

# An Unusual Pairing in the Gut: Accidental Ingestion of a Wireless Earbud in an Adult

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## Abstract

Ingestion of foreign bodies is uncommon in adults; ingestion of modern electronic devices, such as wireless earbuds, is exceptionally rare. Wireless earbud ingestion represents an unusual clinical challenge because of the combination of a smooth gastrointestinal foreign body and an enclosed lithium-ion battery. The enclosed battery carries a risk of mucosal injury, perforation, and other battery-related complications, owing to which the optimal management of an intact earbud that has traversed the esophagus remains unclear.

A 33-year-old man presented approximately six hours after suspected accidental ingestion of a wireless earbud. He had fallen asleep while listening to music and subsequently noted that one earbud was missing. Activation of the device's "Find My Earbuds" function produced an audible alert from his abdomen, prompting medical evaluation. He was hemodynamically stable and had no significant gastrointestinal symptoms. Plain radiographs demonstrated a radiopaque foreign body measuring approximately 26 × 17 mm in the stomach. In view of the absence of esophageal impaction or clinical complications, conservative management with close clinical and radiographic surveillance was initially adopted. Serial radiographs demonstrated progression of the earbud beyond the duodenum, followed by stagnation in the right iliac fossa, suggesting cecal impaction approximately 24 hours after presentation. Colonoscopy was subsequently performed under conscious sedation, and the intact earbud was successfully retrieved from the cecum using a Roth Net® retrieval device (US Endoscopy, Mentor, OH, USA) without mucosal injury. The patient remained asymptomatic during post-procedure observation and at seven- and 30-day follow-up.

The decision to intervene was guided by the object's failure to progress and the feasibility of safe endoscopic retrieval, aimed at avoiding potential complications associated with prolonged retention or surgical intervention. This case illustrates that, in selected asymptomatic patients with an intact earbud that has traversed the esophagus, careful clinical and radiographic monitoring may be appropriate, with colonoscopic retrieval providing a safe and effective option when distal progression ceases. Individualized decision-making and multidisciplinary coordination are important to minimize unnecessary intervention while preventing potential battery-related complications.

**Categories:** Emergency Medicine, Internal Medicine, Gastroenterology

**Keywords:** colonoscopy, endoscopy, foreign body ingestion, gastrointestinal foreign body, ingestion, lithium battery, wireless earbud

## Introduction

Foreign body ingestion is a common pediatric emergency, whereas its occurrence in adults is relatively rare and unusual. Adults at increased risk include individuals with psychiatric disorders, intellectual disabilities, substance use disorders, and chronic alcohol use. In adults, ingestion may occur either accidentally or intentionally [1]. In a study by Hsieh et al. analyzing trends in adult foreign body ingestion in the United States from 2000 to 2017, the incidence was found to have increased over the two-decade period, with approximately 14% of cases attributed to intentional ingestion. Notably, although the types of commonly ingested objects varied over time, the study reported a consistent rise in cases involving unique consumer product categories, modern consumer electronics, including fitness trackers, fidget spinners, wireless earbuds, batteries, magnets, and even mobile phones [2].

As the incidence of foreign-body ingestion continues to rise, the associated healthcare utilization and expenditure have become increasingly relevant. Hospital-based studies have documented substantial costs associated with emergency evaluation, endoscopy, and inpatient care [3]. The risk profiles of commonly ingested objects, including batteries and magnets, are well established and may guide early decisions depending on the type and anatomical location of the foreign body [4]. However, substantial uncertainty persists regarding the optimal management of atypical ingestions, particularly modern electronic devices.

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Unlike conventional foreign bodies, True wireless stereo (TWS) earbuds vary in size, shape, and design and contain lithium-ion polymer rechargeable batteries within an external casing. The ingestion of lithium-ion batteries is known to cause mucosal injury, perforation, and, in cases of battery leakage, potential systemic toxicity [4,5]. Consequently, such ingestion is considered a medical emergency, necessitating immediate endoscopic removal when the battery is lodged in the esophagus, while batteries that cross the pylorus may pass through the remainder of the gastrointestinal tract uneventfully [4,5]. Although the casing may actually alleviate significant risk when intact, battery-related injury and complications associated with prolonged gastrointestinal retention remain potential concerns. No specific guidelines currently exist for the management of ingested wireless earbuds, and recommendations for conventional foreign bodies and button batteries may not be directly applicable. The paucity of data on their expected clinical course and the uncertainty regarding optimal management may contribute to repeated diagnostic imaging, prolonged clinical observation, and occasionally avoidable procedural intervention [5,6].

Herein, we report the case of a young adult male who presented to the emergency department following ingestion of a novel foreign body: a wireless earbud. After initial uneventful progression, the patient subsequently developed cecal impaction of the device and underwent successful colonoscopic retrieval, highlighting the clinical challenges in determining the optimal management strategy for ingested electronic devices. This article was prepared according to the CAsE REport (CARE) Guidelines [7].

## Case Presentation

A 33-year-old male presented to the Emergency Department approximately six hours after an accidental ingestion of a wireless earbud. The patient reported awakening with a transient foreign body sensation in his throat that improved after swallowing several times, although a vague recollection of having swallowed something persisted. On further inquiry, he recalled falling asleep the previous night while listening to music with his earbuds in place.

The following morning, while searching for his mobile phone, he noted that one wireless earbud was missing yet remained connected to the device. After an unsuccessful physical search, he activated the “Find My Earbuds” feature, which triggered an audible alert. A distinct sound emanating from his abdomen raised suspicion of ingestion and prompted immediate presentation to the Emergency Department.

On examination, the patient was mildly anxious but hemodynamically stable, with a blood pressure of 120/100 mm Hg, a pulse rate of 110 beats per minute, a respiratory rate of 18 breaths per minute, and an oxygen saturation of 98% on room air. He denied nausea, vomiting, dysphagia, abdominal pain, distension, or gastrointestinal bleeding.

His medical history was significant for celiac disease, for which he was on a gluten-free diet and under regular follow-up with the gastroenterology clinic. He was not taking any oral medications or supplements and denied tobacco, alcohol, or recreational drug use. A psychiatric consultation did not reveal evidence of intentional ingestion or an underlying psychiatric disorder.

Anteroposterior chest and erect abdominal radiographs demonstrated a well-defined, oval, radiopaque foreign body measuring approximately 26 x 17 mm in its maximal axial dimensions in the gastric region, proximal to the pylorus (Figure 1). Baseline laboratory investigations, including complete blood count, renal function tests, liver function tests, and coagulation profile, were within normal limits (Table 1).

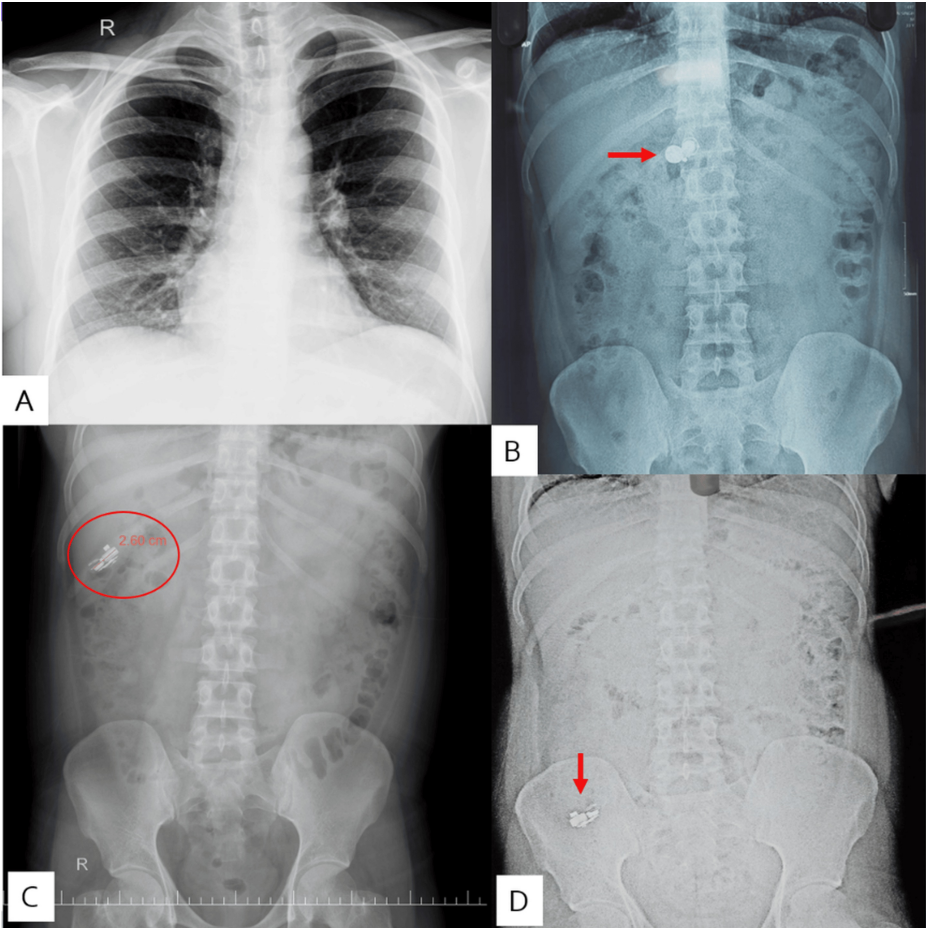


FIGURE 1: Serial radiographic tracking of the ingested wireless earbud

A: chest X-ray at presentation showing no radiopaque foreign body in the esophagus; B: abdominal X-ray at presentation showing a radiopaque foreign body in the stomach (red arrow); C: follow-up abdominal radiograph at six hours estimating the foreign body's length at 2.6 cm (red circle); D: follow-up abdominal radiograph at 24 hours showing stagnation of the foreign body in the right iliac fossa (red arrow).

| Laboratory Investigations    | Values                     |
|------------------------------|----------------------------|
| Hemoglobin                   | 15.7 g/dL                  |
| Total leukocyte count        | 8140 /μL                   |
| Differential count (N/L/M/E) | 64/20/08/08                |
| Platelet count               | 360 x 10 <sup>3</sup> / μL |
| PT/INR                       | 11.1/0.94                  |
| LFT                          | WNL                        |
| RFT                          | WNL                        |
| Blood group                  | A+                         |
| Viral markers                | Negative                   |

TABLE 1: Summary of routine laboratory investigation reports

LFT: liver function test; RFT: renal function test; PT: prothrombin time; INR: international normalized ratio; TLC: total leukocyte count; WNL: within normal limits

An initial gastroenterology consultation was obtained. Given the absence of symptoms and radiographic evidence of distal migration beyond the esophagus, a conservative approach with close monitoring was considered most appropriate. Serial abdominal radiographs obtained at six-hour intervals demonstrated peristaltic advancement of the foreign body beyond the duodenum, followed by arrest of progression in the right iliac fossa, approximately 24 hours after presentation (Figure 1). Serial radiographs over the next 24 hours demonstrated non-progression of the foreign body, suggestive of cecal impaction. The patient remained hemodynamically stable, complaining only of mild abdominal discomfort with a Visual Analog Scale (VAS) of three [8].

A repeat gastroenterology consult was sought, and the decision was made to proceed with standard adult video colonoscopy. The patient underwent polyethylene glycol-based bowel preparation, and the procedure was performed under intravenous conscious sedation using midazolam and fentanyl. The foreign body was visualized in the cecum and successfully retrieved using a Roth Net® retrieval device (US Endoscopy, Mentor, OH, USA) without mucosal injury and with intact casing (Figure 2).

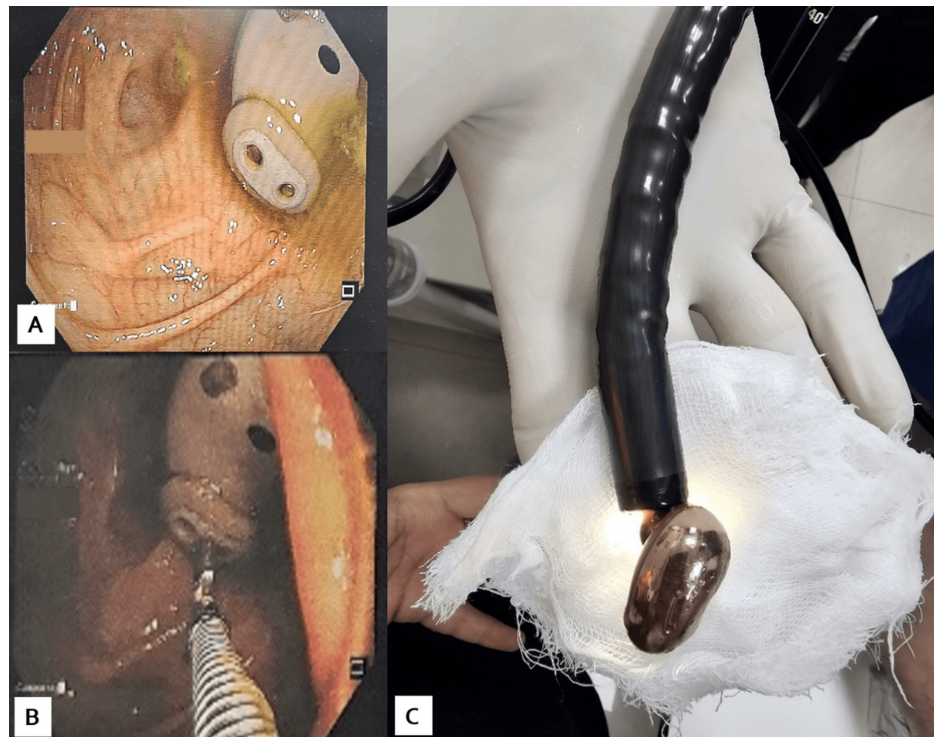


**FIGURE 2: Colonoscopic visualization and retrieval of the ingested wireless earbud**

A: colonoscopic image showing lodged Bluetooth earbud in cecum; B: Roth Net® forceps retrieving the foreign object; C: retrieved earbud held at colonoscope tip

Roth Net® retrieval device (US Endoscopy, Mentor, OH, USA)

The primary interdisciplinary team, composed of practitioners of all the previously mentioned specialties, devised a treatment strategy based on guidelines regarding battery ingestion and endoscopic retrieval, keeping in mind patient preferences and resource constraints.

The post-procedure period was uneventful. The patient was observed for 24 hours with stable vital signs and no evidence of abdominal pain, gastrointestinal bleeding, or signs of perforation. The medical team discharged the patient home with outpatient follow-up, and he remained asymptomatic at the seven-day and 30-day reviews.

## Discussion

The 21st century has witnessed a paradigm shift in the spectrum of cases encountered in routine clinical practice. Foreign body ingestion is commonly observed in the pediatric population and, less frequently, in adults, and is associated with significant morbidity and mortality. Reports suggest that approximately 1500 deaths occur annually in the United States due to foreign body ingestion or its related complications [9].

Foreign bodies most commonly lodge in the upper esophagus, followed by the mid-esophagus, stomach, pharynx, lower esophagus, duodenum, and terminal ileum, in decreasing order of frequency [10].

While one study identified coins, toys, and batteries as the most commonly ingested foreign bodies in children, another study involving adults and the elderly reported meat bones as the most frequent, followed by coins and dentures in decreasing order of incidence. Additionally, in the elderly, particularly those who are edentulous, an impacted food bolus is a common cause of esophageal obstruction [11,12].

In recent years, there has been an increasing trend toward ingestion of modern consumer electronics, including fitness trackers, fidget spinners, wireless earbuds, batteries, magnets, and even mobile phones [13]. TWS devices commonly use compact lithium-based rechargeable batteries because of their high energy density and small form factor. Ingestion of lithium-ion batteries is known to cause mucosal and chemical injury, perforation, and, in cases of battery leakage, potential systemic toxicity. Consequently, such ingestion is considered a medical emergency, necessitating immediate endoscopic removal when the battery is lodged in the esophagus. Nevertheless, batteries that traverse the esophagus often pass through the remainder of the gastrointestinal tract uneventfully, with reported complication rates of approximately 7% in the stomach and 1.3% in the small bowel [14,15]. Other studies have suggested that following ingestion of a foreign body, 80% pass naturally, while endoscopic intervention is required in 20% of cases, and surgery is reserved for less than 1% of cases [16].

The accidental ingestion of a wireless earbud, a rare event and possibly among the first reported in the medical literature, poses unique risks. The limited number of reported cases results in insufficient evidence to guide standardized treatment approaches.

The clinical presentation of earbud ingestion is variable. Many patients remain asymptomatic, particularly in the early phase, and therefore may not seek tertiary care. Symptomatic individuals may present with dysphagia, odynophagia, retrosternal discomfort, abdominal pain, or vomiting, depending on the level of impaction [14]. In the present case, the patient reported transient dysphagia and a foreign body sensation, which is consistent with the smooth contours of the object ingested.

The management of wireless earbud ingestion follows the general principles applicable to gastrointestinal foreign body ingestion in accordance with the European Society of Gastrointestinal Endoscopy (ESGE) guidelines, guided by the patient's symptomatology, the nature of the object, and its anatomical location [16]. Plain radiography of the neck, chest, and abdomen plays a crucial role, as it provides information regarding the location, number, size, and configuration of the foreign body [4]. As wireless earbuds contain metallic components, they are generally radiopaque and can be readily visualized on plain radiography [5]. Serial radiographs can be used to monitor peristaltic progression of the foreign body and aid in the early detection of complications such as pneumomediastinum or pneumoperitoneum. When diagnostic uncertainty persists, computed tomography offers superior localization and assessment for associated complications, including obstruction and perforation [4].

Management of ingested foreign bodies in most cases involves careful observation, particularly when the object is short (<6 cm in length), narrow (<2.5 cm in width), and blunt [4]. Once the foreign body has traversed the pylorus, spontaneous passage is generally expected within days, during which time the patient's stool should be closely observed [5]. In contrast, objects exceeding these dimensions are less likely to traverse the pylorus or duodenal sweep and may warrant endoscopic intervention. Urgent endoscopic removal is indicated for sharp or pointed objects, those lodged in the pre-pyloric region, and cases of complete esophageal obstruction. Ingestion of batteries and magnets also necessitates prompt endoscopic retrieval due to their well-documented risk of local and systemic complications [16]. Colonoscopic intervention is rarely required, as foreign bodies that pass beyond the ileo-cecal valve are typically expelled without incident. With advances in endoscopic techniques, surgical management is now largely reserved for cases complicated by perforation [17,18].

To our knowledge, the report by Machado et al., titled "To Intervene or Observe: Accidental Ingestion of a Wireless Earbud in an Adult," is the only other published case report of wireless earbud ingestion apart from the present case. In their report, conservative outpatient management was successful, with serial radiographs demonstrating progressive distal migration of the intact device and spontaneous passage confirmed on day five [5]. In our case, inpatient observation with serial radiographs was undertaken to confirm the progression of the earbud through the gastrointestinal tract and to promptly identify any delay in transit that could increase the risk of prolonged retention and associated complications and guide early intervention.

Our case was unique and challenging in several aspects. First, given the paucity of reported cases in medical literature specifically addressing the ingestion of wireless earbuds, this report represents one of a kind. Second, although the ingested electronic device was powered by a lithium battery, typically an indication for urgent endoscopic retrieval, it was encased within a protective shell, and its dimensions were below the recommended threshold for immediate intervention. Therefore, in the absence of symptoms, a conservative approach was initially adopted. Serial radiographic monitoring demonstrated progressive distal migration of

the earbud with intestinal peristalsis, supporting continued expectant management and the likelihood of spontaneous passage. Third, while most foreign bodies require endoscopic retrieval because the esophagus is the narrowest and most common site of obstruction in the gastrointestinal tract, the earbud failed to progress beyond the cecum after more than 24 hours. Consequently, colonoscopic removal was undertaken, particularly in view of the inherent risk of local and systemic complications associated with the lithium battery-powered device.

A multidisciplinary team (MDT) approach and effective communication between MDT members are the cornerstones of managing such complex cases to deliver optimum and timely care.

## Conclusions

In conclusion, this case highlights the clinical challenges associated with wireless earbud ingestion, an uncommon presentation for which specific management guidelines are lacking. Although many gastrointestinal foreign bodies pass spontaneously, management should be individualized according to the patient's clinical status, device characteristics, anatomical location, and progression on serial imaging. In selected cases, colonoscopic retrieval may be a feasible option when the device becomes impacted or fails to progress, potentially avoiding complications associated with prolonged retention. The ingestion of modern electronic devices poses an emerging clinical challenge. As wearable technologies become increasingly prevalent and miniaturized, clinicians may encounter a broader spectrum of unconventional foreign bodies requiring individualized assessment. Further case reports are needed to improve understanding and guide clinical decision-making in these atypical ingestions.

## Additional Information

### Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

**Concept and design:** Hanny C. Japhina, Zainab Mehdi, Amtoj Singh Lamba

**Acquisition, analysis, or interpretation of data:** Hanny C. Japhina, Zainab Mehdi, Mukesh Kumar, Sumit Rungta

**Drafting of the manuscript:** Hanny C. Japhina

**Critical review of the manuscript for important intellectual content:** Zainab Mehdi, Amtoj Singh Lamba, Mukesh Kumar, Sumit Rungta

**Supervision:** Zainab Mehdi, Mukesh Kumar, Sumit Rungta

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## References

1. Alturkmani OG, Al-Badawi MM, Alturkmani SG, Al-Midani MH, Attar SA: A case report of non-intentional foreign body ingestion in an elderly patient. *Cureus*. 2023, 15:e37684. [10.7759/cureus.37684](https://doi.org/10.7759/cureus.37684)
2. Hsieh A, Hsiehchen D, Layne S, Ginsberg GG, Keo T: Trends and clinical features of intentional and accidental adult foreign body ingestions in the United States, 2000 to 2017. *Gastrointest Endosc*. 2020, 91:350-357.e1. [10.1016/j.gie.2019.09.010](https://doi.org/10.1016/j.gie.2019.09.010)
3. Ngu NLY, Karp J, Taylor K: Patient characteristics, outcomes and hospital-level healthcare costs of foreign body ingestion from an Australian, non-prison referral centre. *BMJ Open Gastro*. 2023, 10:e001087.
4. Ikenberry SO, Jue TL, Anderson MA, et al.: Management of ingested foreign bodies and food impactions. *Gastrointest Endosc*. 2011, 73:1085-91. [10.1016/j.gie.2010.11.010](https://doi.org/10.1016/j.gie.2010.11.010)
5. Machado T, Nath A, Madtha J, Vaz A: To intervene or observe: accidental ingestion of a wireless earbud in an adult. *Cureus*. 2026, 18:e102994. [10.7759/cureus.102994](https://doi.org/10.7759/cureus.102994)
6. Durant D, Mohammed FB, Boyle A: Harm from foreign body ingestion in adults and children: a systematic review of case reports. *Cureus*. 2025, 17:e95766. [10.7759/cureus.95766](https://doi.org/10.7759/cureus.95766)
7. Riley DS, Barber MS, Kienle GS, et al.: CARE guidelines for case reports: explanation and elaboration document. *J Clin Epidemiol*. 2017, 89:218-35. [10.1016/j.jclinepi.2017.04.026](https://doi.org/10.1016/j.jclinepi.2017.04.026)

8. Huskisson EC: Measurement of pain. *Lancet*. 1974, 2:1127-31. [10.1016/S0140-6736\(74\)90884-8](#)
9. Hong KH, Kim YJ, Kim JH, Chun SW, Kim HM, Cho JH: Risk factors for complications associated with upper gastrointestinal foreign bodies. *World J Gastroenterol*. 2015, 21:8125-31. [10.3748/wjg.v21.i26.8125](#)
10. Yao CC, Wu IT, Lu LS, et al.: Endoscopic management of foreign bodies in the upper gastrointestinal tract of adults. *Biomed Res Int*. 2015, 2015:658602. [10.1155/2015/658602](#)
11. Fung BM, Sweetser S, Wong Kee Song LM, Tabibian JH: Foreign object ingestion and esophageal food impaction: An update and review on endoscopic management. *World J Gastrointest Endosc*. 2019, 11:174-92. [10.4253/wjge.v11.i3.174](#)
12. Adhikari P, Shrestha BL, Baskota DK, Sinha BK: Accidental foreign body ingestion: analysis of 163 cases . *Int Arch Otorhinolaryngol*. 2007, 11:267-70.
13. 11 Weird Things People Have Swallowed . (May 25, 2017). Accessed: May 10, 2026: <https://www.livescience.com/54727-weird-things-people-swallowed.html>.
14. Wang L, Zhang Y, Bruce PG: Batteries for wearables. *Natl Sci Rev*. 2023, 10:nwac062. [10.1093/nsr/nwac062](#)
15. Amodio J, Lightman M: A review of button battery ingestions in children-diagnosis and management . *Children (Basel)*. 2025, 12:1678. [10.3390/children12121678](#)
16. Birk M, Bauerfeind P, Deprez PH, et al.: Removal of foreign bodies in the upper gastrointestinal tract in adults: European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guideline. *Endoscopy*. 2016, 48:489-96. [10.1055/s-0042-100456](#)
17. Ambe P, Weber SA, Schauer M, Knoefel WT: Swallowed foreign bodies in adults . *Dtsch Arztebl Int*. 2012, 109:869-75. [10.3238/arztebl.2012.0869](#)
18. Erbil B, Karaca MA, Aslaner MA, Ibrahimov Z, Kunt MM, Akpınar E, Özmen MM: Emergency admissions due to swallowed foreign bodies in adults. *World J Gastroenterol*. 2013, 19:6447-52. [10.3748/wjg.v19.i38.6447](#)