

Ending the Chemical Dynasty: Children and Pesticides

As we enter spring and celebrate the myriad of religious and folk holidays of this time, I am reminded of the story of the Easter ham. After observing her mother chop the ends off of a ham before placing it in a baking dish, a little girl asks her mother why she is cutting the ends off. Her mother replies that she does not know why, but that she has done it all her life because as a small child, she saw her mother do the same thing. When the mother calls the grandmother to inquire about the practice, the grandmother laughs and replies that she cut the ends off of her ham because she did not have a pan big enough to fit the whole thing!

Many of our customs exist because, "that was the way my father did it, and his father did it, and his father did it before that..." When we look at our relationship to the land around us and our own gardens, a similar story is in play. We have bright green lawns in California because that is what our parents had when we grew up on the East coast or in the Midwest, or because the aesthetics of the 'English Garden' of our ancestors still fulfill our expectations of what a garden should look like. We are also still susceptible to DuPont's famous slogan, "Better living through Chemistry," which was used to promote the use of plastics, DDT, and the numerous pesticides, herbicides and fertilizers that are still a part of the modern day garden care ritual.

How is it that in 2008, when we have evidence that 37% of commonly used lawn chemicals are endocrine disrupters, 53% are toxic to birds, 80% are toxic to fish and aquatic organisms, and 57% are now found in detectable amounts in our groundwater (drinking water), we are still using these chemicals on a regular basis? Lawns are primarily used by children, who are the most vulnerable to these chemicals through inhalation and absorption through their skin. The following facts are excerpted from the *Beyond Pesticides Fact Sheet, Vol 25, No. 2, 2005 Pesticides and You, Page 17*:

- The National Academy of Sciences reports that children are more susceptible to chemicals than adults and estimates that 50% of lifetime pesticide exposure occurs during the first five years of life.¹
- A study published in the *Journal of the National Cancer Institute* finds that household and garden pesticide use can increase the risk of childhood leukemia as much as seven-fold.⁸
- A 2004 peer-reviewed study finds that young infants and toddlers exposed to herbicides (weed killers) within their first year of life are four and a half times more likely to develop asthma by the age of five, and almost two and a half times more likely when exposed to insecticides.¹⁷
- Scientists believe that the amount of toxic chemicals in the environment that cause developmental and neurological damage are contributing to the rise of physical and mental effects being found in children.²²
- Lawn pesticide products containing herbicides and fertilizers (such as "weed and feed" products) tested on mice show increased risk of infertility, miscarriage and birth defects at very low dosages.²⁴
- Scientific studies show that 2,4-D applied to lawns drifts and is tracked indoors where it settles in dust, air and surfaces and may remain for up to a year in carpets.³¹

We typically consider our yards to be a safe place for our children to play. Ironically, they are most often toxic to the ones we are working the hardest to protect. Chemical pesticides, herbicides and fertilizers are not only harmful to our families, but they have a devastating effect on wildlife and the health of the San Francisco Bay as well. These products are still legal and readily available, but we have a choice as consumers whether or not we will use them.

As a mother of two and owner of a sustainable landscape company, I want mothers to know that there are alternatives to conventional landscaping that will help protect our children and their future. In my business we continually work with our clients to 'green'

their gardens through the tried and true use of organic gardening practices and non-toxic materials. We promote changing lawns into planted areas that incorporate native and drought tolerant plants (which can potentially create more creative playspaces for children.) And for those who want to keep their lawns, we use natural fertilizers to promote healthy soil, which is the foundation for any plant to thrive. We are committed to sustainable landscape management because we know how important a healthy environment is for children and for all life.

Long before the early nineteen hundreds and the introduction of chemicals into our daily lives, generations and generations of people before us were all organic gardeners—let us invite these practices back into our culture and consciously perpetuate traditions of real value. And when our children ask us why we leave our grass clippings on the lawn after we mow, we can answer confidently, “because it is the best way to feed the grass without hurting the environment, and it is what your great-great grandfather did, and his father before him...”

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References

¹ National Research Council, National Academy of Sciences. 1993. *Pesticides in the Diets of Infants and Children*, National Academy Press, Washington, DC: 184-185.

⁸ Lowengart, R. et al. 1987. *Childhood Leukemia and Parent's Occupational and Home Exposures*, Journal of the National Cancer Institute 79:39.

¹⁷ Salam, MT, et al. 2003. *Early Life Environmental Risk Factors for Asthma: Findings from the Children's Health Study*. Environmental Health Perspectives. 112(6): 760.

²² National Research Council. 2000. Scientific frontiers in developmental toxicology and risk assessment. Washington, DC: National Academy Press. Physicians for Social Responsibility, The National Environmental Trust, and The Learning Disabilities Association of America. 2000. *Polluting our future: Chemical pollution in the U.S. that affects child development and learning*. http://www.net.org/health/tri_report.pdf (accessed 6/2/05).

²⁴ Greenlee, A. et al. 2004. *Low-Dose Agrochemicals and Lawn-Care Pesticides Induce Developmental Toxicity in Murine Preimplantation Embryos*, Environ Health Perspect 112(6): 703-709; Cavieres, M., et al. 2002. “Developmental toxicity of a commercial herbicide mixture in mice: Effects on embryo implantation and litter size.” Environ Health Perspect 110:1081-1085.

³¹ Nishioka, M., et al. 1996. *Environmental Science Technology*, 30:3313-3320; Nishioka, M., et al. 2001. Environmental Health Perspectives, 109(11).