

Magnet Ingestion Survey Report: 2012

Background:

In Dec 2011, a Queensland toddler became the first child in Australia to die following ingestion of multiple small powerful magnets (SPMs).

The capture of non-fatal injury data relating to SPMs has been difficult due to the lack of a specific ICD code to identify 'magnet'.

In order to rapidly gather case data to inform possible regulatory action, in October 2012, the Queensland Injury Surveillance Unit (QISU) in collaboration with Drs Bhavesh Patel and Aoife Rice, Dept Surgery, Mater Children's Hospital, conducted a brief email survey of Australian/ New Zealand paediatric surgeons. The survey used a recall design and asked the clinicians to identify cases of injury due to SPMs over the last 5 years. The responses identified 22 cases requiring surgical intervention over a 7 year period (2005-2012), with **12 cases identified in 2012**.

The survey was particularly focused on the product source of the SPMs causing injury.

All reported cases involved ingestion. There was inconsistency in the way outcomes were reported in free text, but all but one case required a laparoscopic/ open repair of gut perforations +/- gut resection.

In late 2012, the Australian Competition and Consumer Commission (ACCC) implemented a ban on the sale of SPMs (supplied as separable or loose magnets in multiples of two or more) meeting ALL of the following criteria:

- are small enough to fit into the small parts cylinder (used in the mandatory standard
- for toys for children up to and including 36 months of age)
- have a magnetic flux of 50 (kG)²/mm² or more
- are marketed by the supplier as, or supplied for use as any of the following:
 - toys, games or puzzles (including adult desk toys)
 - construction or modelling kits
 - jewellery to be worn in or around the mouth or nose

More information on this ban can be found on the ACCC website at:

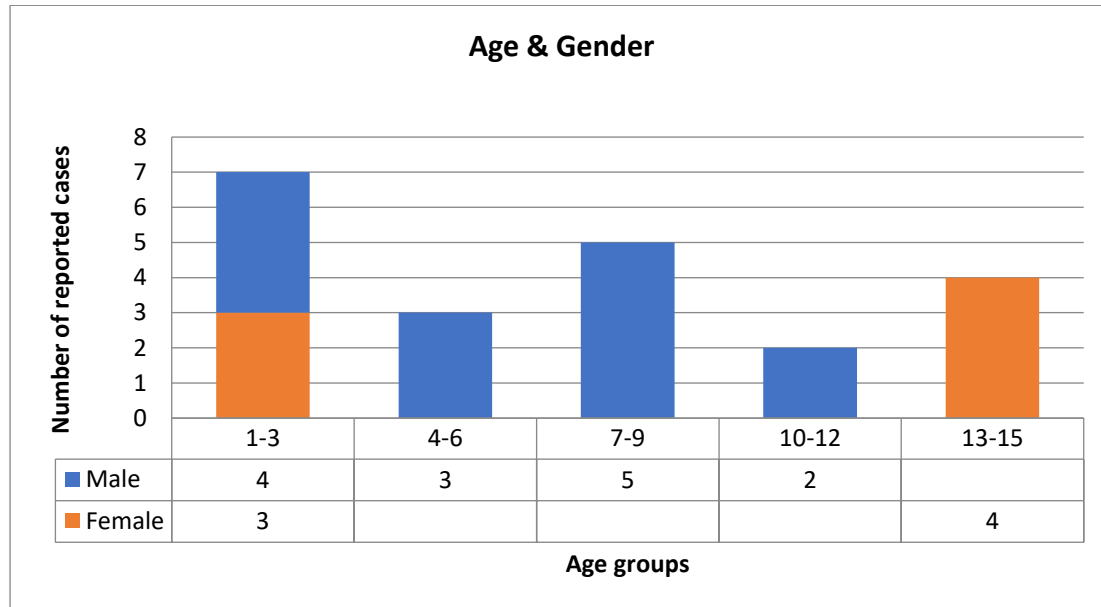
<http://www.productsafety.gov.au/content/index.phtml/itemId/997511>

The questionnaire is attached at the bottom of this report.

Results:

1. Age & Gender

In total, 22 cases were reported in the survey age range 1 to 15 years old. More than half of the cases were male (64%, N=14), 36% (N=8); were female.



*One case with unspecified age

Age (in years)	Female		Male		Total	
	N	%	N	%	N	%
1	1	13%	1	7%	2	9%
2	1	13%	2	14%	3	14%
3	1	13%	1	7%	2	9%
4		0%	2	14%	2	9%
5		0%	1	7%	1	5%
7		0%	3	21%	3	14%
8		0%	1	7%	1	5%
9		0%	1	7%	1	5%
10		0%	1	7%	1	5%
12		0%	1	7%	1	5%
13	2	25%		0%	2	9%
14	1	13%		0%	1	5%
15	1	13%		0%	1	5%
Unspecified	1	13%		0%	1	5%
Total (% of total)	8	36%	14	64%	22	100%

2. Number of magnets

Number of magnet	Age group						Total
	1-3	4-6	7-9	10-12	13-15	Unspecified	
2	1	1	2		1	1	6
3	1		1	1	2		5
4					1		1
5	1						1
6		1	1	1			3
8		1	1				2
9	1						1
20	1						1
21	1						1
30	1						1
Total	7	3	5	2	4	1	22

3. Shape & size

Age group	Shape of magnet				Total
	Sphere	Disc	Capsule	Unspecified	
1-3	5	2			7
4-6	1	1		1	3
7-9	5				5
10-12	2				2
13-15	3		1		4
Unspecified	1				1
Total	17	3	1	1	22

Diameter of magnet	Shape of magnet				Total
	Sphere	Disc	Capsule	Unspecified	
2mm	2				2
3mm	6				6
4mm	2				2
5mm	2	1			3
8mm	1			1	2
10mm		1			1
15mm	1				1
Unspecified	3	1	1		5
Total	17	3	1	1	22

4. Product source of magnet

Cases were categorised based on the free text responses. “Toy” appears in inverted commas because items that may be considered to be “toys” may include novelty items that have not been designed or manufactured to relevant toy standards. Adult novelty items are magnet sets marketed for people over 14 years of age.

Source of magnet	Age group						Total
	1-3	4-6	7-9	10-12	13-15	Unspecified	
“Toy”	2	2	4	2	2	1	13
Adult Novelty	3		1		1		5
Other	1				1		2
Badge		1					1
Mattress	1						1
Total	7	3	5	2	4	1	22

5. Mechanism of magnet exposure:

Cases were categorised based on the free text responses.

Reason for magnet exposure	Age group						Total
	1-3	4-6	7-9	10-12	13-15	Unspecified	
Toddler ingestion	5						5
Fake Piercing			1		3	1	5
Intentional mouthing of object		2	2				4
Child would not say			2	1			3
Unspecified	2	1		1	1		5
Total	7	3	5	2	4	1	22

6. Delay to diagnosis

Time to diagnosis (days)	Age group						Total
	1-3	4-6	7-9	10-12	13-15	Unspecified	
Same day	1						1
2	2	1		1	1	1	6
3	1	1	2		1		5
4		1			1		2
5			1		1		2
14	1						1
21	1						1
Unknown	1		2	1			4
Total	7	3	5	2	4	1	22



Thank you for participating in this online survey.

Please complete one form for each magnet related case, giving ANY details that you have.

If you have seen more than one magnet related case, submit the first case, then click on the 'enter another case' button.

Magnet Ingestion Survey:

Q1. Year of incident?

(yyyy)

Q2. Age of child?

(Years)

Q3. Gender of child?

Male Female Unknown

Q4. Mechanism of injury?

Ingestion Application Other (Please Specify)

Q5. Total number of magnets involved?

Q6. Shape/Size of magnet?

Disc Please give diameter (mm) and number of magnets
 Sphere Please give diameter (mm) and number of magnets
 Other Please give dimension (mm) and number of magnets

Q7. Source type of magnet?

Toy
 Adult Novelty
 Other (Please Specify)

Q8. Actual product? (name, brand or distributor)

Q9. Reason for magnet exposure?

(e.g. using magnets as fake tongue piercing):

Q10. Time to diagnosis?

(days)

Q11. Outcome? (brief history of surgery, intensive care support, long term impact such as feeding issues or complications)

If you have relevant case report or publications please email them to us on the following email address: [xxxx](#)

Contact Details:

Name: * required field

Email: * required field

Work Number:

Mobile Number:

Preferred method of contact: Email Work Number Mobile Number