

Children and Lawn Chemicals Do Not Mix

As we know, looks can be deceiving. Consider lawns, parks and golf courses which may be attractive to the eye, but maintenance of these areas often involves treatments with chemicals that are not as safe as you may assume.

This is true especially for children who are particularly vulnerable to environmental toxins. Because of smaller body weight and incomplete development of organs, they are at much greater risk than adults. Philip Landrigan, professor of pediatrics at Mount Sinai School of Medicine says that “These delicate developmental processes are easily disrupted by very small doses of toxic chemicals that would be virtually harmless for an adult.”

Additionally, children can be exposed to pesticides in their food, water and air, again the total effect being much greater than it would be for adults. And of course they have no idea that rolling around in the grass and putting their fingers in their mouths greatly increases their exposure and therefore their health risks.

Also, it is known that lawn chemicals can transfer into the home through vents and windows during and after spraying. People and dogs also can track residue inside the home or into the car where it can persist for up to a year in carpets. A recent study found that a week after lawn treatment, 2,4-D could be detected on all indoor air surfaces, including tabletops and windowsills. It was estimated “that indoor exposure to 2,4-D for young children was about 10 times higher during the week after lawn application than it was in the week before the lawn was treated.”

And the question of how long is it safe before using the lawn again has not been adequately established. Gary Ginsburg, clinical professor at the University of Connecticut says, “Just because it’s dried doesn’t mean it’s not transferable. And even if the herbicide dries, it may mist later, or there may be dew in the morning.”

Other health conditions that are linked to pesticides include asthma, allergies, learning and developmental disorders, endocrine disruption, and even cancers. Studies show that children living in households where pesticides are used suffer elevated rates of leukemia, brain cancer, soft tissue sarcoma, and childhood leukemia.

How are lawn chemicals controlled by the government?

The Environmental Protection Agency approves pesticides based on their intended use, but little is known about safe levels of exposures and how mixtures of chemicals act together. Many lawn chemicals are a combination of pesticides sometimes mixed with an herbicide. Evaluation of combinations of chemicals is not required.

Jay Feldman, executive director of Beyond Pesticides, points out the lack of comprehensive information. “We are so far removed from developing an adequate assessment of what the real effect of these chemicals is, given mixtures, given synergy, given different vulnerabilities or preexisting conditions that people have.”

What pesticides should I be concerned about?

Some of the most common lawn and garden chemicals are listed below. One should always read labels and be informed about health effects. If using a lawn care company, make sure you know what is being applied.

Glyphosate: Is the most commonly used herbicide in the U.S. Glyphosate is the active ingredient in RoundUp. For many years it was thought to be safe for humans, but recent research has correlated it to cancer, particularly non-Hodgkins lymphoma. Three federal courts have upheld lawsuits against the manufacturer Monsanto. Additionally, products containing glyphosate usually contain additives which may be just as toxic as the glyphosate itself. Government testing is done on the active (glyphosate) only.

2,4-D (2,4-dichlorophenoxyacetic acid): Very commonly used active found in many lawn products. Several studies have found a statistically higher incidence of non-Hodgkin's lymphoma in people exposed to 2.4-D. It is listed as a respiratory irritant that can cause irritation to skin and mucous membranes, chest burning, coughing, nausea and vomiting. It can be tracked indoors where it can remain on carpets for months.

MCPP (MCP-p 4-Amine): Listed as a possible carcinogen. Irritating to eyes. Risks of birth defects. Half of original application (half life) persists in environment typically 11 to 15 days.

Dicamba: May cause skin irritation and severe and permanent damage to the eyes. Half of original application (half-life) persists in soil for one to five weeks. Highly prone to drifting so that application in neighboring yards may affect your property.

Diquat (Diquat dibromide): Herbicide which may be breathed in or absorbed through the skin. Can irritate eyes, nose and throat, and cause damage to nails and cracked skin.

Organophosphates (Malathion, Acephate, Diazanone, Chlorpyrifos, etc.): This older class of pesticides should **always be avoided** due to toxic effects on humans and the environment.

What can I do to avoid harmful lawn chemicals? Ways to manage your lawn organically include mowing higher (3"), leaving grass clippings on the lawn, overseeding with mix of hardy grasses, and aeration where indicated. Tolerate clover, dandelions and violets as they are important nectar and pollen sources for pollinators.

