

Preface

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The main achievement at present “on Endocrine-disrupting chemicals (EDCs) effects on human health and disease development, is that it becomes a less controversial issue and that there is “abundant evidence” that even low doses are cause for “significant concern.” The widespread distribution of environmental chemicals in the atmosphere, on the one hand and the detection of these substances within human body, on the other converge to the concept that humans are continually exposed to a variety of EDCs through multiple sources. After all, a recent “real life” example, Flint, Michigan, shows how contemporary the topic of EDCs contaminations is. The United States government declared Flint, Michigan, with its ongoing water contamination crisis through lead-leaching pipes a federal emergency.

From wild-life observations no one is any longer convinced that what happens to insects has no impact on people. In addition, data from experimental and laboratory investigations are often in line with correlative epidemiological data in humans, leading to a plausible biological association between EDC exposure and human diseases.

Thus far, the list of possible EDC-related disorders includes male and female reproductive system dysfunction, thyroid disorders, metabolic deregulation including diabetes mellitus, cardiovascular disease and obesity, hormone-sensitive cancers as well as neurological defects. Data is alarming and though a

causal interference between EDC exposure and human disorders is difficult to establish, there is now compelling evidence to suggest a potential interference. Confirmative of such interaction are the identified diverse molecular mechanisms through which EDCs may alter gene-environment interactions affecting even the subsequent generations. Longitudinal and multigenerational studies are essential for deep comprehension of the endocrine principles by which EDCs act and for understanding all complex mechanisms of action beyond the classic ones. Moreover, it is of great significance to improve all methods applied for human health assessments in order to draw safe conclusions about the real health impact of EDCs on humans. There is adequate evidence to recommend government policies in collaboration with the scientific community to aware and sensitize the public about the issue of environmental contaminants before their effects become evident in future generations as it happened in other creatures in nature. It is worth to remember what Rachel Carson, said:

In nature nothing exists alone.

We all depend on each other and in our interconnected ecosystem the death of even tiny creatures ripples through us also.

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