

# IonCleanse by AMD Footbath Detox and Glyphosate Excretion

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## ABSTRACT

Glyphosate exposure has become a widespread issue. Human exposure is prevalent, and this chemical has garnered a great deal of attention as to the potential impact on human health and wellness. The long-term health effects of this chemical are still being debated in the scientific community. But, our focus was to better assess the glyphosate levels in humans while employing an IonCleanse detox footbath. Here we present a study looking at levels in the body of groups using the IonCleanse by AMD footbath detox and in those not using any form of detox during the same period. Overall our results showed a greater reduction in glyphosate in the cleanse group 48 percent versus a 14 percent reduction in the non-cleanse group.

## Introduction

Glyphosate is the active ingredient in Monsanto's herbicide, Roundup. It is the world's top selling weed killer. Glyphosate usage is prevalent not only as a weed killer but also as a pre-harvest desiccant (drying agent). Human exposure is prevalent, and this chemical has garnered a great deal of attention as to the potential impact on human health and wellness. Given the wide-spread exposure and potential health impact of this commonly used chemical, we wanted to explore one specific detoxification method to assess whether it could support glyphosate excretion in humans. As more science emerges as to the levels of current human exposure, and the potential health ramifications of such exposures, understanding the pathways of excretion and ways to support detoxification of this chemical is of importance to a large population.

Exposure to glyphosate can come in the following ways:

- absorption through the skin
- eating foods treated with glyphosate
- drinking water contaminated with glyphosate

Exposure to glyphosate has been shown to have the following effects on human physiology:

- acts as an antibiotic<sup>1</sup>
- chelates important minerals<sup>2</sup>
- decimates the microflora and its ability to produce essential amino acids like tryptophan that converts to serotonin<sup>2</sup>
- inhibition of cytochrome P450 (CYP) enzymes<sup>2</sup>
- disrupts sulfate synthesis and sulfate transport<sup>2</sup>
- disrupts the microbiome in the intestine, by disrupting the shikimate pathway, causing a decrease in the ratio of beneficial to harmful bacteria<sup>3</sup>
- leads to excessive extracellular glutamate levels and consequently to glutamate excitotoxicity and oxidative stress<sup>4</sup>
- impairs methylation pathways<sup>5</sup>
- inhibition of pituitary release of thyroid stimulating hormone<sup>6</sup>
- toxic and endocrine disruptors in human cell lines<sup>7</sup>

Glyphosate exposure has also been associated with the development of certain cancers. The possible cancers linked to glyphosate exposure include:

- non-Hodgkin lymphoma<sup>8, 9, 10, 11</sup>
- pancreatic islet-cell adenoma<sup>12</sup>
- renal tubule carcinoma<sup>13</sup>

Using 19 study participants, this study was designed to assess the relative concentration of glyphosate in urine and to determine whether IonCleanse by AMD detox footbath may be a therapeutic intervention with potential to facilitate elimination of this compound.

## Results

Glyphosate was found to differing degrees in each of the urine samples. Participants in both the cleanse and the control groups submitted a urine sample at the start of the study. After 30 days, both group participants submitted another urine sample. Urine samples were once again analyzed for glyphosate levels. The cleanse and non-cleanse control groups were similar in gender and age. The cleanse group was 70 percent female and 30 percent male with an average age of 46. The control group was 67 percent female and 33 percent male with an average age of 40. The therapy group demonstrated a 48 percent decrease in mean glyphosate levels after using detox foot bath over a course of 30 days; 3 times a week. While the control group only demonstrated a 14 percent decrease in mean glyphosate levels without any therapy for glyphosates after 30 days. A paired t-Test statistical analysis of pre- and post-glyphosate levels was conducted using SPSS v24 on the therapy group and the control group. Alpha was set at 0.20. This is a common alpha for low risk therapies for people. The analysis demonstrated statistical significance,  $p = .18$ , with a large difference effect size,  $n2=0.8$ . Therefore, concluding that the use of an IonCleanse by AMD detox foot bath had a large effect on lowering levels of glyphosate in their body system. There is a strong correlation between pre- and post-volumes from control and therapy groups,  $r=.986$ ,  $p<0.0001$ , therefore the statistical results are considered reliable. The standard mean error was small, 0.073, and small standard deviation, 0.231, power = 0.806.

## Discussion

IonCleanse by AMD detox footbath usage resulted in lower glyphosate levels in study participants as compared to the control group. Therefore, this method of detox appears to be a successful therapy in the excretion of glyphosate in humans.

## Methods

Urine was collected from 19 individuals and analyzed for glyphosate levels using the Glyphosate test from The Great Plains Laboratory. Informed consent was obtained from all participants and/or their legal guardians. The participants were randomly assigned to either a cleanse group (10 participants) or non-cleanse group (9 participants). The participants were asked not to vary their diets or engage in any other detoxification therapy during the testing period. They were retested 30 days later. During that 30 days, participants in the cleanse group received 3 IonCleanse footbath sessions per week at 30 mins per session, so 12 total sessions each lasting 30 minutes.

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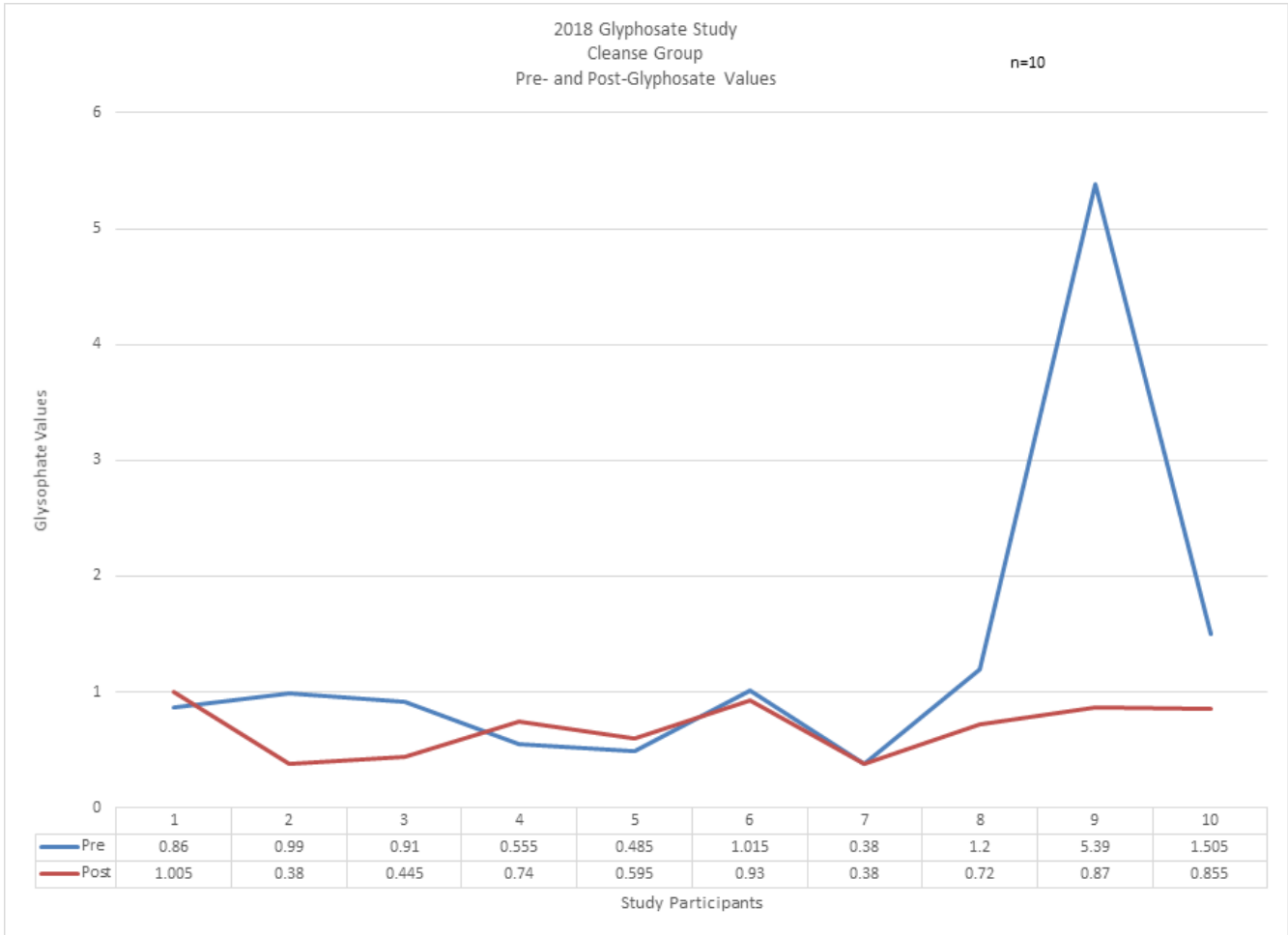
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## **Author contributions statement**

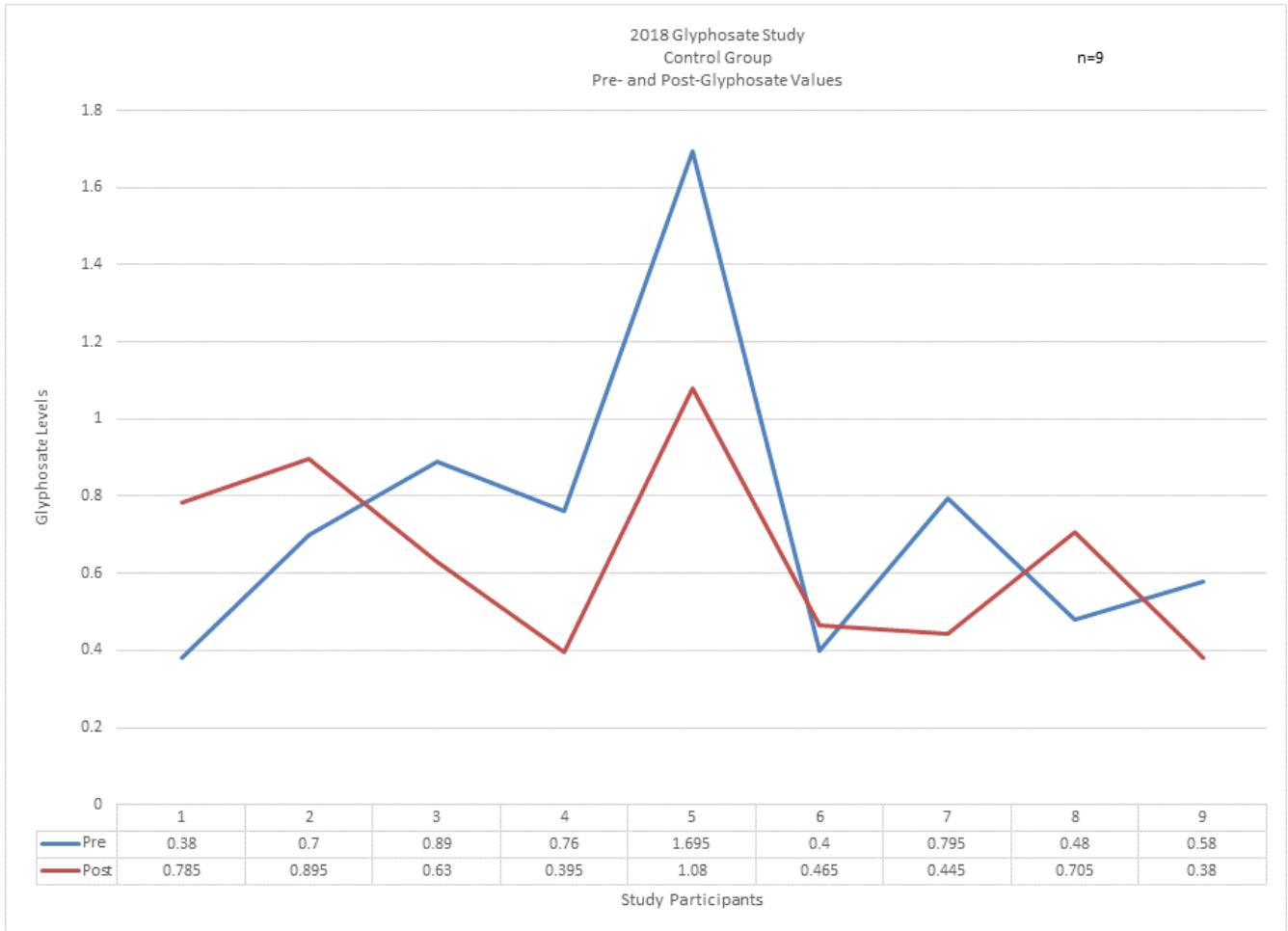
T.H. conceived the study and design, T.H. and E.C. conducted the cleanses, T.H. tabulated and analysed the results. All authors reviewed the manuscript.

## **Additional information**

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**Figure 1.** Cleanse Group.



**Figure 2.** Non-Cleanse Group.