

### What is Glyphosate?

For many years, glyphosate has been the world's most widely used herbicide, used commercially and sprayed on crops for human consumption and sold at most lawn care centers in weed killers under its trade name, Roundup. An increasing number of counties have banned or restricted its use and more and more cities and counties in the United States are doing the same. In the US, about 300 million pounds are sold annually, about 90% of that used on farm fields and about 10% used on non-agriculture lawn care like golf courses, parks, playgrounds, and yards. Bayer, the owner of Monsanto, has now paid out over \$30 billion to resolve thousands of cases alleging that exposure to Roundup herbicide caused them or their loved ones to develop non-Hodgkin lymphoma (NHL), and that Monsanto covered up the risks ([NPR article on payouts](#)).

### Why is Glyphosate Increasingly Banned and/or Restricted?

Much evidence and reports cite strong evidence that glyphosate is linked to non-Hodgkin Lymphoma and reproductive and prenatal developmental disorders in humans and wildlife due to hormone-disrupting and DNA damage. Evidence also shows that it pollutes groundwater leading to harmful effects on aquatic life, which are particularly sensitive to its contamination. Similarly, even more research points to detrimental effects on soil health, gut bacteria, and even birth defects.

[Links to Independent Research on Glyphosate Compiled by the Detox Project](#)

The global glyphosate herbicides market was valued at USD 5.46 billion in 2012 and is expected to reach USD 12.54 billion by 2024. Bayer has launched a hefty public relations campaign to combat the negative press and exposure, citing contradictory research that glyphosate is safe. Questions have risen about whether Monsanto influenced this research. Documents unsealed in March 2017 in federal court suggest that Monsanto's long-standing claims about the safety of glyphosate and Roundup [do not necessarily rely on sound science](#) as the company asserts, but on [efforts to manipulate the science](#). According to documents made public during court proceedings, the EPA Pesticide Office worked with Monsanto to hold back a report published by the Agency for Toxic Substances and Disease Registry (ATSDR) proving for several years while it promoted its "[no cancer risk](#)" position. In April 2015 internal Monsanto emails that were made public showed now-retired EPA Pesticide Office official Jess Rowland telling Monsanto's Dan Jenkins, "If I can kill this I should get a medal." ([Link to US District Court Record](#)). Further, much research supposedly

proving glyphosate safe was done solely on the active ingredient of glyphosate and not on Roundup itself, which current studies have shown to be far more harmful than glyphosate on its own. “The adjuvants (in Roundup) are toxic in themselves and increase the toxicity of glyphosate by enabling it to penetrate plant and animal cells more easily, making it more bioavailable ([Link to Research](#)).

## Does Glyphosate Cause Cancer in People and Pets?

[CNNhealth: Common weed killer glyphosate increases cancer risk by 41%, study says](#)

### **Quote from article:**

“Co-author and doctoral student Rachel Shaffer said in a statement: “This research provides the most up-to-date analysis of glyphosate and its link with Non-Hodgkin Lymphoma, incorporating a 2018 study of more than 54,000 people who work as licensed pesticide applicators.” The scientists also assessed studies on animals. Focusing on data relating to people with the “highest exposure” to the herbicide, the researchers concluded that a “[compelling link](#)” exists between glyphosate exposure and a greater risk of developing non-Hodgkin lymphoma. Senior author Lianne Sheppard, professor in biostatistics and environmental and occupational health sciences, said she was “convinced” of the carcinogenic properties of the chemical.”

[U.S. Right to Know: Glyphosate Fact Sheet: Cancer and Other Health Concerns](#)

### **Quote from Article:**

More than 42,000 people have filed suit against Monsanto Company (now Bayer) alleging that exposure to Roundup herbicide caused them or their loved ones to develop non-Hodgkin lymphoma (NHL), and that Monsanto covered up the risks. As part of the discovery process, Monsanto has had to turn over millions of pages of internal records. We are [posting these Monsanto Papers as they become available](#). For news and tips about the ongoing legislation, see Carey Gillam’s [Roundup Trial Tracker](#). The first three trials ended in large awards to plaintiffs for liability and damages, with juries ruling that Monsanto’s weed killer was a substantial contributing factor in causing them to develop NHL. Bayer is appealing the rulings.

[Natural Resources Defense Council: ATSDR Report Confirms Glyphosate Cancer Risks](#)

### **Quotes from report:**

“Developmental risks reported in studies of farm families identify a link between parental use of glyphosate and an increased risk of neural tube defects, miscarriage, preterm

delivery, and small for gestational age (ATSDR Table 2-5, p. 40-41). Although many of these are not statistically significant at a 95% confidence level, they are significant at a 90% confidence level, which should be confident enough to generate regulatory action to protect families wishing to conceive.”

“ATSDR summarizes a number of animal studies of early-life exposure to glyphosate-based products that report developmental effects including testicular lesions, decreased sperm production, elevated abnormal sperm, decreased testosterone, and skeletal malformations ([ATSDR, p. 14](#)).”

“Studies in young rodents conducted by the Ramazzini Institute reported that early-life exposure to both pure glyphosate and formulated Roundup mixtures resulted in modifying the gut microbiome in ways that may impair gastrointestinal health or have other long-term adverse health impacts ([Mao et al 2018](#)).”

## Does Glyphosate Harm Reproductive Health?

### [Research on Birth Defects and Developmental and Reproductive Problems](#)

#### **Quote from Report:**

“Reproductive toxicity in humans can show up in the form of increased tendency towards miscarriage, infertility, stillbirth, and birth defects. Studies, including some by industry, show that glyphosate and Roundup cause malformations in laboratory animals. The malformations are similar to those seen in people exposed to spraying of Roundup on genetically modified (GM) soy in Argentina.”

### [U.S. Right to Know: Glyphosate Fact Sheet: Cancer and Other Health Concerns](#)

#### **Quote from Fact Sheet:**

“Statement by the International Federation of Gynecology and Obstetrics (FIGO) Reproductive and Environmental Health Committee: “We recommend that glyphosate exposure to populations should end with a full global phase out.” (7.2019)

## Does Glyphosate Harm Pollinators?

### [U.S. Right to Know: Glyphosate Fact Sheet: Cancer and Other Health Concerns](#)

#### **Quotes from Fact Sheet:**

“Harmful impacts bees and monarch butterflies: A 2018 study reported that glyphosate [damaged the beneficial gut bacteria in honeybees](#) and made them more prone to deadly infections. This followed research from China showing that honeybee larvae [grew more slowly and died more often](#) when exposed to glyphosate, and a 2015 study that found field-levels of exposure [impaired the cognitive capacities](#) of honeybees.

Research from 2017 correlated glyphosate use with [reduced populations of monarch butterflies](#), possibly due to reductions in milkweed, the main food source for monarch butterflies.”

## Where is Glyphosate Banned?

### [Which Countries and U.S. States are Banning Roundup?](#)

Florida Cities and Counties that Have Banned or Restricted Glyphosate:

- Indian River County
- Fort Myers
- Key West
- Martin County
- Miami Beach
- North Miami
- Port St. Lucie
- Satellite Beach
- Sebastian
- Stuart
- Vero Beach