



IMPROVING
CHILDREN'S
PRODUCT
SAFETY

Analysis of CPSC-Supplied Data on Magnet Related Injuries

Research by Liliya Shmuylovskaya & Oscar Rivera

An increasing number of incident reports to the CPSC indicate that high-powered magnets continue to be a safety risk to children. From toddlers to teens, children who swallow two or more magnets are at risk of developing serious injuries such as small holes in the stomach and intestines, intestinal blockage, blood poisoning, and even death. Removing magnets surgically often requires the repair of the child's damaged stomach and intestines. In the past, emergency room physicians have likened the internal damage caused by magnets to that of a bullet wound.

In 2005, twenty-one month old Kenny had flu-like symptoms and the severity of his condition advanced. His parents took him to the hospital. He died shortly after going into cardiac arrest and his left lung collapsing. It was later discovered that Kenny's death was caused as a result of him swallowing loose magnets that fell out of a defective Magnetix toy. The incident sparked investigations that showed dozens of incidents and injuries from children swallowing more than one powerful magnet from toys such as Magnetix and Polly Pocket, among others. The toy standard was gradually changed to prohibit small magnets and magnetic components in toys for children under 14.

But toys with BB-shaped magnets such as Nanodots and Buckyballs continued to be sold as adult desk toys to those over 14. Labels for these products emerged, warning against the use of these toys for children younger than 14 years old. However, the new label did not prevent injuries, as this report shows.

Through a Freedom of Information (FOIA) request, Kids In Danger (KID) received three documents from the U.S. Consumer Product Safety Commission (CPSC) with data on magnet related injuries from January 2010 through April 18, 2012. Additional reports of magnet incidents on SaferProducts.gov were added through June 8, 2012. KID chose this start date to more closely examine new hazards, not those that had already been addressed through the new toy standard.

These databases include 62 magnet related incidents. The average age of children involved in these incidents was 6.2 years and the median was three years. Further, out of the 62 incidents, 25 children or about 40% required surgery. Twelve children (19%) received other medical attention at the emergency room or doctor's office. Twenty five children or 40% did not sustain any injuries.

While the majority of incidents involved children under the age of 14, there were four incidents involving teenagers 14 or older.

All Magnet Incidents by Age

Age	Total Number	Percent
0-2	16	25.8%
3-5	16	25.8%
6-13	26	42%
14-18	4	6.4%

Incidents with Magnetic Toys and Building Sets (not BB-style)

The CPSC data lists 24 incidents (39%) involving magnetic toys and building sets that were not the newer BB-style. The average age of children involved in these incidents is about 5 years old and the median age is three years. Eight children (33 %) required surgery, five children (21%) received other medical attention. Lastly, 11 children or approximately 46% did not experience any injuries.

Only one of the incidents with these products involved a teen over 13 years old.

Incidents with non BB-style Magnetic Toys by Age

Age	Total Number	Percent
0-2	6	25%
3-5	11	45.8%
6-13	6	25%
14-18	1	4.2%

BB-Style Magnetic Ball Incidents

BB-style magnet ‘desk toys’ are currently being sold by many retailers and are responsible for the majority (61%) of the incidents in these reports. Data indicates that there were 38 total incidents involving BB-style magnets. The age of children injured by BB-style magnetic balls is higher than those injured by other magnet toys/products -- 7.3 years is the average and the median is 10 years. Seventeen children (45%) needed surgery, compared to just a third of the children injured by the other styles of toys. Eight children (21%) were rushed to the emergency room or required other medical attention from a doctor. Thirteen children or approximately 34% were not reported as injured.

While the age range of children injured as a result of playing with BB-style magnets is higher than other magnet toys, almost all of those injured by these products are under the intended use age of 14.

BB-Style Magnetic Ball Incidents by Age

Age	Total Number	Percent
0-2	10	26.3%
3-5	5	13.2%
6-13	20	52.6%
14-18	3	7.9%

Conclusion

This data shows that incidents with so-called ‘desk toys’ impact children under 14 and the resulting injuries can be serious, requiring surgery and presenting lifelong health issues. Children and teens’ use of this product to mimic piercings and then accidentally inhaling or ingesting the magnets presents the greatest risk. KID recommends:

- CPSC should examine the data more closely and determine if use and play value prove that these products are incorrectly age graded for teens and adults.
- Purchasers should be warned at the point of purchase of the dangers of allowing children to play with the product and the real risk, even to teens, when the product is inhaled or ingested.
- The risk of using the magnets to mimic piercings should be identified on the packaging with graphic descriptions of the potential injuries.
- The need for immediate medical attention when magnets are swallowed or inhaled must be better communicated to the public.

Sources:

Magnets in Toys-Calendar Year 2010-Present. Reported Incidents. U.S. Consumer Product Safety Commission- National Injury Information Clearinghouse. April 18, 2012.

Magnets in Toys- Calendar Year 2012. National Electronic Injury Surveillance System (NEISS). U.S. Consumer Product Safety Commission. National Injury Information Clearinghouse. April 18, 2012.

Magnets In Toys- Calendar Year 2010- Present. Incident Investigations. U.S. Consumer Product Safety Commission- National Injury Information Clearinghouse. April, 18, 2012.

Saferproducts.gov -- an online consumer incident database maintained by CPSC. (April 19, 2012 to June 8, 2012)

Reported Incidents included in reports from CPSC or SaferProducts.gov

ID #	Age	Gender	Date of Incident	Product	BB style	Action While Injured	Injury Type/ Diagnosis
I1020615A	7 yr	M	2/8/2010	1345 Building Sets	No	Not listed	Ingestion, removal method not listed
I1053322A	5 yr	M	5/17/2010	5021 Toy Vehicles	No	Playing with train, put one in mouth	Ingestion, no injury
100729CNE0554	2 yr	M	6/14/2010	1395 Toys	No	Playing in Sandbox	No Injury
H1110160A	0 yr	M	6/15/2010	1345 Building Sets	No	Had toy in mouth	Choking; suffocation/strangulation hazard; injury not stated
100708CCC1922	4 yr	M	7/7/2010	1345 Building Sets	No	Playing	Ingestion, no injury
I1010709A	2 yr	M	1/8/2010	1365 Water Toys	No	Playing in bath	Index finger stuck in toy, medical attention
100720CCC2898	12 m	M	7/18/2010	1381 Toys	No	Playing	No Injury
I1080155A	3 yr	M	7/24/2010	1381 Toys	No	Not listed	Ingestion, removed with surgery; permanent: removed part of intestines, post-operative complication
I1080478A	4 yr	F	8/6/2010	1381 Toys	No	Swallowed from necklace	Ingestion, no injury
100822HEP7532	6 yr	M	8/11/2010	1345 Building Sets	No	Not listed	Ingestion, removed with medical attention
101210HEP7681	2 yr	M	12/7/2010	1381 Toys	No	Swallowed while unattended	Ingestion, ER, no injury
I10C0915A	3 yr	F	12/24/2010	1381 Toys	No	Not listed	Ingestion, perforation, removed & repaired w/surgery
110131HEP7521	3 yr	F	12/26/2010	1345 Building Sets	No	Toy found during bedtime	Ingestion, removed with surgery, hospitalized
110310CCC1393	9 yr	M	3/4/2011	1345 Building Sets	No	Playing at school	Ingestion, removed with surgery, repair damaged tissue
110328CNE0024	3 yr	M	3/28/2011	1345 Building Sets	No	Magnetic filling leaked while playing	No Injury
I1210220A	12 yr	F	1/3/2012	1345 Building Sets	No	Playing, tried separating magnets w/teeth	Ingestion, hospitalized, removal method not listed

Reported Incidents included in reports from CPSC or SaferProducts.gov

ID #	Age	Gender	Date of Incident	Product	BB style	Action While Injured	Injury Type/ Diagnosis
X1230258A	3 yr	F	3/2/2012	1345 Building Sets	No	Not listed	Ingestion, removed with surgery; magnets snapped and ripped 3 holes in lower intestines and stomach, risked death- currently recovering
I1240231A	3 yr	M	4/4/2012	1345 Building Sets	No	not listed	Ingestion, removed through medical attention, which perforated stomach
I1020542A	0 yr	?	01/01/2010	1345 Building Sets	No	Not listed	Not listed
I11C0229A	14 yr	M	01/01/2011	1345 Building Sets	No	Inserted magnet into body	Insertion, removed with surgery
110331CBB3525	8 yr	M	02/01/2011	1345 Building Sets	No	Not listed	Ingestion, hospitalized, removed with surgery; permanent: intestinal problems
X1131037A	8 yr	M	02/01/2011	1381 Toys	No	Not listed	Ingestion, removed with surgery; permanent: 7 holes in stomach/intestines, had to undergo 3 surgeries
X1230744B	3 yr	F	03/01/2012	1345 Building Sets	No	Not listed	Ingestion, removal method not listed
H1180168A	3 yr	?		1345 Building Sets	no	" "	Ingestion, perforated intestine, method of removal not listed
H1020044A	9 yr	M	1/28/2010	1345 Building Sets	yes	Playing as a tongue/lip ring	Ingestion, removed with medical attention
I1070197A	5 yr	M	7/1/2010	1345 Building Sets	Yes	Not listed	Ingestion, injury (if any) not listed
I1090310A	12 yr	F	9/5/2010	1381 Toys	Yes	Not listed	Ingestion, rushed to hospital, removal method not listed
100929CBB2179	10 yr	M	9/26/2010	1345 Building Sets	Yes	Playing in Mouth	Ingestion, ER but medical attnt, no injury

Reported Incidents included in reports from CPSC or SaferProducts.gov

ID #	Age	Gender	Date of Incident	Product	BB style	Action While Injured	Injury Type/ Diagnosis
H10C0303A	0 yr	F	12/19/2010	1345 Building Sets	Yes	Purchased toy with hazard described in recall	No Injury
110112CBB2269	3 yr	F	12/23/2010	1395 Toys	Yes	Swallowed from refrigerator	Ingestion, removed with surgery (esophagus and stomach)
110118CBB2275	9 yr	M	12/25/2010	1381 Toys	Yes	Playing, stuck in nose	Removed by parent, no injury
I111D650A	4 yr	M	1/6/2011	1345 building Sets	Yes	Not listed	Ingestion, removed with surgery; permanent: massive damage to intestines and stomach
I111D331A	14 yr	F	1/7/2011	1345 Building Sets	Yes	Playing, toy fell in mouth	Ingestion, injury (if any) not stated
110613CNE0090	9 yr	F	1/23/2011	1345 Building Sets	Yes	Had hands full, put in mouth to carry it across room	Ingestion, no injury
I1120110A	0 yr	F	1/24/2011	1345 Building Sets	Yes	Playing on computer, crashed and damaged computer	No Injury
110311HCC3475	18 m	M	2/14/2011	1345 Building Sets	Yes	Visiting aunt's home	Ingestion, removed with surgery, permanent injury: removed 9 in of intestines, medical issues persist
110331CBB3526	15 yr	F	3/1/2011	1345 Building Sets	Yes	Pretending to have tongue piercing	Ingestion, medical attention
I1160250A	9 yr	F	6/11/2011	1345 Building Sets	Yes	Not listed	Ingestion, no injury
120130CBB3341	10yr	F	6/13/2011	1345 Building Sets	Yes	Stuck to braces	Ingestion, removed with medical treatment, hospitalized
120130CBB3339	10 yr	F	9/16/2011	1345 Building Sets	Yes	Watching television	Ingestion, removed with surgery, hospitalized
AC130-2147467809	2yr	F	10/25/2011	Building Sets	Yes	N/A	Ingestion, urgent endoscopy to remove 2 "buckeyballs"
120130CBB2294	13yr	F	10/26/2011	1345 Building Sets	Yes	Mimicking lip piercing	Ingestion, removed with surgery, hospitalized

Reported Incidents included in reports from CPSC or SaferProducts.gov

ID #	Age	Gender	Date of Incident	Product	BB style	Action While Injured	Injury Type/ Diagnosis
CDEB2-2147468193	14yr	F	11/1/2011	Building Sets	Yes	attempting to make tongue ring	Ingestion lead to hospitalization & surgery to remove 5 BuckyBalls
I11B0398A	2yr	F	11/12/2011	1345 Building Sets	Yes	Not listed	Ingestion, removal method not listed
I1210711A	6yr	M	1/2/2012	1345 Building Sets	Yes	Playing, set was near lip	Pinched lip, bleeding
H1210085A	8yr	M	1/4/2012	1345 Building Sets	Yes	Not listed	Ingestion, removed with medical attention
C04A8-2147468264	2yr	M	1/22/2012	Building Sets	Yes	Not listed	Ingestion, removed with surgery
I1230068A	2yr	M	2/27/2012	1345 Building Sets	Yes	Swallowed magnetic balls over period of time	Ingestion, removed with surgery
H1230134A	8yr	F	3/4/2012	1345 Building Sets	yes	Pretending to have tongue piercing	Ingestion, removed with medical attention
51C10-2147468464	11yr	F	4/11/2012	Building Sets	Yes	Mimicking tongue piercing	Ingestion
I11B0328A	10yr	F	9/16/2012	1345 Building Sets	Yes	Playing in mouth, might have been attracted to braces	Ingestion, removed with surgery, hospitalized
X1210711A	10yr	F	01/01/2011	1345 Building Sets	Yes	Playing	Ingestion, hospitalized, removed with surgery; permanent: removed appendix
X1210935B	10yr	M	01/01/2012	1345 Building Sets	Yes	Not listed	Ingestion, no injury
H1230061A	13 m	M	01/01/2012	1345 Building Sets	Yes	Not listed	Ingestion, removed with surgery
X1230744A	0yr	?	03/01/2012	1345 Building Sets	yes	Two juniors hs- both pretending to have toungue/lip piercings	Ingestion, both removed with surgery
H1140074A	2yr	F	03/01/2011	1345 Building Sets	Yes	Not listed	Ingestion, removed with surgery
100804CCC2986	3 yr	M	05/01/2010	1345 Building Sets	Yes	Not listed	Ingestion, removed with

Reported Incidents included in reports from CPSC or SaferProducts.gov

ID #	Age	Gender	Date of Incident	Product	BB style	Action While Injured	Injury Type/ Diagnosis
							surgery
X1190950A	8yr	M	09/01/2011	1345 Building Sets	Yes	Not listed	Ingestion, removed with surgery
I10C0617A	13yr	F	12/15/2010	1345 Building Sets	Yes	Playing in mouth, mimic piercing	Ingestion, injury (if any) not stated
I11B0231A	13yr	F	10/26/2011	1345 Building Sets	Yes	Placed magnets on inner/outer lip	Ingestion, removed with surgery
H1180168A	10yr	F	06/13/2011	1345 Building Sets	Yes	Making a bracelet with magnets	Ingestion, removed with medical attention
I1110108A	9yr	M	12/29/2010	1381 Toys	Yes	Placed toy on either side of nose	No Injury, trouble breathing