

BUZZ TALK

Here to stay

PFAS make some products functional. However, they accumulate in the environment and in the body.

They actually aim to make our lives easier. They protect outdoor clothing from water, oil and dirt. They make frying in coated pans easier. And they prevent fast-food packaging from becoming weak and falling apart. They are per- and polyfluoroalkyl substances (PFAS), industrially-produced substances that are not found in nature. Professor Dr. Tanja Schwerdtle, Vice President of the BfR, on the challenges posed by PFAS risk assessments.



Professor Dr. Tanja Schwerdtle,
Vice President of the BfR, knows all about the challenges posed by PFAS risk assessments: she was chair of the PFAS working group at the European Food Safety Authority (EFSA) for several years.

Ms. Schwerdtle, PFAS have fantastic properties – they can repel dirt, oil and water at the same time. What are the disadvantages of these chemicals?

PFAS are extremely stable. It is almost impossible to get rid of them once they get into the environment, which is, unfortunately, unavoidable. This is why the use of some PFAS is banned in the EU. Nonetheless, they can be detected in water, soil, plants and animals around the world. Humans ingest PFAS mainly through drinking water and food, such as fish and shellfish. But other animal-based products, such as offal, may also contain relevant concentrations. Based on current information, it is not yet possible to conclusively determine which foods mainly contribute to intake. Some PFAS are also very slow to break down in the human body. One possible consequence: the substances accumulate. However, concentrations of PFAS in the blood and the relative amounts of individual PFAS can differ significantly from person to person. Science lacks reliable figures on this.

What facts about PFAS are established with regard to their harmful properties?

Very few, unfortunately. One thing is certain: certain PFAS that are ingested remain in the body for a long time. But what happens then is still not completely clear. We have evidence of lower antibody production after common vaccinations in children when they have higher PFAS concentrations in their blood serum. Animal experiments have shown that some PFAS damage the liver and are immunotoxic. The information on cancer risk is also uncertain. This means that we in risk assessment also have to deal with scientific uncertainties in this respect. The new health-based guidance values from the European Food Safety Authority (EFSA) take this into account to protect people's health as much as possible.

What challenges are there in assessing the detrimental health potential of PFAS?

Two points are important: we are talking about a huge group of substances here. There are more than 4,700 different compounds. We have to find out whether all these compounds pose a danger to our health. Are there differences or can we adopt a one size fits all approach? Secondly, we still have to fill large gaps in our knowledge for many PFAS. There are too few valid studies for some representatives to reliably assess the health risk. For this reason, we are still pretty much in the dark when it comes to a few PFAS. ■

More information:

www.bfr.bund.de/en > A-Z-Index: Per- and polyfluoroalkyl substances