



**TEA & HERBAL**  
ASSOCIATION OF CANADA  
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**THÉ ET DES TISANES**  
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## **POSITION STATEMENT**

### **PFAS IN YOUNG ADULTS**

A recent study published by Environment International “Associations of dietary intake and longitudinal measures of per- and polyfluoroalkyl substances (PFAS) in predominantly Hispanic young Adults: A multicohort study”<sup>1</sup>, suggests that dietary intake and food sources were associated with higher levels of per- and polyfluoroalkyl substances (PFAS). The study focused on Hispanic young adults between the ages of 17-22. It was found that a higher intake of unsweetened tea, hot dogs and processed meat resulted in higher levels of PFAS in the blood.

PFAS are a complex group of synthetic chemicals and a class of over 4700 human-made substances. They have been widely used around the world in consumer products for over eighty years. They are used primarily to prevent food from sticking to packaging and can be ubiquitously found in a variety of products including cookware, clothing, and cosmetics.<sup>2</sup>

It is important to note that the study conducted did not test any of the food and beverages consumed by the participants. Nor is there any indication of what format the food was consumed in. There is therefore no basis to draw an indisputable link between the consumption of the foods and beverages named and an increase in PFAS. More research is needed to determine the source of PFAS.

The study followed a very small group of participants, 123 Hispanic young adults, with no mention of any potential occupational exposure. Although the study itself does highlight the following: “In particular, Hispanic populations have higher risk of many non-communicable diseases and experience higher exposure to environmental toxins including PFAS”.<sup>3</sup>

There are a number of additional issues with the study itself, namely:

- The paper states: “PFAS in tea may come from the primary tea components, including the water, tea leaves or tea bags, or from additives, including milk, creamer, or sugar.” Yet it provides no definitive proof that there is PFAS in tea.
- The paper states the authors were unable to determine which types of tea (sweetened vs. unsweetened vs. artificially sweetened), were driving the correlation observed and hence associations with other ingredients or indeed types of packaging cannot be ruled out.

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<sup>1,3</sup> [Environment International. “Associations of dietary intake and longitudinal measures of per- and polyfluoroalkyl substances \(PFAS\) in predominantly Hispanic young Adults: A multicohort study”.](#)

<sup>2</sup> [Per- and polyfluoroalkyl substances \(PFAS\)](#)



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- The study was small in scale, involving 123 people mainly 17–22-year-olds of Hispanic origin from California and only 2 x24 hour dietary recalls were used to estimate food and beverage intakes.
- The authors make a tenuous link between teabags and PFAS, by stating PFAS is found in paper and paper is used to make teabags, but they have no information about the types of teabags that may have been used to prepare the beverages consumed. In fact, as the authors don't know how the tea was consumed, they do not know if teabags were used at all.
- The paper quotes Hernandez *et al.*, (2019) suggesting that the release of microplastics from teabags proposed in that study could also be the basis for the release of PFAS. This statement is not based on fact due to the reasons given above, plus PFAS are not used as raw materials in teabag manufacture. Furthermore, the findings of Hernandez *et al.*, (2019) are flawed as demonstrated by [Busse \*et al.\*, \(2020\)](#).<sup>4</sup>

In its assessment of PFAS, Environment and Climate Change Canada concludes that “the widespread use of these substances and their extreme persistence in the environment, propensity for accumulation, and mobility has led to PFAS being commonly detected in the environment and humans.”<sup>5</sup> They further state “Globally, PFAS can be found in virtually all environmental compartments, including air, surface and groundwater, oceans and soil...”.

The statements made by the study are inconclusive: the authors are unable to determine what the source of PFAS could be. The study points to all possibilities including the water used for the tea, the tea itself as well as the packaging material although no evidence is presented for the above.

Manufacturers of tea bag paper closely follow the requirements for materials that come into food contact. Furthermore, PFAS are not raw materials used in the tea bag paper manufacturing process.

Materials used in teabags have been assessed by the CFIA (and other respected, independent agencies around the world)<sup>6</sup> for their safe use under various conditions of hot food and beverage contact applications. The safety of all materials used for packaging foods is controlled under Division 23 of the Food and Drugs Act and Regulations, Section B.23.001. The regulation “prohibits the sale of foods in packages that may impart any substance to the contents which may be harmful to the consumer of the food.”<sup>7</sup>

It is far more likely that the water indicated in the study could be a potential source of PFAS. The existence of PFAS in the U.S water system has been long established. In a recently published report by the Environmental Protection Agency (EPA), February 2024, they found that the levels of PFAS in the U.S water supply are above the proposed federal limits of four parts per trillion, which is the limit of detection for PFAS.<sup>8</sup>

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<sup>4</sup> Comment on “Plastic Teabags Release Billions of Microparticles and Nanoparticles into Tea” Kristin Busse, Ingo Ebner, Hans-Ulrich Humpf, Natalia Ivleva, Andrea Kaeppeler, Barbara E. Obmann, and Darena Schymanski *Environmental Science & Technology* **2020** *54* (21), 14134-14135 DOI: 10.1021/acs.est.0c03182

<sup>5</sup> [Draft state of per- and polyfluoroalkyl substances \(PFAS\) report](#)

<sup>6</sup> ILSI – International Life Sciences Institute, Japan Food Research Laboratories

<sup>7</sup> [Food Packaging](#)

<sup>8</sup> [EPA reveals more evidence of widespread ‘forever chemicals’ in drinking water](#)



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The Tea and Herbal Association of Canada would like to reassure consumers that drinking tea is a safe and healthy lifestyle choice. Consumers should continue to enjoy the many varieties of tea for its health-promoting attributes as well as its delicious taste.

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*The Tea and Herbal Association of Canada is a not-for-profit association representing a majority of producing countries, importers, packers, allied trade, retailers and Certified TEA SOMMELIERS™.*