



TO: The Honorable Shane E. Pendergrass, Chair
Members, House Health and Government Operations Committee
The Honorable Dana Stein

FROM: Dr. Michael Ichniowski

DATE: March 2, 2022

RE: **SUPPORT** – House Bill 570 – *Pesticides – Mosquito Control Products and PFAS Chemicals*

The Maryland Chapter of the American Academy of Pediatrics (MDAAP) is a statewide association representing more than 1,100 pediatricians and allied pediatric and adolescent healthcare practitioners in the State and is a strong and established advocate promoting the health and safety of all the children we serve. On behalf of MDAAP, we submit this letter of **support** for House Bill 570.

PFAS (Per- and Poly-Fluoro Alkyl Substances) are known as “forever chemicals” because they do not break down and will persist unchanged in our environment. They contain one or more fully fluorinated carbon atoms and may be present in some pesticides, including those used as mosquito sprays, both as active and inert ingredients or as possible contaminants, leaching from the containers in which they are stored or shipped. At present, there are over 12,000 chemicals identified as PFAS.

PFAS have been widely detected in human blood samples and can enter the body by ingestion of contaminated food or water, or through inhalation of sprayed PFAS or dust particles contaminated with PFAS. Once present, they are poorly excreted and persist in the human body, with half-lives often measured in years to decades for some of the PFAS with longer chains of fluorinated carbon; some of these chemicals have also been found to bioaccumulate within tissues in the body. With this environmental and circulatory persistence, **the potential for lifetime exposure and accumulation of PFAS is substantial, especially in children, who would have higher levels of exposure relative to their weight over more years.**

Children and fetuses are also uniquely susceptible to the effects of toxic chemicals, a vulnerability that contradicts the misconception that it is the dose that determines the toxicity of a particular substance. PFAS can cross the placenta and enter the fetal circulation, and the **amount to which the fetus is exposed relative to weight is far greater than that of the mother. Toxic exposures during the time of brain and organ formation and growth can have impacts on an unborn child that would not have the same effects on an adult.** Infants and young children also have higher levels of exposure to toxic substances in their environment. They eat and drink more relative to their body weight than adults, and their frequent hand-to-mouth behaviors increase inadvertent non-food ingestions, such as outdoor soil or contaminated house dust.

Research has identified the following adverse health effects from exposure to PFAS chemicals:

- Cancer of the kidneys, testicles, ovaries, prostate; non-Hodgkins lymphoma (PFOA, other PFAS)
- Bladder cancer (PFOS)
- **Immune suppression:** reduced levels of vaccine-induced antibodies (tetanus, diphtheria, rubella, mumps, Hemophilus influenza B, Hepatitis A&B) (PFAS); **increased risk of infections in exposed children** (PFOS, PFHxS, PFOA, PFNA)
- Increased risk (PFOS, PFOA, total PFAS) and severity (PFBA, a PFAS that accumulates in lung tissue) of COVID-19 infections
- Thyroid disease, primarily hypothyroid, both congenital and acquired (PFAS)
- **Low birth weight, decreased birth length and head circumference** (PFOA, PFOS)
- **Pre-eclampsia** (PFOA)
- Increased liver enzymes and non-alcoholic fatty liver disease (PFOS, PFHxS)
- Increased total and LDL cholesterol (PFOA, total PFAS)
- Impaired kidney function (decreased glomerular filtration rate) (PFAS)
- Increased serum uric acid (marker of risk for kidney disease) (PFAS)

House Bill 570 would prohibit the use of mosquito control products that contain PFAS. Children in Maryland would be expected to benefit from this by reducing their risk of exposures to PFAS. **Because young children often crawl or roll on the ground when playing outdoors, their direct contact with sprayed outdoor surfaces and their hand-to-mouth activities would increase the potential for ingestion. Because House Bill 570 would be expected to reduce children's exposures to PFAS, MDAAP requests a favorable report on this proposed legislation.**

For more information call:

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