

Toxins - How Prevalent?



According to the United States (U.S.) Environmental Protection Agency (EPA) Toxics Release Inventory (TRI), 2003, over

4.44 billion pounds of over 650 chemicals from industrial sources were disposed of or otherwise released to the environment; our air, land and streams many of which, have significant and widespread health consequences.

Toxins—Safe at Any Dose?

Most disconcerting is that these toxins have the potential to affect human health in a most insidious way from low-level, long-term exposure. Many of these chemicals are fat soluble and not readily broken down in the body and can therefore build up to dangerous levels. Yet, the potential to affect health in microgram doses exists.

The Environmental Working Group (EWG), an environmental research organization and public interest watch dog, reports a growing body of literature that may link low dose chemical exposures to a broad range of health effects that have been previously unexplored in high dose studies.

Do I Have Toxins in Me?

Scientists refer to the load of toxic chemicals in the body as “Body Burden”. That is, pollution found inside the body from not only industrial sources but consumer products as well.

Where Do They Come From, What Are They and What Are The Risks?

Surprisingly, exposure does not necessarily come from chemicals on the job or from living near an industrial facility. We can be exposed in many ways. Household cleaners, cosmetics, pharmaceuticals, second-hand smoke, long driving commutes, and food wrap are but a few hidden sources creating body burden.

Industrial solvents and gasoline ingredients like xylene and benzene are toxic to the nervous system and cause certain cancers. These compounds known as aromatic solvents due to the sweet odor they impart, are used in the manufacture of rubber, plastics, textiles, paints, aerosols, and are found in automotive emissions and tobacco smoke.



Phthalates are used in the manufacture of plastics, pharmaceutical products and are found in over 70% of common cosmetic products including nail polish,

fragrances, deodorants, hair gel, mousse and sprays, in addition to a variety of hand and body lotions. These compounds are what make fragrances last longer, keep nail polish from chipping and permit the slow release of drugs in some time-release pills.

Phthalates are also found in plastic food wraps and containers. It is no surprise that one may be exposed to a multiple number of these chemicals at high levels on a daily basis simply due to the multitude of possible sources. An unnerving fact is that these compounds are not listed on product labels.

Phthalates may potentiate neuroinflammatory states in the body, may adversely mimic female hormone activity, and have been linked to birth defects of male reproductive organs. It is estimated that one in four pregnant women have sufficient levels of phthalates to increase the incidence of birth defects by ten-fold. Many have recently been banned in Europe.

Parabens are a widely used family of preservatives found in cosmetics, food products, industrial products and pharmaceutical formulations.



These compounds, like phthalates, may also act as female hormones in an adverse way. Due, to the possible relationship between paraben exposure, breast cancer and/or its harmful effect on male reproductive function, the Cosmetic Ingredient Review Expert Panel in 2004 announced its intention to reevaluate the safety of these compounds.

What Can I Do?

A simple urine test will help to define your exposure to seven commonly used chemicals.

US BioTek's Environmental Pollution panel is a GC/MS urine analysis for the assessment of exposure to key environmental and occupational chemicals. Chemicals in the report include metabolites of

- Aromatic Solvents
 - Xylene
 - Toluene
 - Benzene
 - Trimethylbenzene
 - Styrene
- Phthalates
- Parabens



