U.S. Playground Equipment Manufacturer and Purchaser Perceptions of Treated Wood

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Presentation Sections

• Overview
• The Studies
• Results
• Implications
It extends the life span of lumber, but the Environmental Protection Agency says arsenic treated wood might cut life short for our children.

"I believe this is a children's safety issue," Crow pleaded. "If you don't protect these children, their blood will be on your hands."

Rep. Larry Crow, Palm Harbor, Florida, after his bill to ban arsenic-treated wood from Florida's public playgrounds failed to pass.

“Wave of opponents kills Crow's treated-wood bill” St. Petersburg Times, November 28, 2001
Pressure-treated wood linked to Mississippi couple's health nightmares

Poisoned dreams

As publicity increases, more people are coming forward with medical problems believed caused by arsenic in pressure-treated wood.

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By RON MATUS
Sun staff writer

Hernando, Miss. Lynn and Thomas Milam live in a cramped travel trailer 50 yards from the dream home they never finished.

In front of the house, with its giant windows overlooking a small lake, stacks of lumber sit in a weed-ridden yard. Inside, the sawdust is so thick the Milams couldn't write their names in it.

"It makes me sad every time I see it," said Thomas Milam, emerging from the trailer one day last week.

And for good reason: Doctors say the arsenic-treated wood the Milams were using in the house made both of them seriously ill.

And it apparently put enough arsenic in Lynn Milam's system to lead doctors, local police and even the FBI to investigate her husband for attempted murder.

What happened to the Milams has led to another product liability lawsuit against the treated-wood industry.

It is also the most dramatic example yet of illness or injury linked to chromated copper arsenate, or CCA, the potent pesticide that has come under fire for health risks ever since a Gainesville playground closed two years ago.

In this case, the alleged

Tom and Lynn Milam stand in front of their unfinished dream home in Hernando, Mississippi. The couple claim to have been poisoned by using arsenic-treated wood.

WOOD WORRIES

A CONTINUING LOOK AT THE CONTROVERSY OVER ARSENIC-TREATED WOOD

FOR MORE ON ARSENIC-TREATED WOOD ONLINE: Go to www.gainesvillesun.com/ARCHIVES/articles/woodarchive.shtml

victims have unusual sympathizers in their corner — the Federal Bureau of Investigation and the local prosecutor.

The FBI put Thomas Milam under scrutiny two years ago after his wife was repeatedly hospitalized with severe vomiting, diarrhea, nausea and cramps. According to a complaint filed in a Mississippi circuit court, baffled doctors eventually found arsenic levels in her system more than 100 times above normal.

They told Lynn Milam she probably was being poisoned by her husband, and then called police.

"We thought we potentially had an attempted murder," Mississippi District Attorney John Champion said.

But the case took a bizarre
If Arsenic-Treated Wood is Too Toxic for Zoo Animals...

Why Does Home Depot Still Sell These Products to American Families?

The nation's largest home improvement chain with "pressure treated" lumber coated with a pesticide called chromium copper arsenate (CCA), used on patios, decks, outdoor benches, even mats and playgrounds. Everyone knows arsenic can kill you. Studies show that kids ingest arsenic when it rubs off of these products and onto their hands. The National Research Council says that ingestion of arsenic, even at low levels, is indisputably linked to skin, bladder, and lung cancer, and that there are strong links to diabetes, high blood pressure, reproductive and respiratory problems.

Why Does Home Depot Think it's Safe for Your Kids?

Many reputable playground manufacturers no longer use arsenic-treated wood. The Consumer Product Safety Commission is considering a ban. Yet despite all of this evidence, Home Depot continues to keep it in stock.

Next time you're at Home Depot, please ask the manager to stop putting arsenic in your wood. Don'tmonkey around with your family's health. (Lab tests on Home Depot lumber show alarming levels of arsenic contamination. See our website for details and information on inexpensive home testing kits.)
"The amount of arsenic that could be absorbed from playground soil and CCA treated wood is not significant compared to natural sources and will not result in detectable arsenic intake."

"The level of arsenic in or around CCA treated wood in playgrounds and recreational facilities does not appear sufficient to adversely affect the health of children or adults."

“Panel Finds No Danger From Playground Wood”, The Florida Physicians Arsenic Workgroup, August 8, 2002
“The risk of immediate illness from short-term exposure to chemicals from CCA-treated wood is low. Although arsenic can be poisonous at very high doses, the amounts measured on CCA-treated wood are a thousand times less than a lethal dose.”

The Studies

Sample Frames:
1) Census of 188 playground equipment manufacturers
2) A national random sample of 2,800 playground equipment purchasers

- The source of sample frame information is U.S. census data purchased from Best Lists, a national survey list company.

- The method of data collection was a mail survey questionnaire

- Conducted in 2003

- Survey procedures, follow up efforts and data analysis were conducted in accordance with Tailored Design Method (Dillman 2000)
Results-Response Rates

Manufacturers:
- 188: mailed
- 141: adjusted sample size
- 52 returned/useable
- 37% response rate

Purchasers:
- 2,800: mailed
- 2,580: adjusted sample size
- 431 returned/useable
- 17% response rate
Children’s Playground Equipment Purchasers

(n=431)
Children’s Playground Equipment Purchasers

- Day Care Center: 26%
- City Parks Department: 24%
- Pre-School/Nursery School: 22%
- County Parks Department: 9%
- Public K-8 Schools: 4%
- Parochial K-8 Schools: 4%
- Private (Non-Parochial) K-8 Schools: 3%
- Secondary Schools: 3%
- School District Administrative Offices: 5%
- School District Administrative Offices: 5%
Children’s Playground Equipment Manufacturers/Purchasers

**Playset Materials Manufacturing/ Purchase Criteria**

Scale: 1=Not Important at All; 3=Somewhat Important; 5=Very Important

- Free from as many chemicals as possible
- Minimize health risks
- Long-term performance
- Cost of the play set
- Effective years of service
- Resistance to harsh climate
- Resistance to wood destroying insects
- Low maintenance
- Resale value

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Manufacturers</th>
<th>Purchasers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free from as many chemicals as possible</td>
<td>4.5</td>
<td>4.8</td>
</tr>
<tr>
<td>Minimize health risks</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Long-term performance</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Cost of the play set</td>
<td>4</td>
<td>4.6</td>
</tr>
<tr>
<td>Effective years of service</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Resistance to harsh climate</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Resistance to wood destroying insects</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Low maintenance</td>
<td>3</td>
<td>3.9</td>
</tr>
<tr>
<td>Resale value</td>
<td>2</td>
<td>2.2</td>
</tr>
</tbody>
</table>
# Perception of the Number of Years Materials Last in Weather Exposed Above Ground

(Percent of Respondents)

<table>
<thead>
<tr>
<th></th>
<th>0-10 Years</th>
<th>11-25 Years</th>
<th>More than 25 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>P</td>
<td>M</td>
</tr>
<tr>
<td>Concrete</td>
<td>4%</td>
<td>6%</td>
<td>33%</td>
</tr>
<tr>
<td>Steel</td>
<td>7%</td>
<td>7%</td>
<td>54%</td>
</tr>
<tr>
<td>Naturally durable species (cedar, redwood)</td>
<td>64%</td>
<td>33%</td>
<td>31%</td>
</tr>
<tr>
<td>Treated lumber products</td>
<td>23%</td>
<td>42%</td>
<td>52%</td>
</tr>
</tbody>
</table>

*Children’s Playground Equipment Manufacturers/Purchasers*
In general, what is your overall perception of treated wood?

Children’s Playground Equipment Manufacturers/Purchasers

- **Extremely Negative**
- **Somewhat Negative**
- **Neutral**
- **Somewhat Positive**
- **Extremely Positive**

<table>
<thead>
<tr>
<th>Perceived Impact</th>
<th>Manufacturers</th>
<th>Purchasers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Negative</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>Somewhat Negative</td>
<td>23%</td>
<td>18%</td>
</tr>
<tr>
<td>Neutral</td>
<td>27%</td>
<td>41%</td>
</tr>
<tr>
<td>Somewhat Positive</td>
<td>18%</td>
<td>9%</td>
</tr>
<tr>
<td>Extremely Positive</td>
<td>9%</td>
<td>9%</td>
</tr>
</tbody>
</table>
Children’s Playground Equipment Manufacturers/Purchasers

Playset Materials: Manufacturing/Currently Installed
(Percent of Respondents)

- Plastic: 48% (Manufacturers), 33% (Purchasers)
- Steel: 50% (Manufacturers), 48% (Purchasers)
- Treated Wood: 48% (Manufacturers), 33% (Purchasers)
- Aluminum: 30% (Manufacturers), 20% (Purchasers)
- Cedar: 15% (Manufacturers), 10% (Purchasers)
- Redwood: 10% (Manufacturers), 5% (Purchasers)
- Untreated Wood: 10% (Manufacturers), 5% (Purchasers)
- Concrete: 5% (Manufacturers), 5% (Purchasers)
- Hemlock: 1% (Manufacturers), 1% (Purchasers)
Would you be willing to purchase/manufacture outdoor children’s playground equipment that is fabricated in part with treated wood?

**Buyers**
- Yes: 44%
- No: 56%

**Suppliers**
- Yes: 64%
- No: 36%
I Understand the Concept of Treating Wood

Scale: 1=Do Not Agree at All; 3=Somewhat Agree; 5=Strongly Agree

<table>
<thead>
<tr>
<th>Scale</th>
<th>Manufacturers</th>
<th>Purchasers</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9%</td>
<td>13%</td>
</tr>
<tr>
<td>1</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percent of Respondents
Do you think that some types of treated wood are safer than others?

**Manufacturers**
- Not Sure: 27%
- No: 4%
- Yes: 69%

**Purchasers**
- Not Sure: 54%
- Yes: 41%
- No: 5%
Entity Trusted to Provide Consumers with Treated Wood Safety and Handling Information

Manufacturers
- Centers for Disease Control
- Playground equipment mfgrs.
- Treated wood companies
- Environ. Protection Agency
- Federal government
- State government
- Chemical mfgrs.
- Depts. of education

Purchasers
- Centers for Disease Control
- Environ. Protection Agency
- Depts. of education
- State government
- Federal government
- Playground equipment mfgrs.
- Treated wood companies
- Chemical mfgrs.

Most Trusted
- Centers for Disease Control
- Depts. of education

Least Trusted
- Chemical mfgrs.
## Perception of Risk to Human Health from Exposure to Selected Chemicals

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Mfgrs</th>
<th>Purchasers</th>
<th>Mfgrs</th>
<th>Purchasers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>2%</td>
<td>2%</td>
<td>42%</td>
<td>84%</td>
</tr>
<tr>
<td>Chromium</td>
<td>12%</td>
<td>6%</td>
<td>24%</td>
<td>32%</td>
</tr>
<tr>
<td>Boron</td>
<td>35%</td>
<td>10%</td>
<td>13%</td>
<td>28%</td>
</tr>
<tr>
<td>Borax</td>
<td>34%</td>
<td>12%</td>
<td>8%</td>
<td>18%</td>
</tr>
<tr>
<td>Copper</td>
<td>38%</td>
<td>15%</td>
<td>3%</td>
<td>13%</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>58%</td>
<td>35%</td>
<td>0%</td>
<td>7%</td>
</tr>
<tr>
<td>Zinc</td>
<td>29%</td>
<td>11%</td>
<td>0%</td>
<td>14%</td>
</tr>
<tr>
<td>Water</td>
<td>76%</td>
<td>48%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Oxygen</td>
<td>83%</td>
<td>58%</td>
<td>0%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Desire for More Information on Proper Treated Wood Use and Handling

Children’s Playground Equipment Manufacturers/Purchasers

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Somewhat Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturers</td>
<td>14%</td>
<td>24%</td>
<td>27%</td>
</tr>
<tr>
<td>Purchasers</td>
<td>14%</td>
<td>24%</td>
<td>35%</td>
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Implications for the Future
Questions?

For More Information, Contact:

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