

Disc Batteries Dangerous for Children

Study Shows Swallowing Disc Batteries Can Cause Severe Injuries to the Esophagus

By Bill Hendrick

FROM THE WEBMD ARCHIVES 

Sept. 20, 2010 -- Small disc batteries swallowed by curious young children can cause severe injury to the esophagus, new research finds.

Disc battery ingestions have increased dramatically since 1998, according to the study, published in the September issue of *Archives of Otolaryngology - Head & Neck Surgery*.

Researchers in Ohio and Utah reviewed the medical charts of 10 pediatric patients who had undergone endoscopic retrieval of a swallowed disc battery over a 10-year period between 1998 and 2008.

Children Swallowing Batteries

“Five patients had an observed ingestion or were found coughing,” the researchers write in the study. “Two patients complained of a sore throat and self-reported foreign body ingestion.”

Three of the youngsters were diagnosed incidentally, by chest X-ray, two of them after showing persistent upper respiratory tract systems. The other’s swallowed disc was found during a chest examination for reported back pain a patient suffered after falling off a bicycle.

The researchers say in a news release that the children stayed in the hospital an average of 6.9 days, with one hospitalized for 30 days. Six of the children were seen within six hours of ingesting a battery, one 10 hours later, and another after 12 hours. One patient’s swallowed battery was discovered after seven days, and another patient’s was discovered after 30 days.

Batteries Can Damage Esophagus

In three patients, minimal damage to the esophagus was discovered, including one with no injury and two with superficial injuries to the mucus membrane.

Severe damage was reported in the other seven children, with five sustaining damage to the smooth muscle lining the esophagus, and two experiencing a perforation of the esophagus.

One patient's injury resulted in a tracheoesophageal fistula, an opening between the trachea and esophagus, the researchers say.

Severe "injury can occur rapidly following disc battery ingestion," the researchers write.

The researchers say that emergency endoscopic retrieval is necessary when children ingest disc batteries, and that a "multidisciplinary approach involving otolaryngology and pediatric surgery can be very helpful, especially when a tracheoesophageal fistula and/or uncontained perforation is identified."

Kids Increasingly Swallowing Tiny Batteries

The researchers write that disc ingestion by children has been increasing. The American Association of Poison Control Centers reported a total of 2,063 disc battery ingestions in 1998, but that number increased 80% over the next eight years.

When a disc battery lodges in the esophagus, its alkaline content can leak, causing tissue death and burns from electrical discharge, the researchers say.

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SOURCES:

News release, *Archives of Otolaryngology -- Head & Neck Surgery* (JAMA/Archives).

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