

Button Battery Ingestion

Clinical Practice Guidelines

Button Battery Alert:
Call 1-1111. Activate
Monroe Carell Button
Battery Alert. Notifies
Pediatric Surgery, Cardiac
Surgery, ENT, IR,
Anesthesia, OR Charge
Nurse

Suspected button battery ingestion

PRE-HOSPITAL

For ingestion <12 hours:
≥12mo. Give honey 10mL PO Q10 min
<12 mo. Give Sucralfate 1g PO Q10 min
Keep patient NPO (except honey/Sucralfate)
Provide oral suction as available

VERSION
07/17/2025

ED

Priority placement; notify Pediatric ED Attending & Staff leader
Obtain STAT foreign body series radiologic study if not already completed
Determine size and location of button battery

Pre-Op

**If Active and/or Sentinel Bleed,
Esophageal Perforation, Patient
Clinically Unstable, hematemesis or
hematochezia or melena:**

- STAT Pediatric Surgery Consult
- Activate button battery alert
- STAT CBC, coag, type & cross
- Activate MTP
- Assume aorto-enteric fistula and emergently prepare OR with Peds Surg/CT surgery/IR/ENT. Consider ECMO on standby.
- CTA at discretion of surgical team prior to OR

LEVEL 1 to OR

ESOPHAGEAL

STAT Pediatric Surgery Consult
Activate button battery alert
Consider CTA for button batteries
ingested >12 hrs ago
EMERGENT REMOVAL

**Goal is Removal
Within 1 Hour**

Attending Surgeon notifies
Anesthesiologist in Charge (AIC)
or Anesthesiologist on-call
Pediatric Surgery notifies OR
board

Emergent Endoscopic Removal
* Case to be placed in OR 11 (back up
location OR 5) if possible

Evaluate Esophageal Damage
Flush with 50-150mL sterile 0.25%
acetic acid if no evidence of
esophageal perforation

Consider bronchoscopy if
concern for airway involvement.

**GASTRIC WITH CO-
MAGNET INGESTION OR
WITH SYMPTOMS**

STAT Pediatric Surgery
Consult
EMERGENT REMOVAL

**Goal is Removal
Within 1 Hour**

Attending Pediatric
Surgeon to contact
subspecialty Attending
Surgeon/Proceduralist
to confirm assistance
requested

**GASTRIC AND BUTTON
BATTERY > or = 20mm AND
patient ≤6YO**

Urgent Pediatric Surgery
Consult
Endoscopic Removal

**Goal is Removal within
2 Hours**

**GASTRIC AND BUTTON BATTERY
<20mm AND patient >6YO AND
patient ASYMPTOMATIC**

Routine Pediatric Surgery Consult

PO Trial
Discharge once tolerating PO
Follow up x-ray in 4 days

*Consider endoscopy or esophagram
for button batteries >15mm and
ingested >12 hours ago to evaluate
for esophageal injury prior to
discharge.

Follow up with Pediatric
General Surgery in 4 days
for repeat X-ray to
confirm passage

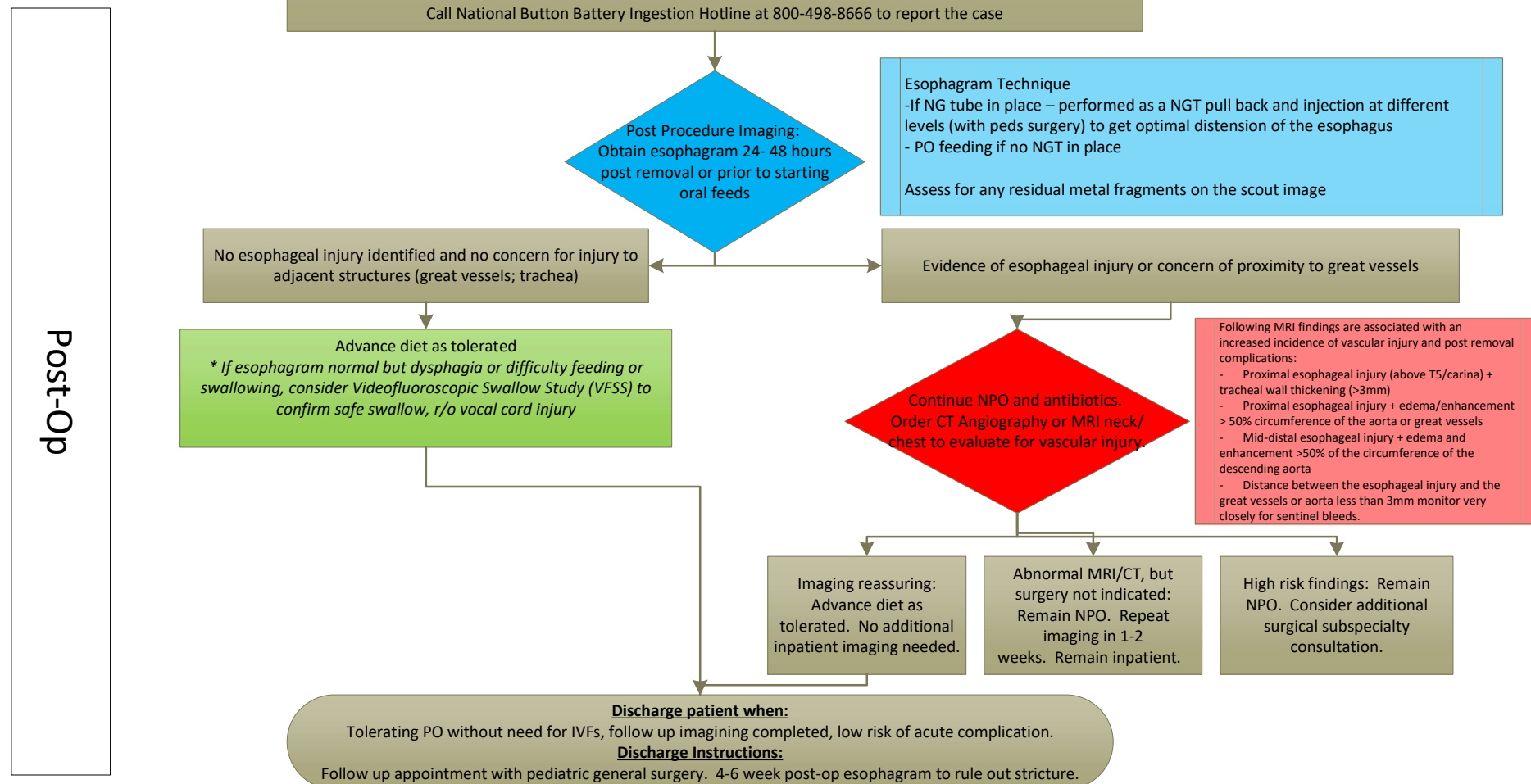
Patient return to ED
if symptomatic

Intra-Op

Button Battery Ingestion

Clinical Practice Guidelines – Page 2

VERSION
04/10/2025



References:

1. Button battery ingestion: Clinical Practice Guideline _ Childrens Hospital of Atlanta (CHOA)
2. National Capital Poison Center. Button Battery Ingestion Triage and Treatment Guideline. Available online: <https://www.poisson.org/battery/guideline>.
3. Leinwand K, Brumbaugh DE, Kramer RE. Button Battery Ingestion in Children: A Paradigm for Management of Severe Pediatric Foreign Body Ingestions. Gastrointest Endosc Clin N Am. 2016 Jan;26(1):99-118. doi: 10.1016/j.giec.2015.08.003. PMID: 26616899; PMCID: PMC5425245.
4. Grey NEO, Malone LJ, Miller AL, Carroll HF, Khalaf RT, Kramer RE, Browne LP. Magnetic resonance imaging findings following button battery ingestion. Pediatr Radiol. 2021 Sep;51(10):1856-1866. doi: 10.1007/s00247-021-05085-w. Epub 2021 Jun 1. PMID: 34075452.
5. Riedesel EL, Richer EJ, Sinclair EM, Sauer CG, Santore MT, Simoneaux SF, Alazraki AL. Serial MRI Findings After Endoscopic Removal of Button Battery From the Esophagus. AJR Am J Roentgenol. 2020 Nov;215(5):1238-1246. doi: 10.2214/AJR.19.22427. Epub 2020 Sep 22. PMID: 32960667.
6. Clinical Pathway for Evaluation/Treatment of Children with Foreign Body Ingestion _Children's Hospital of Philadelphia <https://pathways.chop.edu/clinical-pathway/foreign-body-ingestion-button-battery-ingestion-confirmed-x-ray#esophagus>
7. Mubarak, A; et al. Diagnosis, Management, and Prevention of Button Battery Ingestion in Childhood: A European Society for Paediatric Gastroenterology Hepatology and Nutrition Position Paper. JPGN 2021;73: 129–136.
8. Brandt, K., Dukleska, K., McKeown, M., Brancato, J., Grossi, V., Schoem, S., ... & Campbell, B. T. (2023). Utilizing a critical airway response team expedites esophageal button battery removal. Journal of Pediatric Surgery, 58(5), 810-813.
9. Lerner, D. G., Brumbaugh, D., Lightdale, J. R., Jatana, K. R., Jacobs, I. N., & Mamula, P. (2020). Mitigating risks of swallowed button batteries: new strategies before and after removal. Journal of Pediatric Gastroenterology and Nutrition, 70(5), 542-546.