

Magnet ingestion by young children serious and growing problem

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Physicians and parents must be aware of the growing danger of magnet ingestion by children because magnets can adhere to each other and cause life-threatening problems such as bowel perforations, a new case study illustrates in *CMAJ*.

"Modern magnet technology has transformed what was once an esoteric subtype of foreign-body ingestion into a common and lethal threat," writes Dr. Daniel Rosenfield, Department of Paediatrics, The Hospital for Sick Children (SickKids), with coauthors.

In the past, magnet ingestion generally could be treated with a wait-andsee approach, relying on the foreign body to pass without incident. However, new high-powered magnets—neodymium-iron-boron magnets (or rare-earth magnets)—are 10-20 times stronger than older magnets and can adhere to one another through the bowel. Magnet ingestion was thought to be rare, but the literature, and clinical examples experienced by the authors, indicates it is becoming more common. Data from the <u>Public Health Agency</u> of Canada also indicate that the number of visits to emergency departments for magnet ingestion has increased significantly over the last decade.

"Swallowing a single magnet is generally innocuous, much like swallowing any other inert foreign body. However, multiple magnets, especially when swallowed at different times, can attract each other through loops of the <u>gastrointestinal tract</u>. The force created through the bowel or stomach wall may result in pressure necrosis and eventual



perforation."

If x-rays indicate the presence of more than one magnet, removal by endoscopy, laxative (<u>polyethylene glycol</u>) or surgery as a last resort may be required.

Awareness and prevention are the first defence in combatting this problem.

"Although <u>health care providers</u> can play an important role in disseminating information on the risks of magnet ingestion, further targeted campaigns are needed to inform parents of the risks," state the authors. "Small <u>warning labels</u> on magnet-based products have been insufficient. Media exposure on the topic and information in primary care offices are needed. The 18-month well-baby visit may be an appropriate time to discuss magnet safety in the context of safe toys."

"Through primary prevention, effective recognition of the problem, and prompt, appropriate management with multidisciplinary collaboration, the risks associated with magnet ingestions can be mitigated," conclude the authors.

More information: www.cmaj.ca/lookup/doi/10.1503/cmaj.121847

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