

ENVIRONMENTAL POLLUTANT TESTING

Why assess phthalate and paraben levels?

Exposure to phthalates and parabens is more common than you may realize. Phthalates and parabens are often classified as xenoestrogens, foreign compounds in the body functioning as endocrine disruptors by binding specifically to estrogen receptors.

Endocrine disruptors are associated with diseases such as:

- Endometriosis
- Infertility
- Breast cancer
- Ovarian cancer
- Prostate cancer
- Testicular cancer
- Decreased sperm count

Other health problems associated with daily exposures are:

- Liver toxicity
- Immune effects such as allergies and asthma
- Reproductive toxicity
- Pubertal development

Where are phthalates and parabens found?

Phthalates, also called "plasticizers", are found in numerous everyday products such as:

- Children's toys
- Cosmetics
- Cleaning products
- Air fresheners
- Perfumes
- Furniture
- Vinyl flooring
- Plastic food containers
- Medical products

Di-(2-ethylhexyl) phthalate ester (DEHP) is a common additive to Polyvinyl Chloride (PVC). This additive helps make PVC soft and pliable to be molded into eye-pleasing shapes. PVC products are marked with the plastic identification code 3. The analytes measured in this profile are metabolites of DEHP. In perfumes and air fresheners, phthalates are often listed as "fragrance".

Parabens are used as preservatives to prevent the growth of bacteria and fungi in personal care products, such as:

- Shampoo and conditioners
- Soaps
- Makeup
- Lotions and creams
- Shaving gels
- Hair gels
- Pre-packaged foods



What are Volatile Solvents (aka VOC or Volatile Organic Compounds)?

Overexposure or chronic exposure to volatile solvents damages the central nervous system and causes chemical-driven liver and kidney damage. Benzene, in particular, has a severe toxic effect on the hematological system and is a recognized human carcinogen. Other solvents contribute to atrophy of skeletal muscles, loss of coordination, vision problems, and depression of the central nervous system.

Volatile solvents are routinely used in industrial processes to manufacture consumer products. A solvent is a liquid or gas used to dissolve a solid, liquid, or gas to create a new solution. Each year, annual production of these solvents numbers in the tens of billions of pounds in the United States.

Air and water pollution are common routes of exposure in both our homes and workplaces. We are also exposed by inhalation or ingestion of car exhaust, paints, glues, adhesives, and lacquer thinners. These volatile solvents are used in large numbers to produce items in our homes such as furniture, building materials, paint, shoes, cleaning and degreasing agents, inks, pharmaceuticals, and as additives to gasoline. For those living and working in urban areas, the exposure to this class of compounds goes on twenty-four hours a day.

Solvents are very damaging to bone marrow and have been associated with many of the bone marrow cancers as well as anemia and thrombocytopenia. They are also associated with immune disorders, including autoimmunity, chronic neurologic problems, and infertility.

Symptoms of Solvent Exposure:

- Aplastic anemia (low blood cells in bone marrow)
- Atrophy of skeletal muscles
- B-cell malignancies
- Blood dyscrasias (unspecified blood disorder)
- Bone marrow damage
- Cancer
- Chemical bronchitis
- Chromosomal aberrations
- Cognitive disorders
- Conjunctivitis
- Corneal erosion
- Defatting dermatitis
- Dermatitis
- Erectile dysfunction
- Erythema (redness due to capillary congestion)
- Fatigue
- Headaches
- Hemolysis
- Hepatomegaly (enlarged liver)
- Infertility
- Irritation of eyes and nose
- Irritation of mucous membranes
- Keratitis (cornea inflammation)
- Leukemia
- Muscular weakness
- Nausea
- Parasthesias
- Parkinsonism
- Polyneuropathy (neurological disorder)
- Pulmonary edema (fluid in lungs)
- Renal damage
- Seizures / Epilepsy
- Skin irritation
- Thrombocytopenia (low platelet count)
- Tingling/cramps in arms or legs
- Toxic hepatitis

Sources of Solvent Exposure:

- Acrylic nail applications
- Adhesives/glues
- Air fresheners
- Cigarette smoke
- Detergents
- Gasoline additives & exhaust
- Gums
- Ink
- Jet fuel exhaust
- Lacquer thinners
- Oil and grease extractors
- Paints
- Perfumes and fragrances
- Pesticide inert ingredients
- Petroleum products
- Polyesters
- Reinforced plastics
- Rubbers
- Synthetic resins

Common Solvents Include:

- Benzene
- Ethylbenzene
- Hexane
- Iso-octane
- Methylpentane
- Styrene
- Toluene
- Trimethylbenzine
- Xylene

Toxicity often lies at the root of many chronic illnesses, such as:

- Allergies
- Asthma
- Autoimmune conditions
- Brain fog
- Certain cancers
- Chronic bacterial, fungal, and viral infections
- Chronic neurological illnesses
- Cognitive difficulties
- Development disorders
- Diabetes
- Fatigue
- Fibromyalgia
- Hormonal imbalances
- Infertility
- Mood disorders
- Multiple Chemical sensitivities
- Obesity
- Tremors