

Glyphosate Health Hazards

Updated September 30, 2013 by Carrie Lovelace Carrier

Parkinson's Disease and Other Neurodegenerative Conditions

- Ya-xing Guia et al. "Glyphosate induced cell death through apoptotic and autophagic mechanisms." 2012.¹
- Benachour, N. et al. "Glyphosate Formulations Induce Apoptosis and Necrosis in Human Umbilical, Embryonic, and Placental Cells." 2009.²
- Le Couteur, D.G. et al. "Pesticides and Parkinson's disease." 1999.

Cancer and Systemic Human Health Effects

- Samsel A. et al. "Glyphosate's Suppression of Cytochrome P450 Enzymes and Amino Acid Biosynthesis by the Gut Microbiome: Pathways to Modern Diseases." 2013.³
- Thongprakaisang S. et al. "Glyphosate induces human breast cancer cells growth via estrogen receptors." 2013.⁴
- Jasper R. et al. "Evaluation of biochemical, hematological and oxidative parameters in mice exposed to the herbicide glyphosate-Roundup(®)." 2012.⁵
- De Roos, A. J. et al. "Cancer Incidence among Glyphosate-Exposed Pesticide Applicators in the Agricultural Health Study." 2005.⁶
- De Roos, A.J. et al. "Integrative assessment of multiple pesticides as risk factors for non-Hodgkin's lymphoma among men." 2003.⁷
- Hardell, L. et al. "Exposure to pesticides as risk factor for non-Hodgkin's lymphoma and hairy cell leukemia: pooled analysis of two Swedish case-control studies." 2002.⁸

Fertility and Fetal Impacts

- Romano RM et al. "Prepubertal exposure to commercial formulation of the herbicide glyphosate alters testosterone levels and testicular morphology." 2010.⁹

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- Dallegrave E et al. "Pre- and postnatal toxicity of the commercial glyphosate formulation in Wistar rats." 2007.¹¹
- Richard S. et al. "Differential effects of glyphosate and roundup on human placental cells and aromatase." 2005.¹²

Ground and Surface Water Contamination:

- Scribner, E. A. et al. "Concentrations of Glyphosate, its Degradation Product, Aminomethylphosphonic Acid, and Glufosinate in Ground- and Surface-Water, Rainfall, and Soil Samples Collected in the United States, 2001-06." 2007.¹³
- Scribner, E.A. et al. "Reconnaissance data for glyphosate, other selected herbicides, their degradation products, and antibiotics in 51 streams in nine Mid-western states." 2003.¹⁴
- Frans, L.M. "Pesticides detected in urban streams in King County, Washington, 1999-2003." 2004.¹⁵

Toxicity to Frogs and Aquatic Organisms

- Frontera J.L. et al. "Effects of Glyphosate and Polyoxyethylenamine on Growth and Energetic Reserves in the Freshwater Crayfish *Cherax quadricarinatus* (Decapoda, Parastacidae)." 2011.¹⁶
- Gluszcak L, et al. "Acute Exposure to Glyphosate Herbicide Affects Oxidative Parameters in *Piava* (*Leporinus obtusidens*). 2011.¹⁷
- Kreutz L.C. et al. "Exposure to sublethal concentration of glyphosate or atrazine-based herbicides alters the phagocytic function and increases the susceptibility of

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