

Caroline Barakat, PhD, shared insights from her research program focused on reducing chemical exposures in indoor environments. Everyday products found in homes, schools, daycares, and workplaces contain harmful chemicals. These include parabens in shampoos and cosmetics, phthalates in plastics, synthetic chemicals known as PFAS in waterproof makeup, flame retardants in electronics, and toxins like polychlorinated biphenyls (PCBs). People absorb these substances through breathing them in, swallowing dust, or direct skin contact. These exposures affect reproductive health and contribute to long-term health risks like cancer. The burden of making a safer, more informed choice falls heavily on regular consumers because of the lack of transparent product labelling.

Dr. Barakat's team surveyed 200 women between the ages of 8 and 35 to test their knowledge of common products. The results revealed an alarming gap in public knowledge. A large majority of the participants had never even heard of toxins like phthalates, plastic-hardening chemicals like BPA, or antibacterial agents like triclosan. Even for widely publicized chemicals, only about half of the women recognized parabens, and less than half were aware of the dangers of lead. An interview with a smaller group of women showed that they are heavily influenced by price, social media trends, and brand reputation rather than ingredient safety while choosing cleaners or cosmetics. While some tried to avoid fragrances in personal care items, almost no one checked the chemical labels on cleaning supplies.

To bridge this information gap, Dr. Barakat developed a free educational toolkit called "Paraben Free and Me". Designed as an interactive online hub, it provided women with accessible blog posts, videos, recommended podcasts, and quizzes explaining the harmful effects of parabens. The team tested the toolkit's effectiveness through a four-week study with over a hundred female university students. They found that women with access to the toolkit showed a massive boost in knowledge and awareness. More importantly, clear, understandable information empowered people to change their shopping habits and actively avoid products containing these known harmful chemicals.

Ongoing projects include a deep dive into how phthalates in fragrances and feminine hygiene products affect hormonal health, and the health impacts of BPA in food containers. Confusing product labels often hide the actual risks from shoppers. Ultimately, Dr. Barakat's goal is to build a permanent, public educational hub filled with easy-to-read brochures, posters, and online learning modules. By adapting to market trends and helping decode product labels, this hub aims to give the general public the practical tools they need to protect their health and create safer, chemical-free indoor spaces.

References

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