



ANGLAIS

Study Finds Alarming Levels of 'Forever Chemicals' in US Mothers' Breast Milk

A new study that checked American women's breast milk for PFAS (per and polyfluoroalkyl substances) contamination detected **the toxic chemical** in all 50 samples tested, and at levels nearly 2,000 times higher than the level some public health promoters advise is safe for drinking water. **The findings** "are cause for concern" and highlight a potential threat to newborns' health, the authors of the study say.

"The study shows that PFAS contamination of breast milk is probably universal in the US, and that these harmful chemicals are contaminating what should be nature's perfect food," said Erika Schreder, a co-author and Science Director with *Toxic Free Future*, based in Seattle. PFAS are a class of about 9,000 compounds that are used to make products like food packages, water and stain resistant clothes and carpets. They are called "forever chemicals" because they do not naturally break down and have been found to accumulate in humans. They are linked to cancer, birth defects, liver disease, thyroid disease, and a range of other serious health problems.

There are no typical norms for PFAS in breast milk, but the public health advocacy organization *Environmental Working Group* recommends drinking water at 1 ppt. (part per trillion), while the Federal Agency for Toxic Substances and Disease Registry, within the Department of Health and Human Services, recommends as little as 14 ppt. in children's drinking water.

Though researchers are worried by the findings, newborns are difficult to study, so there has not been an exhaustive analysis of how PFAS affect **them**, said Sheela Sathyanarayana, a co-author of the study and pediatrician with the University of Washington. But she added that studies of older children and adults have linked the chemicals to hormonal disruptions and suggests PFAS harm the immune system, which could be especially problematic for infants because breast milk boosts their immune system.

Though the study checked a relatively small population, the contamination circulates in different socioeconomic and geographic groupings, which is "what makes **the issue** so difficult on an individual level," Sathyanarayana said. "What it speaks to is that the chemicals are so omnipresent that we can't really predict who will have the highest exposures," she added. The study also runs counter to a chemical industry claim that its newer generation of PFAS that are still in use do not accumulate in humans.

Adapted from <https://www.theguardian.com/environment/2021/may/13/pfas-forever-chemicals-breast-milk-us-study>

I. READING COMPREHENSION (10 marks)

A) Read paragraphs 1 and 2. Then choose option a), b), or c) to answer questions 1., 2., 3., and 4. (03 marks)

1. The text is about the results of a study on...

- a) newborns' health in America;
- b) breastfeeding in the United States;
- c) toxic chemicals found in food in the US.

- 2. The study demonstrates that...
 - a) breast milk should be nature’s perfect food;
 - b) contamination of breast milk is generalized all over the world;
 - c) contamination of breast milk is more serious than is acceptable.

- 3. PFAS are used in the production of...
 - a) food packages;
 - b) water and stain resistant clothes and carpets;
 - c) food packages, water and stain resistant clothes, and carpets.

- 4. PFAS are called “forever chemicals” because...
 - a) they have always existed and always will;
 - b) they do not decompose through natural processes;
 - c) they are linked to a range of serious health problems.

B) Are these statements TRUE or FALSE? Justify your answers with quotes from paragraphs 3-4-5. (03 marks)

5. 1 ppt. is the normal limit accepted all over the world for drinking water. (☞ Paragraph3)

☞ _____

6. PFAS can cause hormonal disruptions. (☞ Paragraph 4)

☞ _____

7. The good news is that PFAS are contaminating only a relatively small population. (☞ Paragraph5)

☞ _____

C) Indicate WHAT or WHO the following words or expressions refer to in the text. (02 marks)

8. “the toxic chemical” (Line 2): ☞ _____

9. “The findings” (Line 4): ☞ _____

10. “them” (Line 19): ☞ _____

11. “the issue” (Line 25): ☞ _____

D) Identify 4 ideas mentioned in the text from 8 listed in the box and write them below. (02 marks)

Example: Toxic chemical products. (Idea ‘g’ is mentioned in the text. Now find the 4 other ideas).

a) A very high level of contamination	b) Illegal child trafficking
c) Chronic breast cancer	d) Alarming research conclusions
e) Living with diseases	f) Recommendation for safe water consumption
g) Toxic chemical products	h) Infected baby food

12. _____

13. _____

14. _____

15. _____

II. LINGUISTIC and COMMUNICATIVE COMPETENCE (06 marks)

E) Match these sentence beginnings with the correct endings to produce meaningful statements. (02.5 marks)

Sentence BEGINNINGS	Sentence ENDINGS
16. PFAS chemicals have been utilized in various...	a) ...health impacts, including thyroid disease, infertility, high cholesterol, obesity, etc.
17. They have been manufactured since the...	b) ...exposed to them through food packaging and industrial pollution.
18. Today, research has proved that exposure to PFAS may have negative...	c) ...industries because of their ability to repel oil and water.
19. PFAS can easily migrate into the air, dust, food, soil, and water. People can also be...	d) ...into the blood, the kidney, and the liver.
20. When these chemicals enter the human body, they primarily accumulate...	e) ...persist in the environment and in the body.
	f) ...1940s and can be found in nonstick products, stains and water repellants, paints...

Adapted from <https://edition.cnn.com/2019/02/14/health/what-are-pfas-chemicals/index.html>

Write your answers here				
16.	17.	18.	19.	20.

F) Complete the second sentence in each pair so that they have the same meaning. (01.5 marks)

21. The scientists who published the study are not **satisfied with** the results of their research.

☞ *The researchers have concluded that their results are not **satisf**_____.*

22. It is universally admitted that breast milk is one of the **fundaments** of baby growth and health.

☞ *Breast milk is universally admitted as **fundament**_____ to baby growth and health.*

23. The findings of the study reveal a **potential** threat to babies' health.

☞ *PFAS are **potent**_____ dangerous for babies' health, the findings reveal.*

G) In 2018, Senator Gary Peters of Michigan responded to a question by Journalist Brett Walton on the role of the US Congress in solving the PFAS issue. Choose the correct option from the 3 proposals in parentheses to complete this excerpt of his answer to Walton's question. (02 marks)

Well, I think there is a number of things that we have to do. First and (24) _____ (all ☞ almost ☞ foremost), we need to put more money into research. One very important thing that we have learnt—and which science needs to confirm—is that we still don't know much about the impact of these chemicals on the human body. This impact (25) _____ (may not ☞ should not ☞ does not have to) be limited to the people who drink water with PFAS in it. There also may be a contamination route (26) _____ (over ☞ through ☞ between) the air, or even in skin contact, which is very alarming. In the past few months, my office and I (27) _____ (have been ☞ had been ☞ will be) working to try to limit the quantity of PFAS that's going into the environment.

Adapted from www.circleofblue.org/2018/world/interview-with-senator-gary-peters-on-pfas/

III. WRITING: Choose ONE topic and write 100-150 words about it. (04 marks)

Topic 1: More and more Senegalese women prefer to bottle-feed their babies instead of breast-feeding them. What do you think are their reasons? What is your preference and why?

Topic 2: An important part of our food contains additives or seasonings such as *Jumbo* or *Maggi* that are used to improve the taste and texture of cooking. What do you think is the impact of such chemicals on consumers' health? What advice would you like to share?