Living With Liver Disease? Beware Algae

A new study on harmful algal blooms suggests they may be more harmful to people than previously known.

September 25, 2019 By Casey Halter

Over the summer, there were reports of pet dogs dying of liver failure after exposure to toxins arising from harmful algal blooms in several states. Now, a recent study suggests that people with preexisting liver disease may also face major health risks from the environmental phenomenon and may want to steer clear of unclean waters.

Published last month in the journal Toxins, the study sought to examine how microcystin—a toxic chemical released when colonies of algae grow out of control—affected people with non-alcoholic fatty liver disease (NAFLD). The study builds on earlier research that found evidence that mycrocystin exposure could worsen the severity of chronic colitis.

Algal blooms are known to kill fish, mammals and birds and can also make people sick if they are exposed. Environmental scientists also say algal blooms are increasing in intensity and frequency. Many are directly caused by human activities that disturb Earth's ecosystems and allow the toxin to grow.

For the study, researchers at The University of Toledo College of Medicine and Life Sciences in Ohio examined how chronic, low-level exposure to microcystin affected mice with NAFLD and compared them with mice with healthy livers. Their analysis showed a major exacerbation of liver damage in mice with the condition. Healthy mice, however, had no liver damage from the toxic exposure.

Researchers also noted major differences in the way each study group's kidneys processed the toxin, with NAFLD-affected mice showing elevated levels of microcystin in their blood plasma and urine compared with the control group.

So what does this mean for people living with liver disease?

"Current exposure limits from the World Health Organization and U.S. Environmental Protection Agency for humans are based off of studies done in healthy animals," explained study author Steven Haller, MD, an assistant professor at the University of Toledo. "The results of this study

suggest there may be a need to review those guidelines for people with preexisting conditions."

Researchers noted that people should avoid swimming in bodies of water that smell bad, look discolored or have foam on them. People may also be exposed to microcystin through fish and shellfish from affected waters.

© 2026 Smart + Strong All Rights Reserved.

http://beta.docker.hepmag.com/article/living-liver-disease-beware-algae