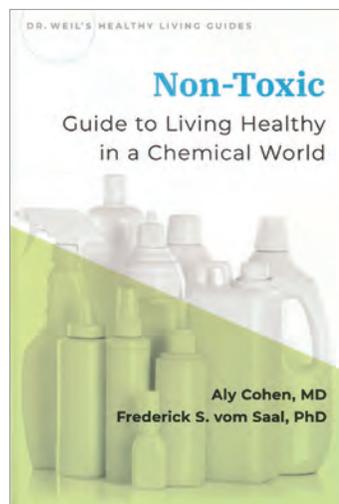


## A Guide to Nontoxic Living



*Non-Toxic Guide to Living Healthy in a Chemical World* (Dr Weil's Healthy Living Guides) by Aly Cohen, MD, FACR, and Frederick vom Saal, PhD. Oxford University Press. 416pp.

**N**on-Toxic *Guide to Living Healthy in a Chemical World* is a collaboration between a physician and a pioneer researcher in the field of endocrine disrupting chemicals (EDCs). Research in the field of EDCs challenges approaches to risk assessment used by federal agencies, showing that chemical exposures disrupt development at doses thousands of times lower than had been previously estimated by the Food and Drug Administration (FDA) and the U.S. Environmental Protection Agency (EPA) to cause no effect. Frederick vom Saal, PhD is one of the courageous researchers in the field who has testified about the hazards posed by environmental endocrine disrupting chemicals in numerous state and national legislative and regulatory bodies. Aly Cohen, M.D. is a board certified rheumatologist, integrative medicine specialist, and environmental health expert in Princeton, New Jersey. She is coeditor (with Dr. vom Saal) of the textbook, *Integrative Environmental Medicine*.

I have recently read several books that help explain environmental hazards—and EDCs, in particular—to the non-scientist. *Non-Toxic* rises to the top for a number of reasons.

First, it is comprehensive in its coverages of hazards, beginning with chapters that establish the context in terms of evolution and history, how chemicals disrupt the endocrine and immune systems, and the special susceptibility of the developing fetus and child. It covers chemicals in food, water, and air, and has chapters focusing on medications, personal care products, cleaning chemicals, pesticides, home furnishings, and radiation. The explanations of toxicity and exposure are clear and accessible to all readers. As one might expect, there is a clear and thorough explanation of EDCs and the problems they pose for risk assessment used by regulators.

For example, the authors explain: “The fact that natural hormones, hormonal drugs, and EDCs all commonly show non-monotonic dose response relationships demonstrates that the core assumption

of toxicology, that only very high doses of chemicals need to be studied to understand their risks to the public at much lower exposures, is false. Yet, as of 2020, the FDA, EPA, and other federal agencies still refuse to abandon the 16th century dogma that testing only high doses of a chemical is sufficient to predict what EDCs will do at the low doses commonly encountered by people.” Timing of exposure—or critical windows of vulnerability during developmental phases of life—is as important as dose: “As mentioned throughout this book, the timing of exposure can be just as critical as the type of exposure, whether the exposure is a neurotoxin, an endocrine disruptor, or both. Critical periods include pregnancy, newborn and toddler years, adolescents through late teens, and even menopause; these are all periods characterized by surges in hormone levels resulting in physiologic changes.”

I especially like the fact that the authors give real advice for avoiding hazards. In some cases, the alternatives are not difficult. I read “Laptops should not sit on laps!” as I was reading the electronic version from my laptop on my lap. My laptop is now on my desk. Others are not so easy, or outside of our direct control. While pointing out practical ways to reduce air pollution within the home, the authors also point out, “At work, school, or other buildings outside of the home in which you spend time, it is important to promote, speak up, and demand changes if there are sources of contamination not being addressed (such as the use of cleaning chemicals or pesticides). This is also true for the outside air you breathe. . . . Actions to reduce pollutant exposure that are mandated by [environmental laws] are being systematically rolled back to the ‘good-old days’ of high pollutant levels, which threaten the health of everyone in the name of increased profits for shareholders in polluting businesses.”

Since it is especially valuable for parents and parents-to-be, I plan to be giving copies of this book to my young friends and family members.