



HEALTHY SCHOOLS FOR HEALTHY KIDS

PESTICIDE USE IN SCHOOLS GET THE FACTS

NCAP works to protect community and environmental health and inspire the use of ecologically sound solutions to reduce the use of pesticides. We work directly with farmers, schools, parks and cities that seek to end their reliance on pesticides.

FACT: THE SCHOOL ENVIRONMENT IMPACTS LEARNING FOR ALL CHILDREN.

Educational attainment is directly linked to the quality of the learning environment; likewise, chemical exposure is linked to developmental delays (Shelton, et al, 2014). The Environmental Protection Agency (EPA) states that concentrations of air contaminants at schools are often found to be two to five times higher indoors than outdoors due to the tighter buildings, reduction in outdoor air brought into schools for ventilation, reduced maintenance budgets, and the proliferation of indoor sources of contaminants. Pests and pesticides are common asthma triggers, which contribute to higher absentee rates and lower test scores. Missing school regularly, even just in kindergarten, is strongly associated with lower reading and math performance for children later in life (Chang and Romero, 2008).

FACT: CHILDREN ARE AT GREATER RISK.

Children are especially impacted by chemical exposures as a result of their size, behavior, and physiology. Their small size results in a higher concentration of pollutant exposure. Children exhibit behaviors that put them at greater risk. They play on the floor or grass, for example, where pesticides are commonly applied. They are also more vulnerable to lifelong detrimental effects of chemicals because their developing hormonal, neurological and other systems can be disrupted by pesticides and other chemicals. This can result in long-term negative health effects (Williams, Linker, Waldvogel, Leidy, & Schal, 2005).



FACT: THERE ARE KNOWN HARMFUL HEALTH IMPACTS ASSOCIATED WITH EXPOSURES TO PESTICIDES (Roberts, 2012). SCHOOLS HAVE A RESPONSIBILITY TO USE SAFE PRODUCTS.

Implementing Integrated Pest Management (IPM) in schools, using best practices, and safer chemical guidelines have many benefits. Chief among them is helping students stay healthy and ready to learn. IPM can benefit schools by improving indoor air quality, which has been found to result in better attendance, lower teacher turnover and increase productivity (Chambers, et al, 2011).

FACT: PEDIATRICIANS AND HEALTH AGENCIES CALL FOR SAFER CHEMICAL POLICIES IN SCHOOLS.

In 2012, the American Academy of Pediatrics issued a strong statement that children should not be exposed to any pesticides and recommended IPM as a solution to reduce risk (American Academy of Pediatrics, 2012). In 2014, a recommendation letter signed by the EPA, Washington State Department of Health, Office of Superintendent of Public Instruction, and Washington State University Extension collectively recommended that schools implement IPM as a means to reduce pesticide exposure and protect the health of children in Washington. IPM is encouraged nationally by the EPA to reduce pesticide use in schools (Center of Expertise for School IPM, 2014).

FACT: CHEMICALS OF CONCERN EXIST IN PRODUCTS WIDELY USED IN SCHOOLS.

Chemicals such as herbicides/pesticides, bleach, ammonia, triclosan, quaternary ammonium compounds, fragrance, artificial dyes and other chemicals found in hand soaps, sanitizers, wipes and commercial cleaning agents are commonly used in school settings. Teachers, staff, custodians and students use these chemicals even though they are proven or suspected to exert neurological, psychiatric, developmental, hormonal, reproductive, and/or carcinogenic effects (Kroger, 2005) (Kerry & Kroger, 2012) (US EPA, 2016). According to a recent EPA study of pesticide use in child care centers, 75% of centers reported at least one pesticide application in the last year (US EPA, 2016).

FACT: LESS TOXIC AND COST-COMPARABLE PRODUCT ALTERNATIVES EXIST AND ARE WIDELY AVAILABLE.

Less toxic and cost-effective alternatives exist for cleaning, managing pests and classroom supplies. These safer alternatives are now widely available. Integrated Pest Management (IPM) policies in schools have been found to reduce pesticide use by 71% and reduce pest complaints by 78% to 90% with no increase in costs (Gouge, Lame and Snyder, 2006). IPM is a long-term policy solution and when coupled with individualized technical assistance to schools, these policies can improve indoor air quality, improve test scores and reduce absenteeism (Chambers, et al, 2011).



FACT: STATE LAWS AND DISTRICT POLICIES MANDATING SAFER CHEMICALS IN PEST MANAGEMENT PROGRAMS PROVIDE INCENTIVE AND A CLEAR FRAMEWORK TO ENSURE HEALTHY SCHOOL ENVIRONMENT STANDARDS.

In some cases, districts have adopted broad guidelines for safe chemical use. For example, Integrative Pest Management in schools has been mandated in Oregon, Arizona, California, and Illinois, among others (EPA strategic plan: <https://www3.epa.gov/pestwise/ipminschoools/strategicplan.pdf>).

ACTIONS YOU CAN TAKE

- Ask your school board to support reducing pesticide use in schools.
- Send a letter to the editor of your local newspaper about pesticides in schools.
- Ask your friends and family to call the school or district and discuss their concerns.
- Call the Governor of your state and your representatives and ask them to support reducing pesticide use in all schools.
- Join your state Green Schools (in Washington and Oregon) and start a green school student group at your school. Learn more at www.wagreenschools.org and www.oregongreenschools.org.

American Academy of Pediatrics. (2012). POLICY STATEMENT: Pesticide Exposure in Children. *Pediatrics: The Official Journal of the American Academy of Pediatrics*, 131 (5), 1757-1763.

Center of Expertise for School IPM. (2014). *Model Pesticide Safety and IPM Guidance Policy for School Districts*. Washington, DC: EPA.

Chambers, Kelly, Thomas Green, Dawn Gouge, Janet Hurley, Tim Stock, Zack Burns, Mark Shour, Carrie Foss, Fudd Graham, Kathy Murray, Lynn Braband, Sherry Glick and Matt Anderson, 2011. *The Business Case for Integrated Pest Management in Schools: Cutting Cost and Increasing Benefits*. U.S. Environmental Protection Agency.

Chang, H. & Romero, M. (2008). *Present, Engaged, and Accounted for – The Critical Importance of Addressing Chronic Absence in the Early Grades*. National Center for Children in Poverty, Mailman School of Public Health, Columbia University.

Gouge, D. H., M. L. Lame, and J. L. Snyder, 2006. *American Entomologist*. 52 (3): 190-196).

Kerry, L., & Kroger, S. (2012). *Toxicants and Environmental Health: A*

psychological Issue. *Journal of Student Research*, 2, 19-30.

Kroger, S., Schettler, T., & Weiss, B. (2005, April). *Environmental Toxicants and Developmental Disabilities: A Challenge for Psychologists*. *American Psychologist*, 243-255.

Roberts JR, Karr CK; American Academy of Pediatrics, Council on Environmental Health. *Technical report—pesticide exposure in children*. *Pediatrics*. 2012;130(6)

Shelton JF, et al. *Neurodevelopmental disorders and prenatal residential proximity to agricultural pesticides: the CHARGE study*. *Environ Health Perspect* 122(10):1103–1109 (2014); doi: 10.1289/ehp.1307044

US EPA. (2016, March 1). *Information for Parents about Pesticides and Integrated Pest Management in Child-Care Settings*. Retrieved May 16, 2016, from US Environmental Protection Agency: <https://www.epa.gov/childcare/information-parents-about-pesticides-and-integrated-pest-management-child-care-settings>

Williams, G., Linker, M., Waldvogel, M., Leidy, R., & Schal, C. (2005). *Comparison of Conventional and Integrated Pest Management Programs in Public Schools*. *Entomological Society of America*, 98 (4), 1275-1283.

Please share this information with parents, students, teachers and school employees to help minimize and prevent the use of harmful chemical pesticides in our schools and daycares.

WWW.PESTICIDE.ORG / INFO@PESTICIDE.ORG