

## Keep magnetic balls out of the reach of children!

Cases of young children accidentally swallowing magnetic balls have recently been reported. These balls, from stress-relief objects intended for adults, have a strong magnetic force and can lead to very serious digestive complications. These items are not intended for children and should be kept out of their reach. In June 2021, the French health authorities issued a press release to warn parents and carers of young children about these risks.



### Serious risks from accidental ingestion

In the summer of 2021, a hospital department notified the French health authorities of two serious cases of accidental ingestion of 3 to 5 mm diameter magnetic balls. They concerned young children (aged three years or younger), and the magnetic balls in question came from "stress-relief" objects intended for adults. Other cases of ingestion of magnetic balls, involving children's toys this time, have also been reported to the French health authorities by hospital departments.

Ingestion of magnets, especially if they have a strong magnetic induction (force of attraction), can lead to very serious complications. Several magnets swallowed at the same time or with ferromagnetic objects can clump together, obstructing the digestive tract and tearing the intestinal walls, causing intestinal blockage or perforation. The most serious cases require major surgery and can be life-threatening.

### Magnetic balls in toys...

Some toys contain magnets that can become accidentally detached. A child can then swallow or choke on one of them.

These toys, like all others, must comply with European Directive 2009/48/EC and the NF EN 71-1 standard on toy safety [1,2]. According to this regulation, a toy is an item intended for children up to the age of 14. The European directive requires manufacturers to carry out several tests, defined by the NF EN 71-1 standard, to ensure that accessible magnets cannot be swallowed by children over the age of three<sup>1</sup> (resistance tests after toys have been dropped or twisted, for

example). In addition, the regulation stipulate that magnetic experiment kits should only be used by children over the age of eight (a warning message must be clearly displayed on the packaging). Tests on the magnetic induction flux<sup>2</sup> must also be carried out to ensure that the force of attraction is low and that the magnet cannot become detached through the attraction of a stronger magnet.

### ...but also in objects for adults

So-called "stress-relief" objects, building blocks or decorative objects containing magnets are also available on the market. They consist of magnetic bars or balls, sometimes small and with a high magnetic flux (neodymium-iron-boron magnets, for example, are stronger).

These items are not intended for children under 14 years of age and are subject to the General Safety Requirement defined in Article L. 421-3 of the French Consumer Code. In this case, manufacturers must inform consumers that these magnetic products are not intended for children and should be kept out of their reach.

1. Directive 2009/48/EC specifies that toys intended for children under three years of age may only contain components of such dimensions as to prevent their being swallowed or inhaled.

2. The magnetic induction flux is calculated from the density of the flux passing through a given surface, and is used to assess a magnet's strength.

**A warning issued by the French authorities**

In June 2021, ANSES, *Santé Publique France*, the Ministry of Health and the Directorate General for Competition, Consumer Affairs and Fraud Control (DGCCRF) issued a joint press release to warn parents and carers of young children about the risks of swallowing magnetic balls from objects intended for adults [3], and remind them to keep any object containing magnetic balls out of the reach of children, who could mistake them for sweets and swallow them.

The DGCCRF takes action to recall/withdraw any magnetic items declared dangerous under either the general safety requirement or the Toy Safety Directive. Elsewhere in Europe and across the Atlantic, magnetic items for adults are also regularly withdrawn from the market [4, 5, 6].

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**Références bibliographiques**

- [1] Directive 2009/48/CE du Parlement européen et du Conseil du 18 juin 2009 relative à la sécurité des jouets : <https://eur-lex.europa.eu/legal-content/FR/TXT/HTML/?uri=CELEX:32009L0048>
- [2] Norme NF EN 71-1. 2018. Sécurité des jouets – Partie 1 : propriétés mécaniques et physiques
- [3] <https://www.economie.gouv.fr/dgccrf/objets-contenant-des-billes-aimantees-tenir-hors-de-portee-des-enfants>
- [4] <https://ec.europa.eu/safety-gate-alerts/screen/webReport/alertDetail/10004158>
- [5] <https://canadiensensante.gc.ca/recall-alert-rappel-avis/hc-sc/2021/76391r-fra.php>