

# Medical Provider Fact Sheet: EXIDE

Residents and workers in the communities surrounding the former Exide Battery Recycling Plant in Vernon, CA have increased risks of health effects resulting from emissions that came from this plant. The facility, located at 2700 South Indiana Avenue, closed in March 2015. All persons living, working, or going to school within 3 miles of the plant, totaling approximately 100,000 adults and children, were likely exposed to these emissions. The affected area includes the communities of Vernon, Commerce, Maywood, East Los Angeles, Huntington Park and parts of Boyle Heights.

## Key pollutants and associated health conditions

Pollutants in Exide's emissions that are associated with health conditions are lead, arsenic, benzene, and 1,3-butadiene. Lead exposures may be ongoing as lead particles were deposited into the local environment, contaminating the soils, pavement, and interiors of commercial and residential properties. Arsenic, benzene, and 1,3-butadiene were emitted as air pollutants and exposure occurred while the facility was in operation, therefore they are not an on-going threat. Elevated levels of Arsenic have not been found in the soil. Benzene, and 1,3-butadiene are gases that are no longer being emitted since the closure of the facility.

- **Arsenic:** Long term exposure to this carcinogen is associated with lung cancer, bladder, liver, and skin/soft tissue cancers and an increased risk of diabetes, cardiovascular diseases, skin anomalies, and birth defects.
- **1,3-Butadiene:** A carcinogen known to increase the long-term risk of stomach, blood, and lymphatic system cancers, hematopoietic disorders and bone marrow suppression.
- **Benzene:** A carcinogen associated with a long-term risk of leukemia and lymphatic system cancers, hematopoietic disorders and bone marrow suppression.
- **Lead:** A toxic metal that can cause both short-term and long-term effects. Short-term symptoms include loss of appetite, headache, irritability, abdominal pain, and fatigue. Long-term effects are on the neurological, gastrointestinal, reproductive, and renal systems. The following populations are especially vulnerable, with effects as noted:
  - Children: Children younger than age six absorb four to five times as much ingested lead as adults from a given source, which can affect mental and physical development. Children with elevated lead levels can exhibit lower IQ scores, learning disabilities, and behavioral disorders.
  - Women of childbearing age: Elevated lead levels may be associated with reduced fertility.
  - Pregnant and lactating women: High blood lead levels can transfer lead to the baby through the placenta or through breast milk. In utero lead exposure is associated with impairment of postnatal neurodevelopment with an increased risk of developmental delay, lowering of IQ, and behavioral abnormalities. The Centers for Disease Control encourages mothers with blood lead levels < 40mcg/dL to breastfeed, however, mothers with higher blood levels are encouraged to pump and discard their breast milk until their blood levels drop below 40 mcg/dL.
  - Individuals with a chronic disease: Conditions such as coronary artery disease, anemia, neuropathies, cognitive, and behavioral disorders may be worse when blood levels are elevated.

## Risk information

In 2013, the South Coast Air Quality Management District issued a Comprehensive Health Risk Assessment for the Exide facility, illustrating up to 22 excess cancers per one million residents exposed, and 440 excess cancers per one million workers exposed. These numbers are in excess of expected 333,000 cancers per one million in the general population. This is the largest excess risk level associated with a single industrial facility in California.

## Testing

**Lead blood tests:** All persons living, working, or going to school within 3 miles of Exide should be screened for lead. Providers can order the test directly or refer patients to the Los Angeles County Department of Public Health for a free blood test (see Resources below). Note: blood tests measure current lead levels and can indicate the need for medical intervention. There is no effective diagnostic evaluation to determine the impact of a past lead exposure on a particular health condition.

- **Toxicology tests:** There are no recommended tests for other Exide pollutant exposures in patients. While specific laboratory tests do exist, they are only intended for surveillance, such as biomonitoring of benzene in petroleum industry workers. As these tests are not designed for clinical evaluation, their results are difficult to interpret and they cannot reliably be used to diagnose conditions or predict the likelihood of future health effects.
- **Cancer Screening:** It is recommended patients have baseline labs (Complete Blood Count, Basic Metabolic Panel and Urinalysis) along with a physical. These should be done in addition to routine age and gender-appropriate cancer screening.
- **Mental Health:** Environmental contamination can cause stress, which can contribute to, or worsen, existing health problems such as heart disease and high blood pressure.

Due to a number of factors—including the long-term and unclear nature of the exposures, the widespread area of the exposure, uncertainty around possible health consequences, the reality that children are among those most affected, and the strong sense of social injustice that many may feel—it is expected that patients will have many questions and concerns. It is important to engage patients about these concerns and acknowledge the uncertainty they may have regarding long term consequences. It will be important to have frank discussions regarding the absence of adequate screening tests for arsenic, 1-3 butadiene and benzene and to, therefore, encourage patients to adhere to routine cancer screening guidelines that are appropriate for their age and gender, as well as to maintain an open dialogue about possible health issues that may arise and to hear and address any concern about links to this exposure.

## Reducing Exposure to Lead

- **Lead soil tests:** Providers can refer patients to the California Department of Toxic Substances Control to find out if they are eligible for free soil testing and possible clean up (see Resources below).
- **Information on how to reduce exposure to lead:** Providers can advise patients using the FAQ (see Resources below).

### Resources

- **Los Angeles County Department of Public Health (Public Health) Exide Response Webpage:** [publichealth.lacounty.gov/eh/exide](http://publichealth.lacounty.gov/eh/exide)  
FAQs for patients in English and Spanish on lead, stress, cancer, soil and blood lead tests
- **Mental Health Agencies:** Information for individuals on stress and a list of mental health agencies in areas affected by Exide is available at [publichealth.lacounty.gov/eh/exide/](http://publichealth.lacounty.gov/eh/exide/)
- **Free lead blood test Public Health:** 1-844-888-2290 [www.bloodleadtesting.com](http://www.bloodleadtesting.com)
- **Free lead soil test and clean-up, California Department of Toxic Substances Control:** 1-844-225-3887  
Visit [www.ExideCleanup.org](http://www.ExideCleanup.org) and click on FAQs to learn how to sign up for soil testing
- **Childhood Lead Prevention Poisoning Program, Public Health:** 1-800-LA-4-LEAD (5323)  
[publichealth.lacounty.gov/lead](http://publichealth.lacounty.gov/lead)
- **Clinical Consultation, Public Health:** Dr. Cyrus Rangan, Medical Toxicologist, Director of the Bureau of Toxicology and Environmental Assessment. 213-738-3220