LAY ABSTRACT

TITLE: A scoping review on per- and poly-fluoroalkyl substances (PFAS) and colorectal cancer: Evidence from in vitro, animal, and epidemiological studies

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In this review, researchers summarized what is known so far about the relationship between PFAS and colorectal cancer (CRC). PFAS are chemicals widely used in everyday products and are often called “forever chemicals” because they persist for long periods in the environment. CRC is a cancer in the large intestine (the colon or rectum). A person’s risk (how likely they are to get CRC) can be affected by diet, family history, and other health issues.

For this review, the researchers looked for previous studies examining the link between CRC and PFAS. They found 26 relevant studies. Five of the studies were also study reviews, three were studies done on cancer cells in a lab, six were animal studies, and 12 used data from humans.

The researchers found that, in studies done on colorectal cancer cells in a lab, PFAS seemed to promote cancer growth and spread. However, findings from animals and human studies did not show a consistent relationship between PFAS and colorectal

cancer. However, these studies had several important weaknesses that could explain mixed results.

This study review tells us that PFAS can influence processes in our body that may affect colorectal cancer risk, but current evidence in humans is limited. We need more research that studies people for many years to see if PFAS really does affect their risk of getting colorectal cancer over time.