



# F A C T sheet

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# Arsenic treated lumber

## Potent poison in our midst

The majority of outdoor home-project structural lumber in this country is a green-tinted wood referred to as pressure treated wood. Pressure treated wood is saturated with wood preservatives, most commonly a pesticide called chromated copper arsenate (CCA), which has a standard formulation of 22% pure arsenic.

A 12-foot long 2" by 6" board of arsenic treated wood contains about an ounce of arsenic, or enough to provide a lethal dose of arsenic to 250 adults.

## Arsenic—the age old poison

Arsenic is a poisonous naturally occurring element. For thousands of years humans have known arsenic is deadly. Today we know arsenic isn't just poisonous in the short term; it causes cancer in the long term, which is why it has come under increasing scientific scrutiny and restriction.

## Health effects of prolonged arsenic exposure

According to the National Academy of Sciences, health effects from arsenic exposure can include skin lesions, cancers of the bladder, liver, kidney, lung, skin, and nasal passages, as well as brain, heart and lung disease, diabetes and reproductive problems.

Arsenic related diseases typically develop slowly over many years. Because exposure to arsenic is cumulative—it builds up in the body—and people are exposed to multiple sources, eliminating all unnecessary exposures is critical.

## Sales for residential uses of arsenic lumber to end on Dec. 31, 2003

In February 2002, EPA announced a voluntary decision by industry to remove consumer use of new arsenic treated lumber products by December

31, 2003, in favor of new alternative wood preservatives. This transition affects virtually all residential uses of wood treated with chromated copper arsenate, also known as CCA, including wood used in play-structures, decks, picnic tables, landscaping timbers, residential fencing, patios, railings, docks, walkways and boardwalks. By January 2004, EPA will not allow CCA products for any of these residential uses.

## Arsenic lumber—bad for children

Children are at particular risk from arsenic treated wood because they are more likely to come into direct contact with the surface, because their hands are often sweaty and sticky, which would increase arsenic rub off, because they are more likely to ingest the arsenic by putting their hands in their mouths, and because children receive a higher dose relative to their size.

According to nationwide sampling overseen by the Environmental Working Group and the Healthy Building Network, an area of arsenic-treated wood the size of a four-year-old's hand contains an average of 120 times the amount of arsenic allowed in a 6 ounce glass of water by the U.S. EPA.

See "The Poisonwood Rivals" for sampling details. Available on line at [www.ewg.org/reports/poisonwoodrivals/](http://www.ewg.org/reports/poisonwoodrivals/)

**"In less than two weeks an average five year old playing on a CCA-treated playset would exceed the lifetime cancer risk considered acceptable under federal pesticide law."**

*Poisoned Playgrounds*—Available on line [www.ewg.org/reports/poisonedplaygrounds/capr.html](http://www.ewg.org/reports/poisonedplaygrounds/capr.html)

See reverse for recommendations about minimizing exposure to arsenic treated lumber.

# Recommendations

## No new arsenic treated lumber installations

Do not install new structures made of arsenic treated lumber where human contact will occur. Because it is so hazardous, after December 31, 2003, arsenic treated lumber will not be available for new residential installations.

## Remove existing arsenic treated lumber structures and dispose of properly.

Currently there is no standard for safe disposal of CCA-treated wood, but it can be disposed of in lined landfills in Vermont. Check with your Solid Waste Management District for haulers who can pick up the wood. Dispose of soil from beneath structures by bagging and placing with household trash.

While studies have shown that CCA-treated wood leaches enough arsenic to qualify as hazardous waste, it is often disposed of in unlined construction and demolition debris landfills where arsenic can leach into groundwater. Disposal of millions of tons of arsenic treated lumber over the next 30 years is going to be a major challenge for waste authorities.

## Temporary fix: seal the arsenic in

Water-based latex paint is the safest sealant and should be reapplied every year, depending on local climate. Oil-based stains and paints are more durable but also more toxic than water-based sealants. Consumers should generally avoid paints and sealants that contain volatile organic compounds (VOCs). If a choice must be made, products with low levels of VOCs should be selected. Other ingredients to avoid in sealants include formaldehyde, fungicide, heavy metals, preservatives and mildewcides. Some least-toxic products to try include Bioshield, Miller Paint, and AFM Safe Coat paints.

## Arsenic leaches from lumber into soil below

Because arsenic continues to leach onto the surface below the play structure or deck, wood chips in particular may build up high levels of arsenic. If a CCA treated deck were removed, the soil or other material underneath would also need to be dug up and removed.

Do not treat CCA wood with acid deck wash or brighteners, which are thought to hasten the release of arsenic. Note that the effect of acid rain is similar in hastening the release of arsenic.

## Keep children and pets out of under-deck areas

Because arsenic dissolves readily in water, it leaches from the wood and accumulates in soil underneath decks and playsets. Children should not be allowed to play in the soil under decks. In addition, do not store toys, such as children's bicycles or yard toys, or tools that humans will touch underneath a deck.

## Hand washing after touching wood removes arsenic

Always wash hands well with soap and water after touching or handling treated wood. Wash children's hands after every exposure to pressure treated wood, such as playing on an arsenic wood playset, especially before eating.

## Remove arsenic treated lumber from gardens

Despite evidence that arsenic does not move far from the lumber (as much as 6 inches), and is taken up poorly by most plants, the Environmental Protection Agency is emphatic in its recommendation that arsenic treated lumber not be used in proximity to food: "Do not use treated wood under circumstances where the preservative may become a component of food or animal feed."

Removing arsenic treated wood from the garden and digging up and removing the adjacent contaminated soil from the garden is only means to ensure that future arsenic exposure will be minimized.

## Do not burn pressure treated wood

Scraps of arsenic treated lumber should never be burned. The smoke will release arsenic and highly toxic hexavalent chromium into the air.

The ash also contains high levels of residual arsenic. According to analysis by Origen Biomedical of Austin, Texas, one tablespoon of CCA ash contains a lethal dose of arsenic.

## Arsenic tainted sawdust—a lingering hazard

Many playsets, decks, picnic tables, ramps, etc. were constructed with no thought to sawdust collection. The arsenic tainted sawdust simply sat or was raked into the lawn, resulting in soil with high levels of arsenic and chromium, generally in areas where children are likely to play. This residual arsenic poses an ongoing hazard to occupants, who may not even be the ones who installed the arsenic treated lumber. Unless sawdust is still visible, a soil test for arsenic is the only way to identify these concentrated contamination sites.

## Alternatives to arsenic treated lumber

We are fortunate in Vermont to have local rot resistant woods available for outdoor uses, including white cedar, tamarack and hemlock. Concrete should be used where the structure is in contact with the ground. Other alternatives include recycled steel, recycled plastic marine pilings, fiberglass, concrete, Trex® (Trex Co. [www.trex.com](http://www.trex.com)), and ChoiceDek® (AERT Inc. [www.choicedek.com](http://www.choicedek.com)). Make sure the plastic is recycled and does not contain PVCs.

## What can you do?

- Don't buy new arsenic treated lumber.
- If you have arsenic treated structures at home, seal them immediately, and plan to remove them as soon as possible.
- Call on your community's schools and early childhood learning centers to immediately cease installation of new arsenic treated structures and plan for removal of arsenic treated structures over the next few years.
- Vermont retailers should remove arsenic treated lumber from the shelves before the 2003 construction season.

For more information and links to national reports on arsenic treated wood, visit VPIRG's website: [www.vpirg.org](http://www.vpirg.org).