#### NASPAG Membership,

Recently mainstream media has highlighted a lawsuit that claims a brand of period underwear contain potentially toxic ingredients, specifically short chain per-and polyfluoroalkyl substances (PFAS).1 The lawsuit does not accuse the product of causing harm, but rather focuses on marketing which claimed products to be "free of harmful chemicals".

# Background

PFAS are human-made chemicals which are found in many common consumer and industrial products, such as cleaning products, stain/water resistant fabrics, non-stick cookware, some personal care products like dental floss, and certain food containers/wrappers like take-out containers and microwave popcorn bags.2,3 Because their use is widespread, PFAS have also been found in the food, soil, air and water around the world; levels of many PFAS have also been found in blood samples of humans and animals globally.2,3 PFAS break down very slowly and can build up in the environment over time, potentially causing ecological and wildlife damage.2,3

Recently lawsuits involving well known reusable menstrual products/period underwear have made headlines. The plaintiffs claim that PFAS were found in period underwear. While some of the lawsuits have led to settlements, we do not have clarity regarding confirmation of PFAS content in underwear, nor the impact on the person wearing it.

### **Health Concerns**

There is a lot we do not know about PFAS including what levels of exposure may pose a health risk to humans and their effect on ecological health.4 Some PFAS have been linked to adverse health effects, including disruption or disturbance in hormone production and function, increased cholesterol, kidney cancer, immune suppression and low birth weight.5,6 While the data is not robust, there is some concern about association of PFAS and early puberty, pre-eclampsia and breast cancer.7,8 While there is biologic plausibility from lab studies that PFAS may cause health concerns, data conclusively linking environmental exposure to PFAS and negative health

effects in humans has not been shown.4 Efforts to create policies to reduce and eliminate PFAS use in products is ongoing worldwide.9

### **Impact to Your Practice**

Many factors are not yet clear regarding PFAS in period underwear. These include specifics such as the presence and amount of PFAS in the underwear, the PFAS persistence after washing, the amount transferred to the skin surface, if this transfer is meaningful in a biological way, how they came to be present in the underwear and if there is an impact of wearing underwear manufactured with PFAS. Due to the ubiquitous nature of PFAS in our environment, it will be challenging to conclude that period underwear are the singular exposure source for any given individual.

Patients and parents should not be alarmed if they have been using period underwear. The highest exposure of PFAS in our environments are in our food and water.2,10

# Conclusion

Several factors are involved in an individual's decision when choosing a menstrual product. Many menstruators find their choices in menstrual products are limited by variables like cost, attitudes/knowledge about products and access/availability.11 Some make decisions based on product comfort, reliability, environmental friendliness, cultural practices, and/or individual or family beliefs.11 In order to make informed decisions about menstrual products, individuals must have access to accurate information, including all ingredients used and any potential risks of use.

**NASPAG encourages ongoing dialogue and open communication** with patients about menstrual product choices, as well as current research available, in order for young people and their families to make informed decisions in their own unique situations.

**NASPAG urges industry to be transparent** in making all ingredients in the manufacturing processes of all menstrual products (disposable and reusable) available to consumers.

**NASPAG supports the need for more robust research** to fully understand the clinical relevance and/or risk to both humans and our environment of ingredients used in menstrual products.

**NASPAG supports that more investment** and research dollars be allocated to menstrual and reproductive health research, specifically with special consideration of young people and adolescents' anatomy and physiology.

References:

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