

## More Kids in ER from Swallowing Batteries

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### As Tiny Batteries Become More Common, So Too Do Swallowing Emergencies

Umar, 3, loved to eat chocolate chip cookies and drink orange juice. All of this changed last September when he ingested a lithium button battery.

His parents never actually saw him swallow the battery, but they began to get suspicious when they noticed that Umar was particularly lethargic, lying on his bed and breathing but not moving.

"Umar is such a hyper kid -- it was confusing and scary at the same time," said Umar's mother, Sonia Khan. "It was frustrating because we couldn't figure what was wrong with him."

His parents immediately rushed him to the emergency department where a chest x-ray was taken. Doctors found what was initially presumed to be a button in his esophagus.

But when the physicians took him to the operating room, they found severe damage to his esophagus because of what turned out to be a lithium button battery.

"I was devastated," Sonia Khan said. "I broke inside. I was hearing everything but couldn't believe it."

The battery ate a hole in his esophagus. As a result, for the next three months Umar had to receive all of his nutrition by a tube that connected directly to his stomach.

"It was tough on him," his mother said. "He didn't understand why he couldn't eat. We all had to hide from food from him."

Research published Monday in the journal *Pediatrics* suggests that Umar's life-threatening ordeal is an increasingly common one. Specifically, the study found that the number of children being taken to emergency departments with battery ingestions is on the rise.

In total, more than 65,000 visits involving kids who had ingested batteries occurred over the past 20 years. In the overwhelming majority, button batteries were the culprits.

These tiny batteries are becoming more and more ubiquitous as more devices powered by small lithium batteries -- the shiny, button-sized variety -- make their way into our homes.

So what makes these batteries so dangerous? Part of the problem is that lithium batteries are especially appealing to the child's eye, as they can mimic candies and can easily fit into small mouths, ears or noses. Occasionally, if a child swallows one of these batteries, it can pass through his or her body without incident. But this isn't always the case.

Dr. Ian Jacobs, associate professor of ear, nose and throat at the University of Pennsylvania in Philadelphia, was one of the doctors who took care of Umar. He said if a lithium battery stays lodged in the esophagus for more than two hours, the battery can erode through the soft tissue of the esophagus and cause a hole. This can be fatal.

Children who survive still face serious health issues. They may experience permanent paralysis of the vocal cords that may forever rob them of their speech. These batteries can also be harmful if lodged in other places. They can burn through the cartilage in the nose or into the inner ear, causing hearing loss or difficulty breathing.

Dr. Toby Litovitz, executive and medical director of the National Capital Poison Center in Washington, D.C., has done extensive research on the major and fatal outcomes associated with button battery ingestions and maintains a national database on these and other incidents. She found in a separate study that from 1985 to 2009 there was almost a seven-fold increase in the percentage of button battery ingestions with major or fatal outcomes.

## How Parents Can Safeguard Kids From Swallowed Batteries

So what can parents do to prevent these potentially fatal ingestions? The first step is to keep the batteries out of children's reach.

Lithium batteries can be found in laptops, iPads, remote car keys, calculators, cameras, bathroom scales, digital thermometers, talking books, video games and even musical greeting cards. Litovitz recommended that parents "be vigilant and look at every product at home to see if it has a battery compartment that can be opened by the child and [if so, make sure it is] secured with heavy tape. If not, it needs to be treated like a medication -- up high, out of reach and locked up."

If parents suspect their child has ingested a battery -- or any other object, for that matter -- they should take them to the nearest emergency department immediately. The majority of ingestions are unwitnessed, according to the new study, and the signs of ingestion are not specific to the item ingested.

Some other tips for parents include:

- If you see your child drooling, having difficulty swallowing, or vomiting, take him or her to the emergency department to get evaluated.
- Do not second guess whether anything was ingested. Leave that to the emergency room doctors to determine. Time is critical with battery ingestions.
- Both Jacobs and Litovitz emphasize that if children are not taken to the operating room within two hours, the outcomes could be fatal.

Umar was lucky. The hole in his esophagus spontaneously healed and today he is back to eating his favorite chocolate chip cookies and drinking his orange juice. He also started preschool in February and his mother, Sonia Khan, said he is doing well.

"Back to his active and playful self!" she said.