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# Toy Story

The tale of how plastics and toxins are endangering children's health

By Jo Immig



Do children intuitively know something that adults don't when they opt to play with the benign wrapping paper or cardboard box instead of the plastic toy?

It seems the list of things to worry about with toys just keeps getting longer, even Santa would have trouble keeping track of it. Along with choking and strangulation hazards, excessively loud toys, magnetic toys and projectiles there's now toxic chemicals in toys.

## Toxic toy recalls

Toxic toy stories have certainly hit the

media lately and it's a timely reminder with the gift-giving season just around the corner to carefully consider the hidden toxic hazards in children's toys.

Recently awarded Australian toy of the year, the 'Bindeez' range was recalled because it was found to contain the chemical 4-butanediol in its small beads. If the beads are ingested the chemical gets converted into a dangerous and illegal drug. Several children have already been hospitalised after swallowing them.

The world's largest toy maker Mattel recalled millions of toys in the USA due to high levels of lead contamination in the paint. Apparently the company itself has protocols in place that don't allow leaded paint, but Chinese manufacturers still used a lead containing paint.

It's estimated that up to 400,000 of the same lead-contaminated toys made their way to Australia and Mattel is also voluntarily recalling these affected toys, including Barbie play sets and some Fisher Price toys

(see below for further details).

The Commonwealth government responded by banning major retailers from selling imported toys with dangerous lead levels in their paint above the Australian standard limit of 90 parts per million leachable lead, but a loophole has been created leaving sole traders, markets and discount stores free to keep trading the toys.

Questions are also being asked about setting so-called 'safe' levels for lead, which is now widely regarded as toxic for children at any level of exposure.

## Calls for mandatory toy testing

It makes you wonder how such potentially deadly constituents could escape the attention of regulators, manufacturers, importers and retailers. The recalls also serve to highlight the problems with Australia's voluntary toy safety surveillance system.

According to Elizabeth O'Brien, President of The LEAD Group, 'The Mattel recall ought to prompt large recalls from other companies, but that's unlikely because companies in Australia are left to carry out their own lead testing in toys.' O'Brien advises parents to demand lead analysis reports on toys from retailers and to lobby to have Australia's laws changed so it becomes mandatory to carry out lead testing on toys.

There are also calls for a coordinated



# Touch Wood

Wood is a regenerating raw material and part of the nature cycle (which applies neither to plastics, or even to metal). It smells good, feels lovely and has a warmth other materials do not have. 'Wooden toys have life to them. Wood warms to the touch, retains the aroma of the tree from which it was created and has a sound that is rich and real. Children innately resonate with this natural material,' says Megan Kinninmont of Mellimoomoo.

Besides its beauty, wood is clean and in most cases, safe—bacteria cannot increase on wood. And it's durable! A wooden toy passes through the hands of

Melissa McGroarty of Honeybee Toys. She suggests parents look beyond just the label. 'Many toys labelled "European" are actually designed in Europe, but made in China,' she says.



Ball catcher  
From Dragonfly  
Toys



Rainbow  
From Dragonfly  
Toys

Avoid lead-based paints and chemical finishes and look for toys finished with beeswax polish and natural vegetable oils. Saliva can dissolve the proactive coating on some toys, which may expose a harmful toxin underneath and beeswax withstands saliva.

Certainly quality wooden toys cost more than the plastic variety. Are they worth the extra expense? 'Wooden toys have more play value—they are often simple and open-ended which means that the child can use their imagination to play with one toy in a variety of ways,' says Linda Lodue of

Dragonfly Toys. 'They also have a longer play life—a set of nesting bowls given to them as a toddler will become a set of pots and bowls for their pretend kitchen at age five.'

They also teach the child to treat their toys with care and respect—they can't be thrown around and simply replaced when broken, says Ms Lodue. 'They are made to last and children seem to know this—they respect the material and the workmanship and treat beautiful toys with care.'



Treehouse  
From Honeybee

Jannine Barron of Nature's Child suggests consumers look for four key things:

- Environment—where does the wood come from: renewable or recycled resources or rainforests?
- Safety—is the paint or finish safe for the child, and the planet? Has the toy been built well so that it causes no injuries?
- Educational value—is the toy 'open-ended'; ie, can it be played with in many ways, through a child's various growth stages?
- Fair trade—were the artists and craft people paid and treated fairly for their labour?

'If these things are not mentioned on the packaging, the manufacturer or retailer should be able to answer your questions,' says Ms Barron. 'If they can't, find a retailer who can.'

several brothers and sisters and even on to their own children.

But there's more to wooden toys than meets the eye. Parents still need to be discerning with their purchase. '... parents should be aware that not all wooden toys are the same. I advise all parents to ask questions about the toys they are looking to purchase,' says

Butterfly  
From Honeybee



national approach to recalling and banning toys and chemicals to replace the cumbersome state-by-state approach that currently exists.

## Trouble in toyland

According to the authors of the 2006 report 'Trouble in Toyland: 21st Annual Toy Safety Survey', some toys can pose hidden hazards and expose children to dangerous chemicals that are linked to serious health problems.

The report's analysis of toxic chemicals in toys found that:

- Some children's jewellery may contain high levels of lead. Lead is used in pewter alloys and lower-grade tins and is also found in PVC components and in paint used on fake pearls.
- Manufacturers are selling play cosmetic sets that include nail polish and some temporary tattoo sets containing toxic chemicals, such as toluene, xylene, dibutyl phthalate, formaldehyde, fragrance and benzene. Since children often put their hands in their mouths, nail polish offers a direct route of exposure to these toxic chemicals.

While there has been improvement, laboratory tests found that two out of ten 'phthalate-free' labelled plastic toys still actually contained detectable levels of phthalates.

## Polyvinyl chloride

Greenpeace's 'Play Safe' campaign in the late 1990s drew attention to the fact that children's toys and teething products contained polyvinyl chloride, or PVC, which posed dangers to their health. As a result the EU moved to ban soft PVC teething toys for children under three years old, but the point continues to be made that young children put all toys in their mouths, not just those intended for teething.

PVC plastic has several nasty surprises. It contains the toxic heavy metals lead and cadmium as well as phthalates (pronounced tha-lates). Lead and cadmium are added to PVC as stabilisers and are used in the pigments to colour plastics. Phthalates are added to soften the plastic to make it more

flexible and durable. Think squishy rubber duckies and floppy bath books and you get the picture.

Another downside to PVC plastic occurs during the production process where deadly dioxins are formed. While Australia only has limited production of PVC, imported goods such as PVC toys are common and often end up in landfills because most PVC is not able to be recycled.

The Target Corporation recently announced it would reduce its use of PVC in packaging like soft plastic zipper bags and in children's products such as lunch boxes and bibs. It has committed to finding PVC alternatives in most toy categories by 2008.

## Lead and cadmium

It is now widely accepted that there's no 'safe' level of lead or cadmium for children to be exposed to. Lead and cadmium are undisputed poisons and cause toxic effects on nearly all organs and systems in the body, especially the nervous system.

Lead is highly toxic to the brains of young children and even a single high exposure to lead, such as swallowing a piece of leaded jewellery, can cause permanent neurological and behavioural damage, IQ deficits, attention deficit hyperactivity disorder and even death.

Children's exposure to lead can have long-term and measurable effects without necessarily causing any obvious acute symptoms. Exposure is also cumulative and children can absorb up to half of the lead they are exposed to and store it in their liver, brain, kidneys and bones.

Children are at far greater risk of exposure because of their hand-to-mouth behaviour. Lead and cadmium readily leach out when toys are licked, sucked or chewed on—all normal stuff for younger children, particularly those three and under.

When PVC is exposed to sunlight, air and detergents the bond between the lead and plastics breaks down and forms a toxic dust, which is another significant source of exposure for children.

## Phthalates

Phthalates are added to PVC plastic toys to make them flexible so they can stand up to rough treatment from little ones, but a mounting body of scientific evidence suggests that exposure to them and their metabolites may result in a range of disturbing health impacts. Phthalates exposure has been linked to:

- Interference with the natural functioning of the hormone system
- Asthma and other respiratory problems, rhinitis and eczema in children
- Reproductive and genital defects
- Premature birth and early onset of puberty
- Lower sperm counts
- Risk factors for testicular cancer

Infants are exposed to phthalates from multiple sources including through the umbilical cord, breast milk, dust in the air and also from sucking on PVC plastic toys. US EPA studies show the cumulative impact of different phthalates leads to an exponential increase in associated harm.

A recent study (2007) concluded that epidemiological evidence indicates boys born to women exposed to phthalates during pregnancy have an increased incidence of congenital genital malformations and spermatogenic dysfunction, signs of a condition referred to as testicular dysgenesis syndrome.

According to data from the US Centers for Disease Control and Prevention (CDC), levels of phthalates found in humans are higher than levels shown to cause adverse health effects. The data also show phthalate levels are highest in children.

## Ban on phthalates in toys

With mounting evidence of harm caused by phthalate exposures, the EU introduced temporary bans on phthalates in children's toys as far back as 1999. The bans became permanent in 2005. Phthalates all have complicated chemical names but it's important to get to grips with the key ones to avoid exposing your children to them.

The EU prohibits the use of three phthalate plasticisers in toys and child-care items:

Di(2-ethylhexyl)phthalate (DEHP)  
Di-n-butyl phthalate (DBP)  
Benzyl butyl phthalate (BBP)

The EU restricts three plasticisers from toys and childcare items that children can put in their mouths:

Diisononyl phthalate (DINP)  
Diisodecyl phthalate (DIDP)  
Di-n-octyl phthalate (DNOP)

According to the European Commission, DEHP, DBP, and BBP are known to be reproductive toxicants, but the risks of the other three phthalates are uncertain. Nevertheless the EU considers a precautionary approach is still required.

California has also just signed into law a bill that prohibits the manufacture, sale and distribution of toys and child-care products used by children under the age of three that contain phthalates, which have been linked to cancer and reproductive defects. The bill comes into effect in 2009.

In Australia the industrial chemicals regulator, NICNAS, is currently conducting a hazard assessment of twenty-five individual phthalate chemicals, several of which are commonly found in PVC and toys. NICNAS has been accused by community groups of being a toothless tiger, however, because ultimately it has no powers to ban chemicals and no control over the importation of chemicals in products such as phthalates in toys.

## Tips for toxic-free toy selection

- Always choose age-specific toys because younger children have different behaviours in relation to toys such as sucking and chewing.
- Beware of 'cheap' children's jewellery and check whether parts are PVC, pewter alloys or lower-grade tins. Painted beads may also contain lead. Why not make your own creations with natural

materials such as wood, hemp, crystals and shells?

- Try plant-based natural make-up for children's face painting and dress-ups. Vida Natural Make-Up by *Livos* is made from vegetable oils, beeswax, carnauba, mineral pigments and vitamin E. The kit comes with twelve great colours. Contact the supplier at Painted Earth [www.house-paint.com.au](http://www.house-paint.com.au).
- Read labels of children's cosmetics carefully and avoid toxic chemicals in nail polish and other products such as perfumes, hair products and tattoos.
- Avoid vinyl and PVC toys and children's products such as bath toys, squeeze toys, dolls, lunch boxes and drink bottles especially for children from 0-6 years of age. Choose plastic-free toys such as certified organic fabric teethingers and unpainted wooden toys.
- Seek assurances and testing by the manufacturers, importers or retailers of painted or metal toys to avoid lead and other heavy metal contaminants. ■

*Jo Immig is an author, environmental scientist and coordinator of the National Toxics Network. [www.oztoxics.org](http://www.oztoxics.org)*

### Source

- PVC Report: Response to the Australian Vinyl Council' (2007) National Toxics Network [www.oztoxics.org](http://www.oztoxics.org)
- 'Toying With Toxics: An Investigation of Lead and Cadmium in Soft Toys in Three Cities in India' (2006) *Toxics Link* [www.toxicslink.org](http://www.toxicslink.org)
- US federation of State Public Interest Research Groups, 'Trouble in Toyland: 21st Annual Toy Safety Survey' (2006) [www.uspirg.org](http://www.uspirg.org)
- 'Death of a Child After Ingestion of a Metallic Charm' (2006) KK Berg, HF Hull, EW Zabel, PK Staley, DM Homa, [www.cdc.gov/mmwr/PDF/wk/mm55d323.pdf](http://www.cdc.gov/mmwr/PDF/wk/mm55d323.pdf)
- 'Phthalate ester toxicity in Leydig cells: Developmental timing and dosage considerations' (2007) Ren-Shan Ge, Guo-Rong Chen, Cigdem Tanrikut and Matthew P. Hardy *Reproductive Toxicology* Volume 23 : 3, 366-37
- NICNAS Draft Phthalate Hazard Assessments and Hazard Compendium (2007) [www.nicnas.gov.au/industry/existing\\_chemicals/phthalate\\_hazard\\_assessments.asp](http://www.nicnas.gov.au/industry/existing_chemicals/phthalate_hazard_assessments.asp)
- 'EU Bans Three Phthalates From Toys, Restricts Three More' *Chemical and Engineering News* July 11, 2005 Vol. 83 No.28
- 'Target Will Reduce PVC Use' *The Wall Street Journal* November 6, 2007
- 'California OKs phthalates ban on children's products', *Reuters*, Mon Oct 15, 2007

### Further information

- The LEAD Group Australia's leading community organisation campaigning to have lead removed from products and petrol see [www.lead.org.au](http://www.lead.org.au) or FREECALL 1800 626 086 Australia only.
- For a list of recalled products including toys see Product Recalls Australia [www.recalls.gov.au](http://www.recalls.gov.au)
- For more information and images of the affected toys and advice on how to obtain refunds visit Mattel's website: [www.service.mattel.com](http://www.service.mattel.com) or FREECALL 1800 674 753