

How to detox glyphosate (Roundup) from your body

Updated February 9, 2019, by Catherine Haug

I am strongly opposed to use of the plant-killer glyphosate, because of the harm it does to our bodies from intake of GMO foods, and from its use as a desiccant before harvesting grain crops. Also because of the harm it does to our soil and environment.

Now I have some good news: you can detox your body from glyphosate, using several methods. This article is mainly about using a simple daily dose of glycine (an amino acid) to detox, and how to test for glyphosate levels in your body.

Glycine and glyphosate

The main way glyphosate harms our bodies, is by substituting for glycine in our body's peptides and proteins (such as enzymes, collagen, etc.). (1,2) That is, glyphosate is an analog of the amino acid, glycine. The chemical formulas are (note the similarities as indicated in bold) (3):

- glycine amino acid is : **NH₂-CH₂-COOH**;
- glyphosate is: H₂(PO₃)-CH₂-**NH-CH₂-COOH**

This similarity allows glyphosate to take glycine's place in peptides and proteins, causing all kinds of havoc. Glycine is found in all parts of the body; for example, it is part of collagen and gelatin. Substitution by glyphosate can easily explain links with (2):

"diabetes, obesity, asthma, chronic obstructive pulmonary disease (COPD), pulmonary edema, adrenal insufficiency, hypothyroidism, Alzheimer's disease, amyotrophic lateral sclerosis (ALS), Parkinson's disease, prion diseases, lupus, mitochondrial disease, non-Hodgkin's lymphoma, neural tube defects, infertility, hypertension, glaucoma, osteoporosis, fatty liver disease and kidney failure."

How to detox from glyphosate

The good news: you can detox your body from toxic glyphosate, via several methods.

1. **Increasing your dietary intake of glycine.** Your body builds new peptides and proteins every day to replace aging ones, or for new uses. An easy way to ensure your body uses glycine and not glyphosate is by flooding it with glycine. Taking glycine supplementally can be very effective; here are two ways to take it:

- add glycine powder to a smoothie, shake, or fresh veggie juices (such as for a juice fast - see below);
- use it as an alternative sweetener for coffee, tea, and other beverages, because it is slightly sweet.

Per Mercola's article (1), *"Dr. Dietrich Klinghardt recommends taking 1 teaspoon (4 grams) of glycine powder twice a day for a few weeks, and then lower the dose to one-fourth teaspoon (1 gram) twice a day. This forces the glyphosate out of your system, allowing it to be eliminated through your urine."*

Or you can take collagen supplementally, because it is an excellent source of glycine. Just be sure the source of collagen is from grass-fed/pasture-raised meat sources (conventionally raised livestock are fed Roundup-resistant grains that are heavily contaminated with Roundup, which ends up in their muscles (meat)).

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IMPORTANT NOTE: Using glycine to detox will not work for other brands of herbicides/pesticides, unless they too contain glycine in their structure.

[**Cat's testing note:** have not yet tried this detox method, but I will do that soon, after getting both a hair analysis and radionics tests (see Testing, below) to determine my starting levels, and will report my results over time.]

2. Other detox methods:

- Easy Health Options (8) recommends first doing a **pre-detox** of your intestines using Miralax to create liquid stools. They also recommend sweating in a sauna, and doing a liver detox with specific herbs and supplements.
- A veggie-juice fast such as that offered by Wellness Education Center (WEC) in Kalispell helps with many different detox needs, but I would recommend doing this glycine detox along with the WEC fast (add glycine powder to the juices).

Bonuses with glycine powder method:

- Impact on glutathione:

One of the most important peptides containing glycine is glutathione, a major antioxidant and detox agent made by the body, and essential for the liver's detox ability. Glutathione is comprised of three amino acids: glycine, L-glutamine, and L-cysteine. When you take glycine supplementally, you help increase glutathione production, which improves your ability to detox toxic substances.

If glyphosate has taken glycine's place in glutathione, that lessens your body's ability to detox, not only from glyphosate, but from many other toxins as well. By flooding your body with glycine, you have a double-impact: restoring glycine to peptides/proteins, and restoring glutathione's ability to detox your body from the damage created by glyphosate.

- Impact on glycine/methionine balance in our bodies:

According to Chris Masterjohn, PhD. (10), "*maintaining proper dietary balance between [glycine and methionine] is also important because too much methionine represses glycine. The former is 'especially abundant in eggs, dairy, meat, poultry, and fish. Glycine is especially abundant in skin and bones.' Unfortunately many of us avoid skin and bones in our meals; 'for example, skinless, boneless chicken breast is rich in methionine, but the glycine-rich skin and bones have been removed.'*"

For those who don't eat enough glycine-rich skin and bones (as in stock and bone-broth), increasing glycine intake can help restore the balance and benefits of both, noting that (10):

- Methionine helps prevent fatty liver disease and improves mental flexibility. It can help cool our anxiety or lift us from depression;
- Glycine helps stabilize our blood sugar, and helps to prevent us from drifting into endless distractions. It promotes healthy sleep, and it revitalizes our skin and bones.

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Glycine supplement examples

Here are a few you can check out (from iherb.com; search for the following code):

- Glycine Powders:
 - NOW-00225 for NOW-brand
 - CAR-06835 for Carlson's-brand
- Glycine in Capsules:
 - NOW-00107 for NOW-brand
 - THR-51202 for Thorne-brand
 - SOL-01370 for Solgar-brand

I recommend the powder because it is easier to adjust the amount you take.

Another form of glycine is its salt form, such as magnesium glycinate, but I am still researching its ability to detox glyphosate.

Testing for glyphosate levels in your body

We are all exposed to glyphosate – it's unavoidable because it is everywhere. Even certified Organic foods are contaminated by drift from nearby spraying. We were safe from drift, here in NW Montana, until local farmers started growing GMO canola. So you may as well assume you have enough glyphosate to be concerned.

You can minimize your exposure to glyphosate by preparing all your meals using foods you grow/raise yourself, but in this day and age, that is difficult.

There are several recommended tests for your body; each provides information for a specific range of exposure over time (4a,5,6):

- **Hair Testing** shows your exposure to pesticides over a period of 90-120 days;
- **Urine Testing** shows your exposure for approximately 14-21 days; and
- **Blood Testing** shows your exposure for 2-3 days.
- **Breast Milk Testing** if you are nursing (exposure time not provided) (7)

Hair Testing has several advantages (6):

- Easy collection
- Easy transport
- Enables continuous cost effective bio-monitoring over a year: 4 samples vs 100 for blood vs 26 for urine

You can also have your **water tested**, as it is one source of exposure close to home.

Labs:

- **Detox Project** offers hair testing (4b), food and water testing (4c)
- **Great Plains Lab** offers both urine and water testing (5)

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Energy testing methods for glyphosate toxicity:

These methods are controversial and declared as shams by conventional medicine practitioners, but I have found them to be helpful and accurate, and will use them to evaluate my glyphosate toxicity, in addition to the more conventional hair test (above).

- **Radionics**, a form of energy testing available at our local Swan Valley Herbs store. It doesn't provide the level in p.p.b. (parts per billion) like the hair, urine or blood testing; rather in relative numbers. The higher the number, the heavier the load of glyphosate.
- **Body Talk** and/or **NAET** (Nambudripad's Allergy Elimination Techniques) use muscle testing to determine if a substance is a problem, and if yes, how serious the problem might be. This too is not measured in p.p.b.; rather in whether your arm muscles are strong or weak to the substance or question asked. My acupuncturist (9) practices NAET.

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