

# ARSENIC

### ECO-HEALTHY CHILD CARE® HELPS EARLY CHILDHOOD LEARNING ENVIRONMENTS TO BE AS HEALTHY, SAFE AND GREEN AS POSSIBLE BY REDUCING CHILDREN'S EXPOSURE TO TOXIC CHEMICALS.



# **HEALTH CONCERNS**

Arsenic is a toxic chemical element that occurs naturally in rock and soil. It is colorless, tasteless and odorless. When arsenic enters the body through ingestion or inhalation, it is readily absorbed and undetectable. The health effects related to long term, repeated arsenic exposure include irritation of the stomach and intestines, birth or developmental effects, skin cancer, lung cancer, bladder cancer, infertility and miscarriages.

### **PRESSURE TREATED WOOD**

The wood in pre-2004 playground sets, picnic tables, benches, mulch, and decks can contain potentially hazardous levels of arsenic due to the use of Chromated Copper Arsenate (CCA) as a wood preservative and insecticide. The EPA-registered CCA solution which is used to treat wood can contain up to 30% arsenic. Due to health concerns, CCA was phased out for residential uses in 2004. Wood treated with CCA can still be used for commercial, industrial and some agricultural purposes. **Children who regularly spend time on treated structures built prior** to 2004 could potentially be exposed to arsenic (e.g., by putting their hands in their mouths or eating directly after playing on treated structures), but such exposures may be avoided or reduced by following the recommendations listed within this fact sheet.

### **CONTAMINATED DRINKING WATER**

Arsenic in water can occur naturally or as a result of agricultural and industrial activities. Exposure primarily occurs from the ingestion of drinking water containing arsenic. Public drinking water systems are regulated and monitored for elevated levels of arsenic. The U.S. Environmental Protection Agency (EPA) has set the maximum level of arsenic permitted in drinking water at 10 parts per billion. EPA also sets a maximum contaminant level goal (MCLG). The MCLG is the maximum level of a contaminant in drinking water at which no known or anticipated poor health outcomes would occur. The MCLG for arsenic is zero. MCLGs are non-enforceable public health goals.

Private wells are unregulated. Those who get their drinking water from a private well need to test for levels of arsenic annually and install a filtration system if levels are high.

### **ARSENIC IN BABY FOOD**

Tests have found arsenic in infant food including common rice cereals. Arsenic even in very small amounts can damage children's developing brains. Despite the health risks, the Food and Drug Administration (FDA) hasn't set limits for heavy metals in many baby foods.

## HOW TO AVOID ARSENIC EXPOSURE

**Wash up.** Encourage children to wash their hands with mild soap and water after playing on CCA-treated mulch or wooden structures.

**Test for it.** If your water comes from a public water system, request a copy of the Consumer Confidence Report to verify system compliance with the maximum contaminant level set by your State's drinking water laws. If your water comes from a private well, call the U.S. Environmental Protection Agency's Safe Drinking Water hotline (800-426-4791) to find certified water-testing labs in your area.

### HOW TO AVOID ARSENIC EXPOSURE (CONT):

**Filter it.** Remove arsenic by treating your private well water. Contact your state or local public health department to request advice on the best treatment methodology for achieving this goal. Make sure the filtration system or unit has been certified by one of the 3 certifiers listed in "Resources". Follow the manufacturer's instructions on how to install, operate and maintain the water treatment unit to ensure levels of arsenic in your drinking water are safe.

**Seal it.** Apply 2 coats of waterproof stain or sealant on CCA-treated wood. Water based sealant should be applied twice a year, where-as oil based sealant can be applied only once a year.

**Do not burn it, sand it or cut it.** Burning CCA-treated wood releases arsenic into the air. Sanding or cutting CCA-treated wood creates toxic dust.

**Dispose of CCA- treated wood at a hazardous waste site.** Visit www.search.earth911.com to find hazardous waste locations in your community.

**Choose rice-free packaged snacks.** Snacks made with rice flour can be high in arsenic. Avoid infant rice cereal as it is the #1 source of arsenic in infant's diets.

## **ARSENIC: TREATED WOOD AND WATER RESOURCES**

- Chromated Copper Arsenate (CCA) <u>https://www.epa.gov/ingredients-used-pesticide-products/chromated-copper-arsenate-cca</u>
- Agency for Toxic Substances and Disease Registry
- Certifiers of Home Water Treatment Units NSF International (<u>www.nsf.org/certified/DWTU</u>), Water Quality Association (<u>www.wqa.org</u>), Underwriters Laboratories, Inc. (<u>www.ul.com/water</u>)
- Healthy Babies Bright Futures, Arsenic in 9 Brands of Infant Cereal: <u>www.healthybabycereals.org/</u>

**Take cover**. Cover picnic tables with a non vinyl tablecloth; ensure that food and drink does not come into contact with CCA-treated wood. Avoid storing toys under CCA-treated wood decks.

**Use a mild soap and water solution to clean CCAtreated wooden structures.** Avoid power washing and applying harsh cleaning products, such as bleach or acidic cleansers. Dispose of cleaning supplies when finished.

**Replace it.** Replace CCA-treated wood structures with alternative materials such as red wood, cedar or plastic playground equipment.





