# Not Recommended By Doctors

**We know that plastic is bad for the planet, but maybe you didn't know that plastic poses a direct health risk to species' health. Throughout the entire lifecycle of plastic products, health risks are posed to humans at each stage. From fracking to production, to consumption, to discarding- carcinogenic toxins are released. The scariest part of all is that we don't have nearly enough information on the full spectrum of impacts that plastic has.**

1. *How much do we use plastic in food packaging?*
2. *Why wouldn't we want plastic in our food packaging?*
3. *What kind of toxins are we ingesting?*
4. *What are the health risks of plastic food packaging?*
5. *Who is likely to be affected by these health risks?*
6. *Does paper have the same risks?*

### *1. How much do we use plastic in food packaging?*

We can all appreciate and have benefited from the convenience that plastic food packaging provides. There are historical records of ancient Chinese civilizations wrapping food with tree bark, before the first century BC. Napoleon Bonaparte used mass produced canned food to feed his troops during the Franco-Austrian war in the early 19th century. So we can see that food packaging is a necessity, history has shown this[1]. Since the mass commercialisation of plastic production, we have been led to normalising the use of plastic amongst our food. A terrifying aspect of plastic use is that there are no veritable records that document exactly how much plastic is used for food packaging. In 2017, the British Medical Journal estimated that since its mass commercialisation in the 1950s, over 8.3 billion tonnes of plastic has been produced globally[2]. This statistic speaks to our consumptive habits- we need to find a new normal.

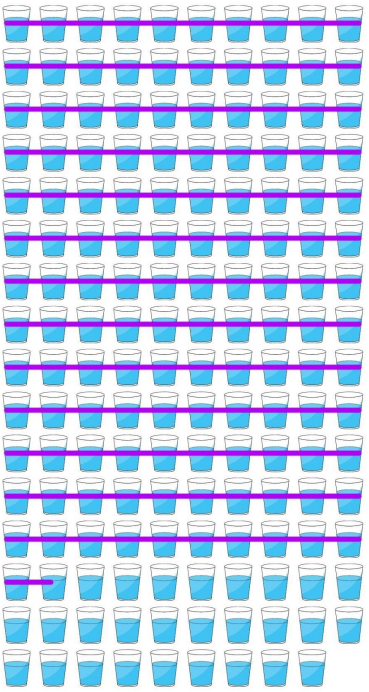
### *2. What kind of toxins are we ingesting?*

When we consume plastic wrapped food, we are unknowingly being exposed to many chemicals and corresponding toxins, which can have direct and long term health effects. Bisphenol A (BPA) for example, is a notorious toxin, often used when making plastic food and beverage packaging. It forms the protective linings for canned foods- we are exposed to BPA far too often. Despite BPA being a highly contentious ingredient in plastic packaging, we are still

[1] Claudio, L. (2012). OUR FOOD: PACKAGING & PUBLIC HEALTH. *Environmental Health Perspectives*, *120*(6), A232–A237. http://www.jstor.org/stable/41549064

[2] Threat to human health from environmental plastics. (2017). *BMJ: British Medical Journal*, *358*. https://www.jstor.org/stable/26941804

given little information on how it affects our health; even though there is evidence of BPA exposure negatively impacting our reproductive systems. The Centres for Disease and Control (CDC) has acknowledged that BPA has been detected in the bodies of the majority of the US population. One Texas study selected a small sample size of 105 plastic wrapped fresh foods, of which 60% contained detectable levels of BPA[3]. Despite public pressure to ban BPA use in packaging, this has not come to fruition, as the chemical is still in use in Hong Kong. We are consistently exposed to toxins from plastic contamination, we have overburdened our natural environment to the point where plastic is now present in the air we breathe & the water we drink. A 2021 study of microplastic particles in drinking water by Orb group, found that 83% out of 159 samples of drinking water contained microplastics. Orb estimates that on a global scale, we each consume 3000-4000 particles of microplastic from drinking water alone. Orb has stated that these estimates are conservative, and other academic studies likely underestimate the concentration of microplastic consumption present in our diets. What we know about microplastics is limited in consideration of the scope of their effect, but we do know that microplastics are toxic chemicals that directly threaten species' health.



83% out of 159 samples of drinking water contained microplastics.

### *3. Why wouldn't we want plastic in our food packaging?*

Plastic is so convenient, which is why it is so pervasive. That's why many of us haven't considered the effect that plastic food packaging has on our personal health. Even in 2021, the weak regulations surrounding food packaging birth a plethora of direct health risks within consumption[4]. Let's consider consumption from the angle of convenience. Within our daily routines, we are on autopilot with the amount of packaging that we use. Even if you bring

[3] Claudio, L. (2012). OUR FOOD: PACKAGING & PUBLIC HEALTH. *Environmental Health Perspectives*, *120*(6), A232–A237. http://www.jstor.org/stable/41549064

[4] Wilson Uzochukwu Eze, Reginald Umunakwe, Henry Chinedu Obasi, Michael Ifeanyichukwu Ugbaja, Cosmas Chinedu Uche, Innocent Chimezie Madufor. Plastics waste management: A review of pyrolysis technology[J]. *Clean Technologies and Recycling*, 2021, 1(1): 50-69. doi: 10.3934/ctr.2021003

your lunch with you to work or school, the food within your meal was almost definitely packaged. We have no other options! The Environmental Health Perspectives Journal agrees that packaging is emphatically useful to our everyday lives. Packaging stores our food, keeps it safe during transport, can give health indications as well as makes our meals mobile. If our packaging is meant to keep our food safe, then why does plastic packaging far outlive our meals' expiry date? It is rare to find criticism regarding the effects of these chemicals which make this 'forever material' outlive even us, but we need to rebuke the normalisation of having plastic toxins in direct proximity to our food.

### *4. What are the health risks of plastic food packaging?*

Weak regulations surrounding plastic used for food packaging has resulted in a plethora of direct health risks within consumption[5]. According to a 2019 report by the CIEL titled "Plastic & Health", as plastic production increases and expands, the threats to our health increase exponentially. Marine pollution specialist Mario Garcia comments that "at every stage of its life-cycle, plastic poses a distinct risk to human health". This means from conception to production, use, discarding and beyond, our health is being impacted by plastics. Ongoing health risks of plastic use include air and water pollution, and the wide range of ailments associated, and the report notes immense human health risks associated with each stage of the plastic lifecycle. From the fracking of fossil fuel stage necessary toward creating plastic, 170 resulting chemicals which compose feedstocks for plastics, have direct and documented human health impacts[6]. These include cancer, neurotoxicity, reproductive & developmental toxicity[7] and immune system impairment to name a few. The fracking chemicals released have documented impacts on our skin, eyes, sensory organs, and respiratory, nervous and gastrointestinal systems respectively. Our liver and brain functions are also negatively impacted. We need far more in depth research to ascertain the exact effects of these chemicals, and this is only at the initial stage of the plastic lifecycle!

### *5. Who is likely to be affected by these health risks?*

The CIELS report mentioned above states that the majority of people globally are exposed to most, if not all, of the health risks associated with the plastic lifecycle[8].

[5] Wilson Uzochukwu Eze, Reginald Umunakwe, Henry Chinedu Obasi, Michael Ifeanyichukwu Ugbaja, Cosmas Chinedu Uche, Innocent Chimezie Madufor. Plastics waste management: A review of pyrolysis technology[J]. *Clean Technologies and Recycling*, 2021, 1(1): 50-69. doi: 10.3934/ctr.2021003

[6] Claudio, L. (2012). OUR FOOD: PACKAGING & PUBLIC HEALTH. *Environmental Health Perspectives*, *120*(6), A232–A237. http://www.jstor.org/stable/41549064

[7] CIELS 2019 "Plastic & Our Health"

[8] CIELS 2019 "Plastic & Our Health"

### *6. Does paper have the same risks?*

To explicate this pragmatically- all food packaging will have chemical components that will intermix with food. The Environmental Perspectives Journal acknowledges that different kinds of packaging have different chemical exposures. Even glass packaging, which is generally accepted to be more eco-friendly than plastic, has chemical risks that rival even that of plastic. In 2012, glass jars used to store food were deemed unacceptable by the European Food Safety Authority due to PVC & DEHP levels which exceeded that of even PET plastics[9]. However, we do not need to accept that the types of chemicals in our packaging will be harmful to our health. With our bagasse and SSFC certified paper products, we acknowledge that it is our duty to take ownership of public health concerns. It is categorically inappropriate to allow public consumption of plastic packaging for food products, when numerous scientific journals have acknowledged the profound lack of research into the numerous detrimental effects of plastic on our health.

[9] Claudio, L. (2012). OUR FOOD: PACKAGING & PUBLIC HEALTH. *Environmental Health Perspectives*, *120*(6), A232–A237. http://www.jstor.org/stable/41549064