

# Fish consumption and knowledge of PFAS among communities of color in the Lake Michigan region



Consumption of freshwater fish has been identified as a key source of human exposure to PFAS, yet there is a general lack of public awareness and understanding of the potential risks associated with and ways to prevent exposure to this chemical. In this project, researchers assessed how two predominantly African American communities on opposite sides of Lake Michigan may be exposed to PFAS via fishing and assessed their trust in sources of health and fishing information to inform outreach efforts to prevent PFAS exposure from fish consumption. A primary pathway for human exposure to these substances is through the consumption of freshwater fish, which bioaccumulate PFAS from contaminated waterways. These communities were selected because they represent populations that often rely on local fishing for both recreation and subsistence but may be disproportionately affected by environmental pollutants.

The researchers employed a multi-faceted methodological approach to gather data. This included “data walks,” which are essentially listening sessions designed to facilitate informal dialogue between researchers and community members. Following these sessions, a formal written survey was administered to eighty-five anglers during the summer and autumn of 2024. The goal was not only to understand how much fish people were eating but also to gauge their level of trust in various information sources regarding health and fishing safety.

The findings reveal a complex picture of year-round fishing activity across multiple locations. Notably,

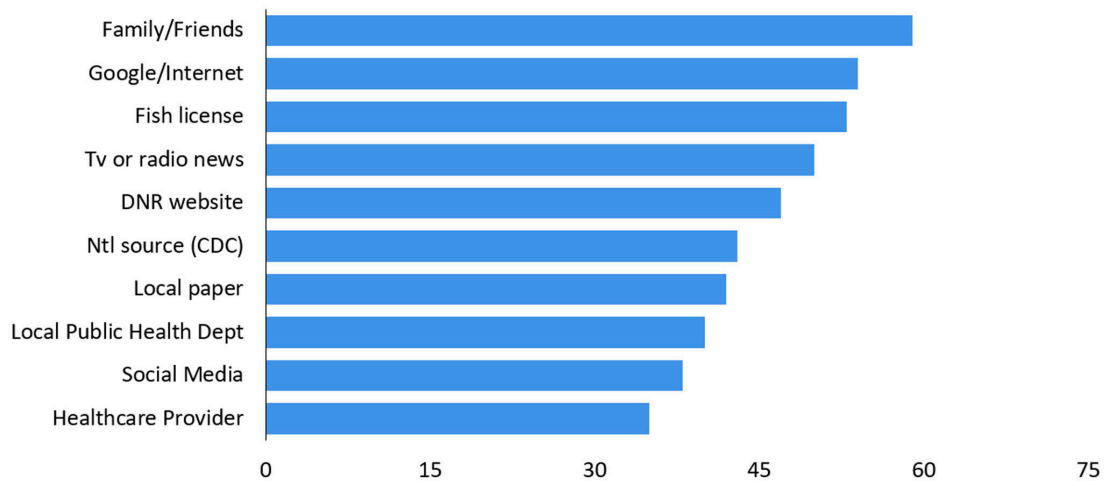
the study found that anglers of all ages and genders are active participants in the local fishing culture. A significant discovery was that these individuals do not just consume the fillets of the fish they catch but also various other parts of the fish, which is a critical detail because certain contaminants, including some types of PFAS, can concentrate differently in different tissues. This practice significantly increases the potential for chemical exposure compared to someone who only eats the muscle tissue or fillets.

Despite the frequent consumption of locally caught fish, the study highlighted a lack of public awareness regarding the specific risks of PFAS. While many anglers were aware of general fish contaminants like mercury or PCBs, specific knowledge about “forever chemicals” was notably low. This gap in knowledge is particularly concerning given the persistence of these chemicals in the Lake Michigan ecosystem.

## **INCREASING UNDERSTANDING AND AWARENESS**

Furthermore, the research explored where these communities turn for health and fishing information. They found that the anglers had little awareness of contaminants in fish or PFAS in particular. However, they did find evidence of self-efficacy, which is a characteristic that can be amplified in health messaging. High self-efficacy leads people to attempt challenging tasks, put in more effort, and persist through setbacks. Regarding trust in sources of health information,

## Where do you participants get their health information?



although none stood out above the others, the survey showed that anglers trusted the Michigan Department of Natural Resources website, national sources such as the Centers for Disease Control, local public health officials, Google, and information related to fishing licenses. Facebook is a common source of information.

The results showed that anglers access a wide variety of sources, yet their levels of trust in these sources vary significantly. This suggests that a one-size-fits-all approach to public health messaging is unlikely to be effective. Instead, the study emphasizes that health communication must be carefully tailored to the cultural and social contexts of the specific populations being served.

### SHIFTING THE MESSAGE

Communities of color and low-income populations often face higher levels of exposure to environmental hazards while having less access to the resources needed to mitigate those risks. By documenting the specific fishing practices and information needs of these Lake Michigan communities, Dr. Buchanan's team provides a foundation for more equitable public health interventions.

To improve community health outcomes, outreach efforts must bridge the gap between scientific knowledge of chemical contaminants and the lived experiences of local anglers. This effort involves creating educational materials that are not only scientifically accurate but also culturally resonant and delivered through trusted community channels.

In summary, the research underscores the urgent need for targeted education regarding PFAS in freshwater ecosystems. As communities continue to grapple with the legacy of industrial pollution in the Great Lakes, understanding the human element—how people interact with their environment and where they get their information—is just as vital as monitoring the chemical levels in the water itself. This study serves as a call to action for public health officials to develop more nuanced and inclusive strategies for protecting vulnerable populations from environmental contaminants.

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