



Eco-Healthy Child Care®



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.

Arsenic: Treated Wood and Water

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. 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 ground and surface water is the result of naturally-occurring minerals, leaching from CCA treated wood, as well as agricultural and industrial activities. Exposure primarily occurs from the ingestion of drinking water containing arsenic. The U.S. Environmental Protection Agency has set the maxi-

mum level of arsenic permitted in drinking water at 10 parts per billion (ppb). Not all water systems are in compliance with this standard. Private wells, which are unregulated, can be a potential source of exposure to drinking water with dangerously high levels of arsenic.

What to Do 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.

Filter it. Remove arsenic by treating your private well water; ensure arsenic concentration levels are less than 10 ppb. 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. For more information go to www.cehn.org/ehcc/toxFAQs, 'Chromated Copper Arsenate (CCA)'.

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

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.

Use a mild soap and water solution to clean CCA-treated wooden structures. Avoid power washing and applying harsh cleaning

products, such as bleach or acidic cleansers. Dispose of cleaning supplies when finished.

Dispose of CCA– treated wood at a hazardous waste site. Visit

www.search.earth911.com; enter your item and zip code and hazardous waste locations will be provided.

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

Arsenic: Treated Wood and Water Resources

- Chromated Copper Arsenate (CCA)
<https://www.epa.gov/ingredients-used-pesticide-products/chromated-copper-arsenate-cca>
- U.S. Environmental Protection Agency's Arsenic in Your Drinking Water
<http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=60000E1E.txt>
- Agency for Toxic Substances and Disease Registry
<http://www.atsdr.cdc.gov/toxfaqs/tfacts2.pdf>
- Certifiers of Home Water Treatment Units
NSF International (www.nsf.org/certified/DWTU), the Water Quality Association (www.wqa.org), and the Underwriters Laboratories, Inc. (www.ul.com/water)
- Alternatives to Arsenic- Treated Wood
<https://fortress.wa.gov/ecy/publications/publications/0604023.pdf>
- Beyond Pesticides
www.beyondpesticides.org/wood
- Center for Environmental Health's FAQs on Arsenic in Play Structures
<http://bit.ly/1loVZnl>

FOR MORE INFORMATION

Call: 202-543-4033, ext. 12

Email: ehcc@cehn.org

Visit: www.cehn.org/ehcc

Eco-Healthy Child Care® (EHCC) is a science-based, award-winning national program that seeks to improve the environmental health of children by partnering with child care professionals to eliminate or reduce environmental health hazards found in child care facilities.

Eco-Healthy Child Care®

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