

**MINNESOTA PUBLIC HEALTH ASSOCIATION
POLICY RESOLUTION**

IMPACT OF PESTICIDES ON CHILDREN'S HEALTH, 2017

WHEREAS, more than 1 billion pounds of pesticides are used annually in the United States, of which 680 million pounds are used in agriculture¹; and

WHEREAS, all children are exposed to pesticides via residues on food and pesticide applications in homes, schools, and parks; and children in rural and agricultural communities are additionally exposed to agricultural pesticides that travel from nearby fields and contaminate water supplies, air or dust²; and

WHEREAS, children are particularly vulnerable to the impacts of pesticide exposure as they take in more air, water and food per pound than adults, and exposure to synthetic chemicals like pesticides—even at low doses—can have significant effects during critical windows of prenatal and childhood development^{3 4}; and

WHEREAS, rates of childhood cancer continue to rise, as do rates of autism spectrum disorder, attention deficit hyperactivity disorder and other developmental disabilities⁵, and some birth defects; and

WHEREAS, a growing body of evidence links prenatal or childhood pesticide exposure to increased risk of childhood cancers, including leukemia and brain tumors^{6 7 8}; and

WHEREAS, prenatal proximity to agricultural fields where pesticides are applied is linked with increased risks of developmental disabilities and changes in neurodevelopment, including autism spectrum disorders, ADHD, and lowered IQ^{9 10 11}; and

WHEREAS, the American Academy of Pediatrics,¹² the President's Cancer Panel,¹³ and the American Congress of Gynecologists¹⁴ have highlighted the link between pesticide exposure and harms to human health, and called for reducing exposure to pesticides to protect human health; and

WHEREAS, six of the top eight pesticides most commonly sold in Minnesota are carcinogens, three are linked with birth defects or developmental harms, and six are suspected endocrine disruptors^{15 16 17}.

THEREFORE BE IT RESOLVED, that the Minnesota Public Health Association:

- 1) Calls on policy makers and state leaders to minimize children's exposure to pesticides by setting ambitious targets for pesticide use reduction in agriculture; creating protective buffers around sensitive sites like schools and daycares; phasing out the use of pesticides most harmful to children's health and development; and creating incentive programs to support farmers to reduce pesticide use; and
- 2) Urges policy makers, state agencies including the Minnesota Department of Agriculture, and the University of Minnesota to collect and release additional data on pesticide sales and/or use in Minnesota, including creating a publicly searchable pesticide use database; and

- 3) Calls on policy makers to improve tracking of illnesses related to pesticide exposure by making pesticide-related illness and injury a reportable disease, and allocating funding to create a Department of Health Pesticide Illness Monitoring and Prevention Program to do surveillance and outreach; and
- 4) Encourages its members, partners, individual health professionals and health professional associations to become familiar with the identification, treatment and reporting of acute and chronic illnesses linked to pesticide exposure; to educate patients on the health effects of pesticide exposure and encourage reduction of pesticide use in the home; and to report incidents of pesticide-related illness to state agencies and encourage patients to do the same.

¹ Grube A, Donaldson D, Kiely T, Wu L. Pesticides Industry Sales and Usage, 2006 and 2007 Market Estimates. U.S. EPA. February 2011.

² Marquez EC, Schafer KS. Kids on the Frontline, How Pesticides are Undermining the Health of Rural Children. Pesticide Action Network of North America. May 2016.

³ Landrigan P, Mattison DR, Babich HJ, Boardman B et al. Pesticides in the Diets of Infants and Children. National Academy Press, Washington DC, 1993.

⁴ Grandjean P, Landrigan P. Neurobehavioural effects of developmental toxicity. *The Lancet Neurology*. 2014;13(3):330-38.

⁵ U.S. EPA. America's Children and the Environment: Measures of Contaminants, Body Burdens, and Illnesses. Washington, DC. 2011.

⁶ Lafiura KM, Bielawski DM, Posecion NC Jr, Ostrea EM Jr, et al. Association between prenatal pesticide exposures and the generation of leukemia-associated T(8;21). *Pediatr Blood Cancer*. 2007;49(5):624-8.

⁷ Emerenciano M, Koifman S, Pombo-de-Oliveira MS. Acute leukemia in early childhood. *Braz J Med Biol Res*. 2007;40(6):749-60.

⁸ Infante-Rivard C, Weichenthal SJ. Pesticides and childhood cancer: an update of Zahm and Ward's 1998 review. *J Toxicol Environ Health B Crit Rev*. 2007;10(1-2):81-99.

⁹ Marquez EC, Schafer KS. Kids on the Frontline, How Pesticides are Undermining the Health of Rural Children. Pesticide Action Network of North America. May 2016.

¹⁰ Shelton, Janie F., Estella Marie Geraghty, Daniel J. Tancredi, Lora D. Delwiche, Rebecca J. Schmidt, Beate Ritz, Robin L. Hansen, and Irva Hertz-Picciotto. "Neurodevelopmental Disorders and Prenatal Residential Proximity to Agricultural Pesticides: The CHARGE Study." *Environmental Health Perspectives*, June 23, 2014. doi:10.1289/ehp.1307044.

¹¹ Bennett D, Bellinger DC, Birnbaum LS, Bradman A, Chen A, Cory-Slechta DA, Engel SM, Fallin MD, Halladay A, Hauser R, Hertz-Picciotto I, Kwiatkowski CF, Lanphear BP, Marquez E, Marty M, McPartland J, Newschaffer CJ, Payne-Sturges D, Patisaul HB, Perera FP, Ritz B, Sass J, Schantz SL, Webster TF, Whyatt RM, Woodruff TJ, Zoeller RT, Anderko L, Campbell C, Conry JA, DeNicola N, Gould RM, Hirtz D, Huffling K, Landrigan PJ, Lavin A, Miller M, Mitchell MA, Rubin L, Schettler T, Tran HL, Acosta A, Brody C, Miller E, Miller P, Swanson M, Witherspoon NO. 2016. Project TENDR: Targeting Environmental Neuro-Developmental Risks. The TENDR Consensus Statement. *Environ Health Perspect* 124:A118–A122; <http://dx.doi.org/10.1289/EHP358>.

¹² American Academy of Pediatrics Policy Statement, Pesticide Exposure in Children. *Pediatrics*. 2012;130(6):e1757-63.

¹³ U.S. DHHS, NIH, National Cancer Institute. 2008-2009 Annual Report, President's Cancer Panel. Reducing Environmental Cancer Risk What We Can Do Now. April 2010.

¹⁴ American College of Obstetricians and Gynecologists Committee Opinion, Exposure to Toxic Environmental Agents. October 2013, Number 575, reaffirmed 2016.

¹⁵ MN Department of Agriculture sales data, http://www2.mda.state.mn.us/webapp/lis/chemsold_default.jsp.

¹⁶ Pesticide Action Network, Pesticide database <http://www.pesticideinfo.org>

¹⁷ Guyton, Kathryn Z et al. Carcinogenicity of tetrachlorvinphos, parathion, malathion, diazinon, and glyphosate. *The Lancet Oncology*, 2015;16(5):490-91.