



The Alliance for a **HEALTHY TOMORROW**

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Protect Our Children: Buy Safer Alternatives to Arsenic-Treated Wood for our Yards and Playgrounds

Playgrounds, decks, stadiums, yards, and picnic tables are often made of pressure-treated wood, which is almost always treated with the pesticide Chromated Copper Arsenate (CCA). Used to protect against weather, mold, and insects, CCA contains chromium and arsenic, which are hazardous to human health. Arsenic is known to cause cancer in humans. It is linked to skin, bladder, lung, liver and kidney cancers, as well as immune system problems, cardiovascular disease, and diabetes.ⁱ

These harmful ingredients are not safely locked up in the wood. Over time, arsenic leaches to the surface of treated wood. When a child plays on a playground with arsenic-treated wood, she gets the arsenic on her hands and skin and may accidentally ingest the arsenic during normal hand-to-mouth contact. Arsenic can also get into our water supply when CCA-treated wood is discarded in unlined landfills.

ALTERNATIVES TO ARSENIC--TREATED WOOD

We can protect our children from needless exposure to arsenic by using one of the many alternatives to arsenic-treated wood whenever possible. These alternatives include metal, cement, sustainably-logged wood, recycled plastics, and other wood treatment options. Currently, these alternatives are slightly more expensive than CCA, but the long-term health and clean-up costs of arsenic-treated wood mean that it will probably cost us more in the long run. If CCA were banned, many of the safer alternatives could be produced on a larger scale, making them at least as cheap as arsenic-treated wood.ⁱⁱ

Other treated wood alternatives are available. These alternatives look safer but do require additional study. In general, treated wood should not be used where it may come in contact with drinking water supplies or with food. The following treated-wood alternatives do not contain arsenic or chromium, but do contain other chemicals that could be harmful for your health:ⁱⁱⁱ

- **Borates:** Boron-based wood treatments have very low oral and dermal toxicity, and are safe in the environment. Borates are effective for prolonging the life of wood, and borate-treated wood looks like untreated wood. Borate treatments are safer for workers than arsenic or copper, and borate-treated wood can be disposed of like untreated wood. Borates tend to leach out when exposed to water, but borate-treated wood is a good option for wood that will not be continually damp or wet.
- **Other copper-based treatments:** Although it is less toxic than arsenic or chromium, copper is a skin irritant. Copper is particularly toxic to aquatic organisms, and shouldn't be used in wetland environments, as copper-based treatments do leach copper into the environment. The following copper treatments are comparable with CCA, lasting about as long and providing equal protection:
 - **ACQ,** or Alkaline Copper Quaternary, is one of the cheapest and most effective treated-wood alternatives to CCA. It contains no EPA listed compounds, and no known or suspected carcinogens. Wood treated with ACQ usually has a light tan to olive color. The most widely available ACQ woods in the US are Kodiak and Preserve.

- **CBA**, or Copper Boron Azole, is used widely in Europe and Japan. It has low toxicity to mammals, and does not cause mutations. It is not yet marketed in the US, but should be available soon. CBA-treated wood has a green tint similar to CCA wood.
- **CC**, or Copper Citrate, is used mostly for posts, and is not widely sold in the US. CBA-treated wood has a green tint similar to CCA wood.
- **CDDC** or Copper Dimethyldithiocarbamate, is moderately orally toxic, and irritates the skin. Wood treated with CDDC is honey brown in color.

Wood treatments you should AVOID using anywhere with potential animal or human contact:

- **Creosote** is a probable human carcinogen.^{iv}
- **Pentachlorophenol or “penta”** can harm the liver, kidneys, blood, lungs, nervous system, immune system, and gastrointestinal tract. It can also irritate the skin and eyes.^v

Untreated woods, such as redwood and cedar, are attractive and safe alternatives to CCA. However, they are substantially more expensive, do not last as long, and require harvesting of slow-growing trees. If you buy these woods, you should try to determine whether the source is a well-managed forest, rather than an old-growth forest. Black locust and larch are also sustainable options – black locust is very hard, and larch is softer. Your lumber supplier may have other suggestions.

Recycled plastic lumber is an option for lighter-load uses, such as tables, benches, or decking. It cannot be used for primary load-bearing, such as posts and beams, and may not be appropriate for some uses, due to warping. Using recycled plastic lumber has the advantage of requiring no harvesting of lumber and saving landfill space. Recycled plastic is more expensive than wood, but is durable and requires very little maintenance. However, it is important to use recycled rather than virgin plastic and to avoid plastic lumber containing PVC and polystyrene, which may cause other health problems.

Cement can be used to replace pressure-treated wood in some uses. It has been used in construction for a long time with no negative effects. Cement production uses silica, and cement cutting releases silica which poses occupational health problems. It is also produced at very high temperatures, requiring lots of energy use. Finally, concrete is very alkaline posing burn risks to those pouring it.

Metal can replace pressure-treated wood for some uses. Steel production involves some occupational health problems, as well as consumption of large amounts of raw materials and energy.

Using safer alternatives whenever possible is one way we can ensure a healthier tomorrow for our children. Continued use of CCA-treated wood is just one example of how our children’s health is being threatened by flawed policies and special interest interference in public health decision-making.

The Alliance for a Healthy Tomorrow is a coalition of citizen organizations, health professionals and educators in Massachusetts calling on Massachusetts Acting Governor Jane Swift to protect our children’s health by banning the sale of CCA-treated wood in the state and purchasing safer alternatives.

For more information or to join our efforts, call 617-338-8131.

www.healthytomorrow.org

ⁱ National Research Council 1999. Arsenic in drinking water. National Academy of Sciences. Washington, DC.

ⁱⁱ Solo-Gabriele H, Townshend T, et al. Alternative chemicals and improved disposal end-management practices for CCA-treated wood. Florida Center for Solid and Waste Management, 2000. Available at www.floridacenter.org/solo_00_08.pdf accessed 10/11/2001.

ⁱⁱⁱ Ibid

^{iv} Agency for Toxic Substances and Disease Registry (ATSDR). 1996. Toxicological profile for creosote. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

^v Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for pentachlorophenol. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.