

The PFAS Alternatives Act

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The PFAS Alternatives Act Could Be a Crucial Step Towards Banning Firefighting Turnout Gear with “Forever Chemicals”

Firefighters encounter countless health threats on the job, from smoke inhalation to serious injuries from collapsing structures. Still, a more obscure risk they face is toxic exposure. Many firefighters use the fire suppressant AFFF to extinguish fires stemming from combustible and flammable liquids and gases, such as alcohol, gasoline, solvents, jet fuel, and lacquers. This firefighting foam contains high concentrations of perfluoroalkyl and polyfluoroalkyl substances, also known as PFAS or “forever chemicals,” due to their ability to persist in the environment and the human body for a long time. It takes nearly four years for the level of these harmful substances to go down by half once they are present in the bloodstream.

Both civilian and military firefighters are exposed to these highly toxic substances when using AFFF, as the fire suppressant sometimes has a 98% concentration of PFAS. However, firefighters are also exposed to

“forever chemicals” from the very turnout gear that is supposed to protect them from extreme temperatures while putting out blazes. Exposure to PFAS can result in a myriad of health problems, including kidney, prostate, and testicular cancer. Furthermore, it can cause liver damage, thyroid disease, fertility issues, hormone disruption, kidney disease, altered immune function, insulin dysregulation, adverse reproductive and developmental outcomes, high cholesterol, and changes to liver function.

“Forever chemicals” are used as a water-repellent finish or coating applied to turnout gear to provide water and oil repellency. Turnout gear is made of three layers, specifically a thermal liner next to the skin, a moisture barrier, and a water-repellent outer shell on top. According to a May 2023 report, PFAS concentrations were lowest on the gear closest to firefighters’ skin and highest on the outer second and third layers. This means that, as turnout gear deteriorates, firefighters can easily inhale these dangerous chemicals while wearing their protective equipment. PFAS in turnout gear poses an unnecessary occupational threat. Cancer is becoming increasingly prevalent in firefighters, as they have a 9% higher risk of developing it than the general population.

Nevertheless, the situation might change soon, as on July 20, 2023, the PFAS Alternatives Act was proposed by Congressman Brian Fitzpatrick. The purposes of the bill are to accelerate the development of PFAS-free turnout gear, facilitate the development of safer turnout gear materials, support guidance and training for firefighters on the most effective practices for reducing toxic exposure through the proper wearing, cleaning, and caring for next-generation turnout gear, and involve the firefighting industry in the development process of PFAS-free turnout gear. The PFAS Alternatives Act would authorize \$25 million every year from 2024 to 2028 to support the development of new materials and \$2 million more annually to support guidance and training.

“Firefighters put their health and safety on the line every day to protect our communities. They run in as others run out. They shouldn’t have to worry about hazardous substances in their own turnout gear,” said Congresswoman Dina Titus.

If the PFAS Alternatives Act became law, firefighters would no longer face the unreasonable health threat posed by their turnout gear. They are already exposed to “forever chemicals” from the AFFF they regularly use, so reducing their toxic exposure might also reduce their cancer risk. Currently, firefighters have a 14% greater risk of dying from cancer than the general population, which is very alarming. The EPA re-confirms the potential carcinogenic nature of PFAS chemicals and that there is no acceptable level of exposure. Finally, the PFAS Alternatives ACT would help expedite the development of turnout gear without “forever chemicals” through comprehensive research, executing development initiatives, and rigorously testing the equipment.

About the Author

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