A “Toxic Truth”:
Deadly environmental chemicals hidden in consumer products

Aarti Khosla, April 14, 2023

Some of the many consumer products that contain harmful chemicals; image created with those from “The Guardian”, “New York Times” and “NBC News”.

Hygiene products, non-stick pans and plastic packaging - they all seem like harmless, everyday products, until you dig deeper and discover what they all have in common.

Many chemicals in household products have been found to cause harm to humans as well as the animals and ecosystems around us. Additionally, most consumers of these items are unaware of their impact and unknowingly continue to intensify the issue.

Several recent reports including those from the David Suzuki Foundation, Government of Canada and Toronto Environmental Alliance have shed light on the “toxic truth” and negative effects posed to living organisms. They reveal that many commonly used products contain chemicals that are harmful to animals and can accumulate in the environment over time, leading to serious health risks for humans and wildlife.

Chemicals - The Culprits

Lots of companies use these chemicals for their beneficial properties, but do not look into their harmful and even toxic effects. Some of the most commonly used chemicals include:

- ➔ **Phthalates** - A large family of chemicals often used to make plastics more durable. They are incorporated in a wide range of products from vinyl flooring to personal-care items such as soaps and hairsprays. Unfortunately, phthalates have been linked to severe hormonal and reproductive issues in many animals.
- ➔ **Parabens** - Anti-mold and anti-bacterial agents also used as synthetic preservatives in products with high concentrations of water (such as shampoos and canned foods). However, like phthalates, parabens also interfere with hormones and the reproductive functions of animals. Furthermore, this chemical can lead to the bleaching of coral reefs, which are an already endangered species that many other aquatic organisms rely on.
- ➔ **Bisphenol A (BPA)** - Are generally found in plastics used in the manufacturing of water bottles, food packaging and baby bottles, as well as to make a clear, hard plastic called polycarbonate. Exposure to BPA has been shown to cause reproductive problems, developmental delays and cancer in animals.
- ➔ **Triclosan** - This chemical is commonly used in antibacterial products, such as sanitizers and toothpastes as it is effective in penetrating bacteria membranes. Despite its beneficial properties, it is deemed highly toxic if exposed to fish and other aquatic organisms, where it starts to target and kill the wrong cells.
- ➔ **Beta-hydroxy acid (BHA) and Butylated hydroxytoluene (BHT)** - Used as preservatives in food, lipsticks and moisturizers as well as other cosmetic products. These chemicals can cause allergic reactions on skin, and may be toxic (through impacting livers, thyroids and kidneys) to mice and rats if they are exposed for long periods of time.
- ➔ **Flame retardants** - These chemicals are usually in furniture, electronics and building materials to prevent items from burning or catching fire. Nevertheless, these chemicals can cause cancer, developmental problems and thyroid disorders in animals.
- ➔ **Polyfluoroalkyl substances (PFAS)** - Often used in non-stick cookware (such as teflon pans), waterproof clothing and food packaging. Yet, they are not biodegradable and can accumulate in fish and other wildlife.

Based on this data of harmful and even deadly chemicals, it is evident that this issue relates to the Sustainable Development Goal #3 - Good health and well-being, as well as #12 - Responsible consumption and production including reducing pollution of these items and reviewing what they contain.

Biodiversity and the environment - The Victims

The above chemicals are capable of entering the environment in a number of ways. For example, Phthalates and BPA can leach out of plastic products, contaminating soil and water. Flame retardant and PFAS chemicals can be released into the environment during manufacturing or disposal of products that contain them. At that point, it is easy for these chemicals to make contact with animals and create serious risks - such as how phthalates and BPA are able to harm aquatic life by modifying and interfering with hormone systems. Ingredients in sunscreen are also able to containmate and even kill coral in oceans. Flame retardants have been associated with a range of health problems like thyroid and endocrine disorders, reproduction issues and cancer. PFAS have been shown to accumulate throughout the food chain - leading to serious health risks and increasingly more chemicals ingested with each next animal or even human that consumes contaminated food. These impacts connect to both the Sustainable Goals #14 - Life below water and #15 - Life on land, as this problem is directly related to the wellbeing of living things in both those areas.

Coral before and after being bleached and contaminated by toxic sunscreen chemicals. Image from "Stone Pier Press".

Solutions

Despite the many negative impacts these products have on us and the environment, there are still several actions we can take to reduce the use of these harmful chemicals in consumer products. These include carefully examining the ingredients in items you purchase and avoiding brands or products that contain these substances, increasing the use of safer alternatives - such as glass or steel containers instead of plastic, and encouraging companies to disclose and make a change on chemicals used in their products.

Many organizations are calling on the government to take action to address this issue and protect the health of wildlife in the Greater Toronto Area, Canada and globally. They are urging them to ban the use of these chemicals, as well as get companies to implement more safety checks and regulations for their products. This includes the largest ever ban of toxic chemicals announced by the "European Commision", and acts to protect baby foods by removing PFAS and other associated chemicals from them by "Toxic-Free Future".

In conclusion, this information highlights the need for greater awareness of the harmful chemicals found in consumer products, and for action to reduce the use of them. By making this change, we can help to protect the health of animals and ecosystems in the GTA and beyond.

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