



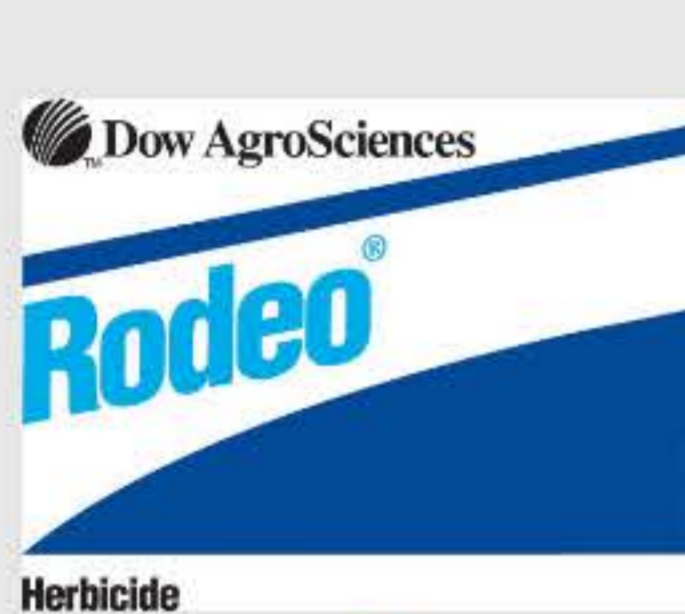
# GLYPHOSATE AND YOUR HEALTH



## WHAT IS GLYPHOSATE?

Glyphosate is an herbicide (weed killer) used extensively world-wide. It is commonly used in agriculture, forestry, industrial weed control, and lawn and garden maintenance. Glyphosate is in Roundup™ formulations and many other home pesticide products.

Cities often spray glyphosate in public parks and walkways to kill weeds.



3D model of the glyphosate molecule

## HOW AM I EXPOSED TO GLYPHOSATE?

Glyphosate exposure can happen in several ways:

- Eating food or drinking water contaminated with glyphosate residues
- Coming into direct contact with plants, soil, or foliage that have been sprayed with glyphosate
- Breathing air with glyphosate that has become airborne from spraying applications of the pesticide
- Spraying weed killers around your home increases your exposure to glyphosate
- Glyphosate has been found in every sample of popular oat-based cereal and other oat-based food marketed to children
- In 2016, approximately 300 million pounds of glyphosate based herbicides were used in the US



Food



Direct Contact

## WHAT ARE THE HEALTH EFFECTS OF GLYPHOSATE?

- Acute exposure to low levels of glyphosate may cause skin, eye, throat and mouth irritation
- A study that analyzed and summarized the findings from 21 animal studies found there to be a high probability that glyphosate causes non-Hodgkin's Lymphoma
- The International Agency for Cancer Research (IARC) has classified glyphosate as "probably carcinogenic to humans"
- A study on stem cells showed that glyphosate increases the risk for tumor development in mammary cells



Kidney Disease



Eye Problems



Liver Damage



Cancer

In animals, exposure has been linked to:

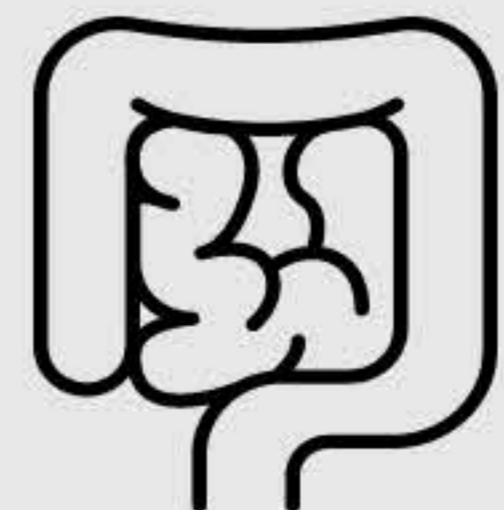
- Liver harm
- Kidney disease
- Neurodevelopmental changes
- Development of cancer
- GI disruption
- Decreased vision
- Memory impairments



Memory Impairment



Neurodevelopmental Effects



Gastrointestinal Problems



## "INERT" INGREDIENTS IN GLYPHOSATE

- Despite their name, so called "inert ingredients" may make a pesticide product more toxic and are generally not disclosed on the label
- Inert chemicals are biologically active, increase environmental mobility and persistence, and increase the ability of pesticide formulations to affect developmental neurotoxicity, genotoxicity and the disruption of hormone function
- Inert ingredients can increase glyphosate's toxicity to fish, amphibians and microorganisms, and may be more toxic to non-plant species than glyphosate itself

## GLYPHOSATE IN WATER

- Glyphosate is now widespread and has been found in a variety of ecological samples including groundwater, surface water, rainfall, and sediment
- Glyphosate can contribute to river eutrophication which can lead to death of aquatic animals

## LITIGATION AGAINST GLYPHOSATE

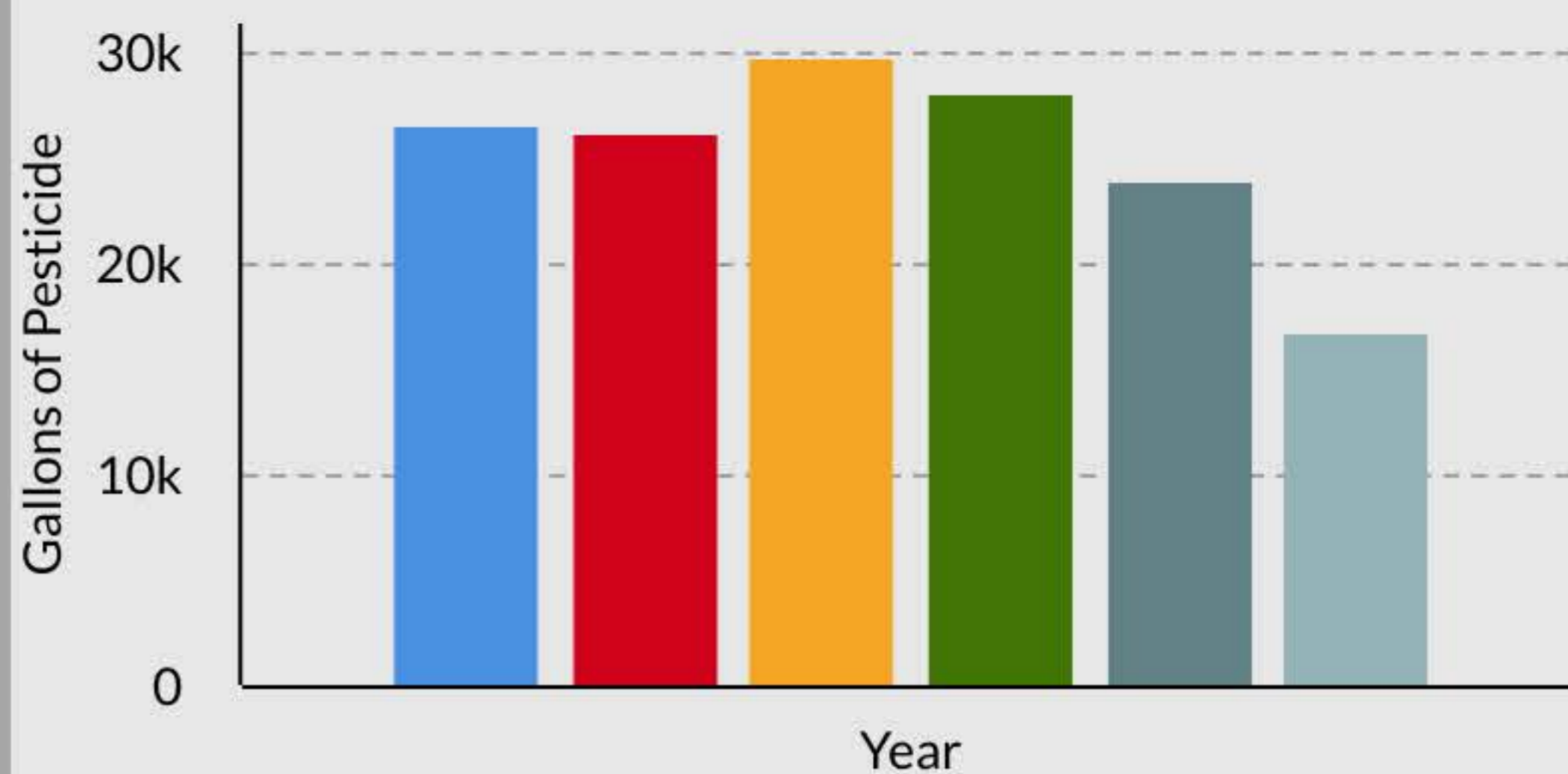
- In 2018, a man in San Francisco won a case against Monsanto and was compensated \$289,000,000 in damages for his cancer caused by exposure to glyphosate because of the "clear and convincing evidence"
- As of 2019, more than 52,500 people have filed suit against Monsanto alleging that exposure to Roundup herbicide caused them to develop non-Hodgkin lymphoma, and that Monsanto covered up the risks of glyphosate

## TAKE ACTION

- If you are concerned about the sale of glyphosate-containing herbicides, such as Roundup, Rodeo, and Eraser, are in your community, please call your local hardware stores, such as Alaska Mill and Feed, to request that they not sell glyphosate-containing herbicides
- If you would like to encourage the Alaska Railroad to not use glyphosate based herbicides on their railroads and surrounding habitats, you can contact them at (907)-265-2300

## GLYPHOSATE USE IN ALASKA

### Gallons of Glyphosate-Containing Herbicide Used by Alaska Railroad Corporation



2014 2015 2016 2017 2018 2019

The Alaska Railroad uses glyphosate containing herbicides along the 482-mile railbelt that crosses hundreds of salmon bearing streams, rivers and wetlands, including the Knik River, Susitna River, Indian River, Nenana River, and Placer River watersheds

## HOW DO I PREVENT EXPOSURE TO GLYPHOSATE?

- Do not spray glyphosate herbicides in or around your home
- Eat organic foods whenever possible
- Avoid areas where glyphosate is used on a regular basis (eg agricultural areas, railroad rights of way, and certain public lands)
- Educate yourself on the use of glyphosate in your community and take action to limit its use by contacting your local politicians and advocacy organizations
- For further information or to report an incident involving glyphosate, contact Pamela Miller at ACAT:

Phone: (907) 222-7714

Email: [pamela@akaction.org](mailto:pamela@akaction.org)

Alaska Community Action on Toxics  
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Suite 220  
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