

# Water Beads, National Security, Economic, & Environmental Health Risks

## Overview:

Water beads are known by many different names. They have caused rashes, nasal cavity injuries, eye injuries, hearing loss, lung damage, seizures, brain injuries, major intestinal surgeries, asphyxiation, and death. Water beads are banned in other countries due to their threat to children.

Even though water beads are marketed as non-toxic, the term non-toxic is shockingly unregulated in the United States. Data for all clinically treated acute, sub-acute, and chronic injuries, as well as disease or fatalities associated with potential chemical exposure from interactions with toy products, are not systematically reported, analyzed, and quantified. Calls to Poison Control, reports to the Consumer Product Safety Commission, and medical literature case studies are submitted voluntarily. Furthermore, the chemical composition of toys is often not readily available to consumers at the point of purchase and physicians at the point of care. The term "nontoxic" is misleading.

In occupational and laboratory settings, gloves and protective equipment must be worn to avoid repeated contact with residual neurotoxin acrylamide monomers when handling polyacrylamide. Even though polyacrylamide is considered non-toxic, the polymer must be treated with the same caution as the monomer acrylamide (Environmental health & safety: Acrylamide, n.d.)

Manufacturers and retailers are not required to disclose the residual amount of acrylamide in their water bead products. Even though the majority of toys sold in the United States are made in China, most American law firms will not pursue Chinese manufacturers. Online retailers are shielded from liability for injuries caused by products sold by third-parties on their platforms. Presently, U.S. consumers injured by a Chinese-made product and unable to sue a responsible party in the U.S. will not be compensated for their injuries. In this regard, the American legal system has failed to adequately protect American consumers. (Glynn, 2012)

# That Water Bead Lady



Scan the code for  
additional information



## Statistics you should know:

Research has shown age restriction and parent observation are not an effective way to prevent these water bead ingestion from occurring, as nearly half of the reported incidents occurred in school-aged children, with 30% occurring while the children were at school. (Alharbi & Dabbour., 2020)

Water beads are so transparent when fully hydrated, they are easy to miss, and when they dehydrate, they shrink down to the size of a pinhead, making them difficult to find.


The type of brain injury water beads can cause is unique. Cytotoxic cerebral edema and toxic encephalopathy are brain injuries that are not always readily visible on traditional MRI image scans. (Goel & Bell, 2013)

You cannot always see water beads on x-ray and on CT scans, the beads often look like gas or can mimic duplication cysts of the small intestine, rather than a foreign body ingestion. While water beads can be detected by ultrasound, they are sometimes overlooked, and may require a second operation to remove remaining beads hiding in another area of the digestive tract. (Kim et al., 2020) (Faytrouni et al., 2021; Alharbi & Dabbour, 2020)

Most often the chemical content of toys is not readily available to consumers at the point of purchase, and physicians at point of care. Absent strict specifications about chemical content, there also may be batch to batch variation in chemical mixtures used for toys. The chemicals used in toys may change rapidly in response to market forces or may be protected as proprietary information. The chemicals used in toys made by smaller manufacturers, may be less well controlled and/or undocumented. (Toys and Chemicals a Thought Starter, 2006)

**Water beads have been banned in multiple counties and water bead guns have been banned by city mayors in Kentucky and New York.**

Call us for more info

 (737) 235-7929

## Citation:

Alharbi, N., Dabbour, M. Aspiration of superabsorbent polymer beads resulting in focal lung damage: a case report. *BMC Pediatr* 20, 262 (2020). <https://doi.org/10.1186/s12887-020-02168-9>

Environmental health & safety: Acrylamide. (n.d.). Einstein College of Medicine. Retrieved February 22, 2022, from <https://einsteinmed.edu/administration/environmental-health-safety/industrial-hygiene/acrylamide.aspx>

Faytrouni, F., Mujawar, Q., Sadiq, K., & Avinashi, V. (2021). Gel beads Ingestion: A Case Report with Management and Review of Medical Literature. *Acta Scientifica Clinical Case Reports* 2.5, 2(5). Retrieved February 2022, from <https://actascientific.com/ASCR/pdf/ASCR-02-0122.pdf>

Goel, A., Bell, D. (2013) Cytotoxic cerebral edema. Reference article, *Radiopaedia.org*. (accessed on 19 Feb 2022) <https://doi.org/10.53347/rtd-24453>

Glynn, S. (2012). Toxic toys and dangerous drywall: Holding foreign manufacturers liable for defective products--the fund concept. *Emory Law Scholarly Commons*. Retrieved January 24, 2022, from <https://scholarlycommons.law.emory.edu/eilr/vol26/iss1/12/>

Kim, H. B., Kim, Y. B., Ko, Y., Choi, Y. J., Lee, J., & Kim, J. H. (2020). A case of ingested water beads diagnosed with point-of-care ultrasound. *Clinical and experimental emergency medicine*, 7(4), 330-333. <https://doi.org/10.15441/ceem.20.041>

Rhodes, H. (2021, November). trouble in toyland - uspirg.org. *Trouble in ToyLand*. Retrieved February 6, 2022, from [https://uspirg.org/sites/pirg/files/reports/trouble-in-toyland\\_2021/PIRG\\_Trouble-in-Toyland\\_2021.pdf](https://uspirg.org/sites/pirg/files/reports/trouble-in-toyland_2021/PIRG_Trouble-in-Toyland_2021.pdf)

World Health Organization. (2006, September). Toys and chemical safety - A thought starter. World Health Organization. Retrieved November 15, 2022, from <https://www.who.int/publications/m/item/toys-and-chemical-safety---a-thought-starter>



ThatWaterBeadLady@gmail.com



ThatWaterBeadLady.org