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Slime product injuries managed at emergency departments



Homemade slime is promoted as a substance that can be produced by children at home or at school. One version of homemade slime uses water, borax (sodium tetraborate), and Elmer's glue, and sometimes food coloring, glitter, or other additives. The American Chemical Society website provides directions for this version of homemade slime [1].

Recipes for homemade slime and its use have been around for years. However, in 2016 and 2017 its promotion on social media, such YouTube and Instagram, increased interest in the substance [2,3]. News stories reported increases in sales of glue linked to homemade slime [3].

At the same time as homemade slime's increased popularity have been reports of injuries when making or playing with the substance [2]. There is limited information on the potentially adverse effects of exposure to homemade slime. One meeting abstract described 38 inquiries involving 41 patients exposed to homemade slime reported to French poison centers during 2010–2017 [4].

The National Electronic Injury Surveillance System (NEISS) operated by the United States Consumer Product Safety Commission (CPSC) collects data on consumer product-related injuries in the United States from the emergency departments (EDs) of approximately 100 hospitals as a probabilistic sample of the more than 5000 hospitals with EDs in the United States [5]. Injuries to slime products or the ingredients being used to make slime in NEISS during 2001–2017 were identified by searching the Narrative_1 and Narrative_2 text fields for any mention of the terms “slime,” “borax,” “borate,” and “boric.” The resulting records were then reviewed to determine whether the substance involved in the injury appeared to be a slime product. Exposures to slime that were clearly not a product (e.g., slime on a rock) were excluded.

Twenty-seven injuries related to slime products were identified during 2001–2017. One (3.7%) case was reported in 2003, one (3.7%) in 2009, one (3.7%) in 2014, one (3.7%) in 2016, and 23 (85.2%) in 2017; 21 (87.5%) of the injuries were reported during May–December 2017. Seventeen (63.0%) of the cases suggested that the slime product was homemade. Eleven (40.7%) of the cases mentioned one or more of the ingredients used to make slime, and 5 (18.5%) mentioned that borax was specifically involved in the production of the slime. The distribution of the cases by route was 10 (37.0%) dermal, 6 (22.2%) ocular, 5 (18.5%) ingestion, 3 (11.1%) otic, 1 (3.7%) inhalation, and 2 (7.4%) unknown route. Of the ten dermal exposures, 4 (40.0%) involved the hand, 4 (40.0%) the finger, 1 (10.0%) the face, and 1 (10.0%) the upper trunk. Ten (37.0%) of the injuries occurred at home, 4 (14.8%) at school, 2 (7.4%) at sports, and 11 (40.7%) at an unknown location.

Seven (25.9%) of the patients were age five years or less, 16 (59.3%) 6–12 years, 3 (11.1%) 13–19 years, and 1 (3.7%) 20 years or more; the mean age was 10 years (range 0–38 years). Twenty-three (85.2%) of the patients were female and 4 (14.8%) were male. The distribution by race/ethnicity was 12 (44.4%) white, 4 (14.8%) black/African American, 6 (22.2%) other, and 5 (18.5%) not specified.

Twenty-five (92.6%) of the patients were treated and released from the ED and 2 (7.4%) left without being seen. The reported symptoms were dermal burn (4), conjunctivitis (2), ocular pain (2), rash (2), blurred vision (1), cellulitis (1), contact dermatitis (1), dermal pain (1), dermal redness (1), dizziness (1), fever (1), headache (1), itching (1), laceration (1), lethargy (1), oral pain (1), peeling skin (1), urticaria (1), and vomiting (1).

In summary, slime product injuries reported to the NEISS increased greatly in 2017, after the promotion of homemade slime in 2016 and 2017 on social media increased interest in the substance. The exposures were most likely to occur by dermal, ocular, and ingestion routes and occur at home or in school. Patients tended to be children and female and did not need to be admitted to a healthcare facility. Continued surveillance of social media and healthcare data may be useful to determine whether interest in homemade slime, and the injuries that may result from its production and use, will continue or wane over time.

Declarations of interest

None.

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Dextrose dilution for pediatric hypoglycemia



Emergency physicians (EPs) commonly treat hypoglycemia. When parenteral dextrose is required for an adult patient, EPs feel comfortable ordering “1 ampule of D50”, which amounts to 25 g of 50% dextrose in sterile water. However, a solution of D50W is a significantly hypertonic solution. When a child has hypoglycemia, concentrations of dextrose must be lower than 50% due to increased risk of small vein sclerosis. Hypertonic solutions may lead to osmotic diuresis and tissue damage if extravasated. Furthermore, smaller gauge intravenous catheters typically used in