

LINKS TO BREAST CANCER

A recent study of human cells demonstrated that glyphosate in “low and environmentally relevant concentrations” has an estrogenic effect that triggers the growth of human breast cancer cells.

BAD FOR THE GUT

Glyphosate has been shown to devastate the population of good bacteria in the gut of animals studied and if this is also true in humans could have an effect on how well we absorb nutrients from our food, how well we digest proteins and ultimately how easy it is to maintain a healthy weight. This may be one factor behind the results seen in recent studies into GMOs and weight gain.

ASSOCIATED WITH CHRONIC ILLNESS

In 2014 German researchers took urine samples from livestock and humans. Amongst the humans, glyphosate levels were significantly higher in those who ate a largely conventional diet compared to those who ate an organic diet. The researchers also grouped their findings according to the health of the humans – those who were chronically ill had significantly higher glyphosate residues in their urine.

A TOXIC FORMULATION

When glyphosate is sprayed on crops it's as a formulation that includes many so-called 'inactive' ingredients or adjuvants. Some of these are added to make a pesticides formulation more effective, for instance by helping it to penetrate the plant more deeply.

Studies show these ingredients are toxic in themselves and may make the formulation more toxic as well. In fact, recent data shows that the 'inactive' ingredients can make a glyphosate formulation 1000 times more toxic than glyphosate on its own.

In a study of Ontario farming populations, exposure to glyphosate nearly doubled the risk of late miscarriages. But the ethoxylated surfactant in the Roundup formulation – considered an 'inactive' ingredient – doubled the toxic effect of the glyphosate. This surfactant, along with the

glyphosate, ends up in our food and our animal feed; which means it ends up in us too.

Unfortunately, no study has yet shown how much of these 'inactive' ingredients we also consume when we eat conventionally grown produce and animal products.

BUT NO WARNINGS

These are just the headlines of the health damage associated with glyphosate but they are serious enough that many GMO campaigns and campaigners feel they can't fully discuss GMOs fully without also discussing pesticides.

Walk into any Tesco, Sainsbury's, Asda, Morrisons or any garden centre like B&Q or Homebase in the UK and glyphosate in many different packages and brand names on the garden care shelves, including Roundup, Resolva, Weedol, Bayer Garden Glyphosate Concentrate, Scotts Tumble-Weed and DeadFast.

You won't find warnings on the packaging or on the shelves. There is nothing to alert customers that this product contains a powerful substance that is detrimental to human health.

There is now a good argument that glyphosate should be banned – though it's hard to see our regulators, under pressure from a powerful pesticides lobby, making this call.

The bonus of doing that, however, is that we would also reduce the possibility of growing glyphosate-resistant GM crops in the UK, saving us the agony experienced by farmers and consumers in the Americas who are awash with both these crops and the toxic herbicide that comes with them.

If you care about your health, it's worth thinking about.



www.beyond-gm.org

GLYPHOSATE

What's the problem?



www.beyond-gm.org

Article with links to references available at:
<https://www.gmfreeme.org/glyphosate-whats-the-problem/>

IT'S THE WORLD'S MOST WIDELY USED HERBICIDE. SOME PEOPLE KNOW IT AS GLYPHOSATE, OTHERS KNOW IT AS ROUNDUP...

Glyphosate is used in gardens and parks, on city streets, and in playgrounds to control weeds. It is also widely used in agriculture.

Throughout the world glyphosate is also routinely sprayed on non-GMO crops, such as cereal, oilseed and legume crops – thus wheat, maize, oats and barley but also rapeseed, sunflower seeds, chick peas, lentils, soybeans and more – as a desiccant (to dry them out) before harvest.

But the use of glyphosate has become a particular problem in the Americas, where genetically modified (GMO) 'Roundup Ready' crops, engineered to withstand repeated sprayings, have significantly increased its use, and, as a result, its presence in the food system.

Glyphosate has long been known to be an environmental poison. Evidence of harm to the natural world includes the emergence of hard to kill 'superweeds, the destruction of beneficial soil organisms, and threatening the survival of wildlife such as bees and butterflies.

In the EU, glyphosate has been granted several extensions on its license. Post Brexit it will continue to be used widely the UK.

Given that you are probably eating it, and if you live near a park or in a rural area, may be regularly exposed to it in other ways, how much do you know about glyphosate and its health effects?

INCREASING USE IN THE UK

Glyphosate use has risen exponentially in countries where GMOs are planted. But even without GM crops, its use has become a problem in the UK. This is

because it's used in parks, schools and on roadsides, as well as being used routinely as a desiccant on a wide variety of food crops which we eat every day.

According to the Soil Association's Not in Our Bread campaign, government figures show its use in UK farming has increased by a shocking 400% in the last 20 years.

Glyphosate doesn't break down immediately, and can follow the grain into our food supply. Tests by the Defra committee on Pesticide Residues in Food have found that as much as 30% of UK bread contained traces of glyphosate. And, of course, UK wheat is used in other foods including biscuits and pasta.

When it does break down it forms a chemical called aminomethylphosphonic acid (AMPA), which is considered even more toxic.

WE CARRY IT IN OUR BODIES

Glyphosate bioaccumulates in organs and muscle tissue. Traces of glyphosate has been found widely in the urine of European citizens.

Traces of glyphosate have also been found in the breastmilk and urine of American mothers, and in their drinking water. The levels in breastmilk were worryingly high – around 1,600 times higher than what is allowable in European drinking water. Passed on to babies through breastmilk, or the water used to make formula, this could represent an unacceptable risk to infant health since glyphosate is a suspected hormone disrupter.

Studies of animals fed GM foods and/or glyphosate, show worrying trends in terms of health impacts including damage to vital organs like the liver and kidneys, damage to gut tissues and gut flora, immune system disruption, reproductive abnormalities, and of course, tumours.

A 'PROBABLE HUMAN CARCINOGEN'

In 2015 the International Agency for Research on Cancer (IARC) declared glyphosate a category 2A 'probable human carcinogen'. The Agency, a branch of the World Health Organization, came to its conclusion

as part of a review of the cancer-causing potential of five pesticides (the others being the organophosphates tetrachlorvinphos, parathion, malathion and diazinon).

This classification puts glyphosate in the same league as human papillomavirus type 68, inorganic lead compounds, anabolic steroids, working in a petroleum refining plant, and the dry cleaning fluid tetrachloroethylene (perchloroethylene, or 'perc').

INCREASES ANTIBIOTIC RESISTANCE

A recent international study found that glyphosate and two other widely-used herbicides, 2,4-D and dicamba, changed the way bacteria responded to a number of antibiotics, including ampicillin, ciprofloxacin, and tetracycline which are widely used to treat a range of serious, and sometimes deadly, diseases.

LINK WITH BIRTH DEFECTS

Although glyphosate is promoted as safe for humans and animals, links between glyphosate/Roundup and birth defects in laboratory animals have been known for decades – and the same effects have been reported in livestock animals whose feed is contaminated with Roundup. Recent studies suggest that this herbicide is also toxic to sperm.

LIVER AND KIDNEY DISEASE

A 2014 study identified a link between glyphosate and what was thought to be an inexplicable rise in the number of outbreaks of a fatal chronic kidney disease of unknown origin (CKDu) affecting several poor farming regions around the world.

Since then animal research has shown that doses of Roundup, well below the regulatory safety limits for glyphosate alone, are associated with fibrosis (scarring), necrosis (areas of dead tissue), phospholipidosis (disturbed fat metabolism) and damage to mitochondria (the centres of respiration in cells) in the liver and kidneys.

Other research in experimental animals confirms that glyphosate-based herbicide can cause significant liver and kidney damage even at ultra-low doses.