

Avoiding Exposure to Arsenic-Treated Wood

You can protect your family from toxics

A fact sheet from Toxic Free NC

At the end of 2003, the US Environmental Protection Agency (EPA) announced that the wood preservation industry was voluntarily removing pressure-treated wood containing CCA from the market. CCA is a pesticide used to protect wood from pests and decay, but it contains



toxic arsenic that can escape from the wood and harm human health. Because treated wood was so widely used for playgrounds, decks, patios and garden beds, there is widespread concern about the risks of exposure to arsenic from treated wood.

Here are some recommendations from Toxic Free NC on how to prevent arsenic exposure from CCA-treated wood, based on information available from EPA.

How does arsenic leach from the wood?

Rainwater can penetrate treated wood and bring arsenic up to the surface, where it can easily move into other substances it contacts. Several studies have shown that children can pick up significant amounts of arsenic by playing on decks and playgrounds made with treated wood.

In Durham, NC in 2002, a family lost nine cows, and their four-year-old daughter became very sick, after exposure from burning CCA-treated wood scraps.

How to reduce exposure

- Seal the wood with a recommended sealant every year – see below.
- Keep away from contaminated soil. Do not allow children or pets to play under decks or other areas where treated wood may have leached arsenic into the soil.
- Use a plastic liner for garden beds framed with treated wood. Do not plant edible plants in unlined garden beds framed with treated wood.
- Follow safe handling guidelines when working with treated wood – wear gloves and long pants and sleeves to prevent skin contact, wash your hands thoroughly after handling, and wear a mask to keep from inhaling the sawdust.
- Do not burn treated wood. Do not use treated wood for wood chips or mulch.

Sealing arsenic-treated wood

In order to protect people from exposure to arsenic while in contact with arsenic-treated wood, EPA recommends sealing the wood every year with an appropriate sealant. EPA does not recommend using film-forming paints or sealants, since they can flake or chip, adding an additional source of arsenic exposure. Instead, choose penetrating stains or sealants.

EPA considers these to be the top five performers based on current testing (2005):

- Clear, water-based, acrylic tint base stain;
- Oil-based deck toner base deck stain;
- Semi-transparent, oil-based, sealant with UV blocker;
- Clear, oil-based penetrating sealant with alkyd and acrylic; and
- Clear, oil-based, acrylic stain.

How much arsenic can be picked up from the wood's surface?

Although many factors can determine how much arsenic will be taken up during contact with treated wood, both new boards and older boards have a significant amount of arsenic on the surface. CCA-treated wood can be a major source of arsenic exposure for children who play frequently on the wood. Arsenic may be swallowed by young children who put their hands in their mouths.

Who is most likely to be exposed?

- Children who play frequently on decks, playgrounds, and patios made from CCA-treated wood at home or at school.
- People who spend considerable amounts of time playing or working with CCA wood.

Alternatives to treated wood

- Choose naturally resistant woods. Black locust, redwood and cedar are naturally resistant to rot and pests. The NC Botanical Garden and UNC Arboretum use beautiful black locust for their projects.
- Look into wood alternatives. Look into composite lumber made with recycled plastic, such as Trex and AERT. Other alternatives include recycled steel, recycled plastic marine pilings, fiberglass and concrete.
- Safer preservatives are now available. Although CCA-treated wood is no longer being manufactured for home use, back stocks may still be available in some places. Check the tag on the wood to make sure you are not buying lumber treated with arsenic. Industrial uses of CCA-treated wood are still allowed.

