact Sheet

“Good Indoor air quality contributes to a favorable learning environment for students, productivity for teachers and staff, and a sense of comfort, health, and well-being for all school occupants. These combine to assist a school in its core mission – educating children.”¹ Why should we be concerned with the adequacy and condition of the school buildings themselves? There are many reasons pertaining to children's education, some of which are outlined below.

In their “Note to School Officials” at the beginning of the Tools For Schools IAQ Coordinator's Guide, the Environmental Protection Agency states that quality contributes to a favorable learning environment.²¹ In other words, the better the quality of a child's surroundings, the better the opportunity for children to learn and reach their full potential. The reverse is true, too. In adverse conditions, children are likely to be affected and not perform to the best of their ability. In addition, there are consequences, not just for learning, but for long term and short term health as well. Because children's bodies are more vulnerable than adults, they are at greater risk. The Children's Environmental Health Network reminds us “that our technological age has led to the discovery and use of thousands of new chemicals. During the last 50 years hundreds of thousands of chemicals have been developed and the production of synthetic chemicals has increased from 1.3 billion pounds in 1940 to 320 billion pounds in 1980.” They go on to say “traces of man-made chemical compounds (toxicants) are found in all humans and animals. Little is known about the health effects of the majority of these chemicals on children.”²⁶ Listed below are reasons why children are more at risk than adults:

- “Children breathe a greater volume of air relative to their body weight.”²
- The EPA has said that individuals that have symptoms caused by the environment are frequently indoor-related not outdoor-related. “Studies from the U.S. and Europe show that person in industrialized nations spend more than 90% of their time indoors.”¹²
- “...frequently they (children) are not able to excrete toxins as well as adults, and thus are more vulnerable to them.”⁵

We do know that there are symptoms associated with environmental exposures to contaminants, which vary depending on the nature of the exposure and the individual's tolerances. Some short-term health problems noted by the EPA include coughing, eye irritation, headache, asthma episodes and allergic reactions and, in rarer cases, life-threatening conditions such as severe asthma attacks. Environmental contaminants such as cigarette smoke, pollen, mold, animal dander, feathers, dust, food, indoor and outdoor air pollutants, including ozone and

exposure to cold air or sudden temperature change can all contribute to these symptoms.⁷

If a closer look is taken at just one affected group -Asthmatics- the significance of properly maintained indoor environments is clearer.

Environmental contaminants are thought to play a role in increases in the incidence of asthma. Asthma is a growing concern in the United States. One third of the nation's estimated 14.6 million asthmatics are children under age 18 or 4.8 million. The prevalence rate (rate per thousand) has increased 72.3 percent between 1982 and 1994. It is the leading serious chronic illness among children. Asthma is responsible for 10 million school day absences annually. Asthma is the third highest cause of hospitalization in children and the first highest reason for hospitalization due to a chronic condition. It is estimated that the treatment of the condition in children under 18 is 3.2 billion dollars and accounts for many lost workdays among parents. Monitoring the indoor school environment could significantly impact the health of Asthmatic children and adults in a positive manner benefiting these children's health and learning, and their families' lives, as well.⁸

In addition to the short-term health concerns, there is a growing body of evidence to suggest that environment may play a role in the long-term health of children, too. The Children's Health Network informs that researchers are trying to determine if increases in the incidence of some childhood diseases may be environmentally linked. For example the “incidence of two types of childhood cancers has risen significantly over the past 15 years: acute lymphocytic leukemia is up 10% and brain tumors are up more than 30%.”⁹

While researchers work diligently to determine the causes leading to increases in children's health concerns, it is important to remember that schools must provide children with a favorable, healthy environment in which to learn. Remember, “The key to protection is prevention.”¹⁰ The SET Project is a PTA initiative, in cooperation with the Department of Education, to monitor indoor environments. It is our hope that many PTAs will want to participate to ensure that our schools are safe. Help us monitor these learning environments, provide us with information for budget advocacy, and ensure that our facilities are safe buildings. Only then can our children reach their full potential.

We urge local PTA's to participate in the SET Project as insurance in our future – our children. “Proper maintenance of indoor air is more than a ‘quality’ issue, it encompasses safety and stewardship of our investment in the students, staff and facilities.”¹¹

¹ Indoor Air Quality, Tools For Schools, IAQ Coordinator's Guide, EPA 402-K-95-001, Pg. I.

² *ibid.*, Pg. 4

² *ibid.*

⁶ *ibid.*

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¹² U.S. EPA office of Air and Radiation, Report to Congress on Indoor Air Quality, Vol. II: Assessment and Control of Indoor Air Pollution, pp. 14-14, EPA-400-I-89-001C, 1989.

⁵ *ibid.*

⁷ Indoor Air Quality, Tools For Schools, IAQ Coordinator's Guide, EPA 402-K-95-001, Pg. 3.

⁸ All Asthma data is from the American Lung Association Fact Sheet, Asthma in Children, <http://www.lungusa.org/ascpedfac.html>, August 1998.

⁹ An Introduction to Children's Environmental Health, Children's Environmental Health Network, <http://www.cehn.org/cehn/WhatisPEH.html>, pg. 7, 6/23/99.

¹⁰ *ibid.*

¹¹ Indoor Air Quality, Tools For Schools, IAQ Coordinator's Guide, EPA 402-K-95-001, Pg. 4.

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