

## Glyphosate / Roundup: NOT SAFE

The existing approval of glyphosate and Roundup is out of date. New research and the conclusions of an international team of reviewers have established ample reason to immediately discontinue use of Roundup and other herbicide formulations that contain glyphosate.

- Most recently the World Health Organization's cancer research agency announced that glyphosate is "[probably carcinogenic](#)"<sup>i</sup> to humans. The UN agency based its decision on human, animal, and cell studies.
- Other independent research has linked glyphosate to a long list of serious health conditions and chronic diseases, including [breast cancer](#),<sup>ii</sup> [birth defects](#),<sup>iii</sup> [kidney disease](#),<sup>iv</sup> and [endocrine disruption](#).<sup>v</sup>
- It was recently determined that glyphosate may in fact bio-accumulate, resulting in a concentration in our bodies that is greater than what may be excreted. This was shown in a [sample testing of mothers' breast milk and urine](#).<sup>vi</sup>
- Further, a [2014 study](#)<sup>vii</sup> showed that the so-called "inert" ingredients or adjuvants used in the formulation of Roundup made it more toxic than glyphosate alone.

Small children with their higher respiratory rates, tendency to sit on the ground, and place their hands in their mouths, are especially vulnerable to exposure. Sharp increases in child disease including a 20% rise in childhood leukemia and brain tumors since 1975<sup>viii</sup> as well as higher rates of allergies, asthma, autism, and birth defects have all been linked to environmental factors such as pesticides (including herbicides). Pets too, are at higher risk of being sickened.

While manufacturers continue to insist that glyphosate is safe to use as directed, the uncomfortable fact is that very little is known about the effects of long-term, low level exposure. What is known, is that an extraordinary amount of glyphosate is being released into the environment: an estimated 300 million pounds per year in the U.S.

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<sup>i</sup> International Agency for Research on Cancer (2015). IARC Monographs Volume 112: evaluation of five organophosphate insecticides and herbicides. Lyon, France.

<sup>ii</sup> Thongprakaisang, S. et al. (2013). Glyphosate induces human breast cancer cells growth via estrogen receptors. *Food and Chemical Toxicology* 59 (2013) 129-136.

<sup>iii</sup> Antoniou, M. et al. (2011). Roundup and birth defects: Is the public being kept in the dark? Earth Open Source.

<sup>iv</sup> Jayasumana, C. et al. (2014). Glyphosate, Hard Water and Nephrotoxic Metals: Are They the Culprits Behind the Epidemic of Chronic Kidney Disease of Unknown Etiology in Sri Lanka? *International Journal of Environmental Research and Public Health*, 2014, 11, 2125-2147.

<sup>v</sup> Young, F. et al. (2015). Endocrine disruption and cytotoxicity of glyphosate and Roundup in human Jar cells in vitro.

Integrative Pharmacology, Toxicology and Genotoxicology. Open Access Text.

<sup>vi</sup> [http://www.momsacrossamerica.com/glyphosate\\_testing\\_results](http://www.momsacrossamerica.com/glyphosate_testing_results)

<sup>vii</sup> Mesnage, R. et al. (2014). Major Pesticides Are More Toxic to Human Cells than Their Declared Active Principles. *BioMed Research International*. National Institutes of Health.

<sup>viii</sup> Watts, M., 2013. *World Without Poisons*. Pesticide Action Network Asia and the Pacific.