

US study finds rise in human glyphosate levels

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Activists demonstrate in favor of a glyphosate ban by the European Union in Brussels on July 19, 2017. A US study found that the controversial chemical found in herbicides markedly increased in bodies of a sample population

Levels of glyphosate, a controversial chemical found in herbicides, markedly increased in the bodies of a sample population over two decades, a study published Tuesday in a US medical journal said.

The increase dated from the introduction of genetically-modified [glyphosate](#)-tolerant crops in the United States in 1994.

The findings published in the *Journal of the American Medical Association* (JAMA) came as the European Commission proposed on Tuesday to renew the license for glyphosate for a shorter than usual five to seven years.

That decision by the EU's executive arm followed a growing uproar over the alleged danger of its use.

Researchers compared the levels of glyphosate in the urine of 100 people living in California. It covered a 23-year period starting from 1993, the year before the introduction of genetically-modified crops tolerant to Roundup.

Glyphosate-containing Roundup, produced by US agro giant Monsanto, is one of the world's most widely-used weedkillers.

"Prior to the introduction of [genetically modified foods](#), very few people had detectable levels of glyphosate," said Paul Mills, of the University of California at San Diego School of Medicine, the study's principal author.

Among the study group, detectable amounts increased from an average of 0.20 micrograms per liter in 1993-1996 to an average of 0.44 micrograms in 2014-2016.

These figures are far from the daily limit of 1.75 milligrams per kilogram set by the US Environmental Protection Agency, and the even stricter limit of 0.3 milligrams per kilogram in the European Union.

"Our exposure to these chemicals has increased significantly over the years but most people are unaware that they are consuming them through

their diet," Mills said.

Roundup was initially used on genetically modified soy and corn, but it is also sprayed on a substantial portion of wheat and oats grown in the US, he said.

In July, California listed glyphosate as carcinogenic, and the World Health Organization International Agency for Research on Cancer called it "probably carcinogenic" in 2015.

There are few human studies on the effects of glyphosate, but research on animals demonstrated that chronic exposure can have adverse effects, said Mills.

Along with the European Commission's proposal on Tuesday, the European Parliament approved a non-binding resolution calling for the chemical to be banned by 2022.

Glyphosate critics, led by environmental activist group Greenpeace, are calling for an outright ban in Europe. On Monday activists handed the EU a petition signed by more than 1.3 million people backing such a move.

Monsanto maintains that glyphosate "meets or exceeds all requirements" for full license renewal in Europe, and says the renewal procedure has in "many respects been hijacked by populism."

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