


## RISK OF SERIOUS INJURY FROM BATTERY INGESTION AND NON-SECURE BATTERY COMPARTMENTS

Dear Electronic Product Manufacturer or Designer:

As a member of the National Electrical Manufacturers Association (NEMA) dry battery section, Panasonic is working with the National Capital Poison Center (NCPC) to alert electronic product manufacturers to potential injuries caused by ingestion of 3 volt lithium coin / button batteries. The most serious incidents are usually associated with the highest selling size coin cells - 20 mm in diameter (*i.e.*, the size of a US nickel). The recommendations of this letter, however, apply to any 3 volt lithium coin battery type. A photo example and a listing of popular sizes are shown below.

	Popular sizes	
	<p><b>CR 2016</b> <b>CR 2025</b> <b>CR 2032</b></p>	<p>The recommendations of this letter apply to any 3 volt CR or BR type lithium coin battery.</p>

As use of these battery types as a power source for electronic devices has grown, the NCPC has noticed an increase in ingestion incidents that involve them, particularly among children under 4 years of age. **Some ingestions have led to serious injury and even death** due to the potential to generate hydroxide when in contact with saliva, causing perforations of the esophagus. This can occur in as little as two hours.

By analyzing all types of battery ingestion cases dating back many years, the NCPC found that 62% of juvenile ingestions of batteries occur when the child obtains the battery **directly from a household product**, as opposed to loose batteries or batteries in the original packaging. Of the reports involving 20 mm lithium coin cells, 37% of ingestions were from remote controls. Other devices that often contain these batteries include key fobs, PDAs, hand held games, and watches.

Our appeal to device manufacturers, therefore, is to consider redesigning products to ensure that battery compartments are secure and only accessible through use of a tool, such as a coin or screwdriver. This is the approach recommended by toy manufacturers for electronic toys and can be found in ASTM F963-07. We also recommend warning language be added to product packaging, instructions, and even products to the extent possible. An effective warning might read as follows.

**WARNING: Keep battery out of reach of children. If swallowed, immediately seek medical help as serious injury may occur. Have doctor phone 24-hour hotline at (202) 625-3333, collect.**

While battery manufacturers are also taking steps to address this problem, we believe that actions by device manufacturers would have the most significant impact. We encourage you to share this letter with relevant trade groups and standards organizations to spread awareness of the problem and promote the aforementioned recommendations, possibly as a basis for global product safety standards.

We welcome any questions or other feedback you may have on this letter. In the meantime, you can find additional information at [www.poison.org/battery](http://www.poison.org/battery) or by contacting me directly.

Sincerely,

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