Analysis: Most research on PFAS harms is unpublicized

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Though per- and polyfluoroalkyl substances (PFAS) make headlines daily, a new paper reveals that most studies finding links between PFAS exposure and human health harms are published without a press release

and receive little or no media coverage. The analysis, published today in the journal *Environmental Health*, found that studies without any press attention receive fewer scholarly citations as well.

"It's a shame that only a small slice of this science is reaching the public," said lead author Rebecca Fuoco, the director of science communications at the Green Science Policy Institute. "New studies finding strong associations between forever chemicals and serious harms like preterm birth and cancer are flying under the radar. Research tucked away in scientific journals has limited reach, and therefore, impact."

The authors analyzed 273 peer-reviewed epidemiological studies on PFAS human health impacts with publication years 2018-2020, as collected by the PFAS-Tox Database. Of papers reporting a statistically significant association with health harm, those with a press release received 20 times more media attention (as assessed by Altmetric scores) than those that did not. However, less than 8% of the papers with statistically significant findings issued a press release.

Papers without press releases included studies reporting significant links between PFAS exposure and risks of preterm birth, ovarian and breast cancers, osteoporosis, and gestational diabetes. These studies received no or very little news coverage and social media posts.

Though the analysis focused on PFAS research, the authors expect that the results reflect the larger body of environmental health research as well as other fields of science.

One reason research teams may forego issuing a press release is a real or perceived lack of career incentive to pursue non-scholarly communications. However, in this analysis the mean age-adjusted citation count for papers with press releases was two-thirds higher than those without. There was also a positive correlation between citations

and Altmetric scores.

Another barrier is a fear among scientists that press coverage of their research may be inaccurate or over-hyped. However, previous research has found that overstatements can often be traced back to university press releases. This suggests that the solution is for scientists to take a more active role in press release drafting and ensure their accuracy rather than not issue one at all. Other barriers include lack of time, resources, or media savvy as well as differing philosophical views about the role of scientists in society.

"I urge scientists and their institutions to embrace media outreach as a critical part of the research process," said co-author Linda Birnbaum, scientist emeritus at the National Institute of Environmental Health Sciences and scholar in residence at Duke University. "As scientists we hold the key to information that can inform better policies, medical practices, industry innovation, and more. It's our responsibility to unlock that potential by sharing our research with a wide audience."

"Most scientific studies in our country are funded by the public who deserve to know the results of the research they're paying for," said Arlene Blum, executive director of the Green Science Policy Institute and a co-author of the study. "With a press release and straightforward plan, scientists can increase their media coverage, reach, and the impact of their work."

The authors include recommendations for scientists who wish to get more media attention to their research and point to a webpage with videos, templates, and additional resources.

More information: Effective communications strategies to increase the impact of environmental health research, *Environmental Health* (2023). DOI: 10.1186/s12940-023-00997-6

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