



CK SURGITECH



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# **FOREIGN BODY RETRIEVAL**



GRASPING FORCEP

DISPOSABLE RETRIEVAL  
NET (NET BASKET)

# FOREIGN BODY RETRIEVAL

Endoscopic foreign body retrieval is a minimally invasive method for the extraction of foreign bodies or ingested objects from the gastrointestinal tract.

CK Surgitech's range of retrieval devices will meet every clinical situation, from polyp and stent retrieval to the removal of dentures, bones, coins, buttons, and marbles.



# FOREIGN BODY INGESTION

Foreign body ingestion is a common diagnosis that presents in emergency departments throughout the world.

Food (typically meat) bolus impaction above a pre-existing oesophageal stricture or ring is by far the most common cause of oesophageal foreign body obstruction in adults.

Coins are the most common ingested foreign body in children.

Those of the community that are at a higher risk of ingesting foreign objects:

- Children and adolescents
- Mentally impaired
- Mental illness
- Abusers of illicit drugs or alcohol
- Incarcerated individuals

Foreign body ingestion is more common in males, with some studies suggesting approximately a 1.5 : 1 male to female ratio.

Upwards of 80% of foreign bodies pass spontaneously and do not require intervention.

Less than 1% of all cases will require surgical intervention.<sup>[1]</sup>

# COMMONLY INGESTED FOREIGN BODIES

## CHILDREN

Coins

Button Batteries

Crayons

Toys



## ADULTS

Food Boluses

Fish Bones

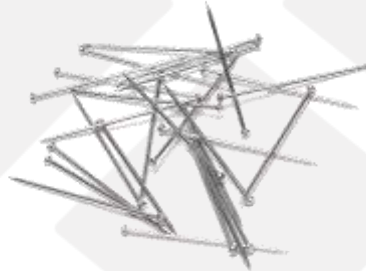
Chicken Bones

Dentures

Crab Shells

Wires

Pins [1]





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# SYMPTOMS OF FOREIGN BODY IMPACTION

**Odynophagia (Painful swallowing)**

Dysphagia

**Globus pharynges (Sensation of having a lump or something stuck in your throat)**

Chest pain

Nausea/vomiting

Abdominal pain [1]



# COMPLICATIONS OF FOREIGN BODY IMPACTION

The majority of foreign bodies pass through the digestive system spontaneously without causing any harm, symptoms, or necessitating any further intervention.

Occasionally, complications will arise from ingested and impacted foreign bodies.

These complications are directly related to the type of foreign body and the location of impaction within the gastrointestinal tract.

The upper oesophagus is the most common lodgement site, followed by middle oesophagus, stomach, pharynx, lower oesophagus and finally the duodenum.

## COMMON IMPACTION SITES OF SHARP FOREIGN BODIES

Duodenal loop

Duodenojejunal junction

Appendix

Terminal ileum [1]

# COMMON COMPLICATIONS WITH FOREIGN BODY IMPACTION

## **Button battery**

Chemical/electrical damage, stricture formation, migration through intestinal wall

## **Fish bone**

Perforation, peritonitis, abscess formation, sepsis, haematoma

## **Crack-cocaine pipes**

Toxic effects of illicit drug

## **Bread bag clips**

Attachment to bowel wall → inflammation, ulceration, perforation, obstruction

## **Round objects (air gun pellets, screws, other metallic objects)**

Acute appendicitis <sup>[1]</sup>

# COMMON COMPLICATIONS WITH FOREIGN BODY IMPACTION

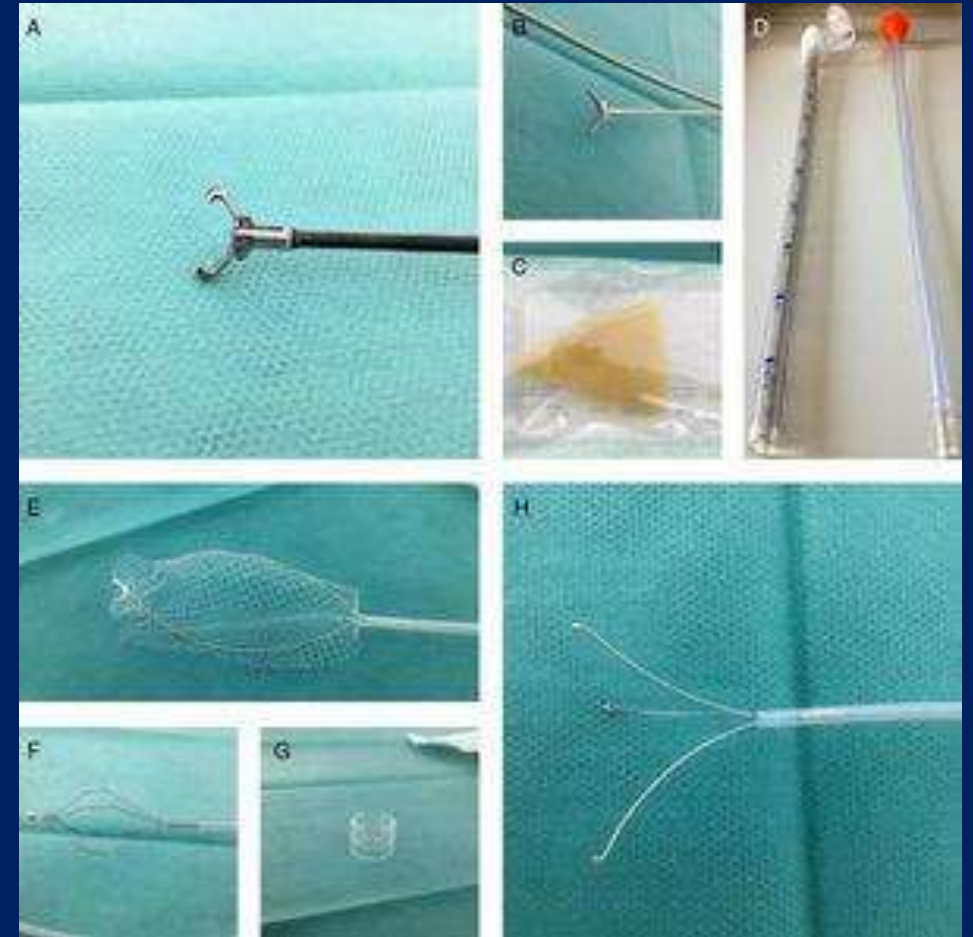


# ENDOSCOPIC MANAGEMENT OF FOREIGN BODY IMPACTION

Endoscopic intervention is recommended within 24hrs of ingestion.

The risk and complications associated with the removal of foreign bodies is low, however it includes, impaction, obstruction and perforation.

Management of the patients airway is essential. In some cases endotracheal intubation is necessary. The use of an overtube should be considered to prevent an object from accidentally dropping into the patients airway during retrieval. A laryngoscope should also be on hand in case of airway obstruction. [1]



# ENDOSCOPIC MANAGEMENT OF FOREIGN BODY IMPACTION

Commonly used devices for foreign body retrieval include polypectomy snares, grasping forceps, magnetic probes, retrieval snare net, and a transparent cap-fitting device which is frequently used in endoscopic mucosal resection.

## **Studies suggest the following management**

### **Food Boluses**

A snare or a snare basket is often the best device to use, and the foreign body can be removed in one piece or via a piecemeal extraction. After the bolus forms small pieces by a snare, it can be pushed into the stomach and can then easily traverse the GI tract.

### **Short blunt objects**

Objects that are less than 2 cm in size can pass through the entire GI tract without causing any complications.

If the objects however do not pass through the stomach after 3-4 weeks, they should be retrieved with a snare, rat tooth or alligator forcep or retrieval net.

### **Long objects**

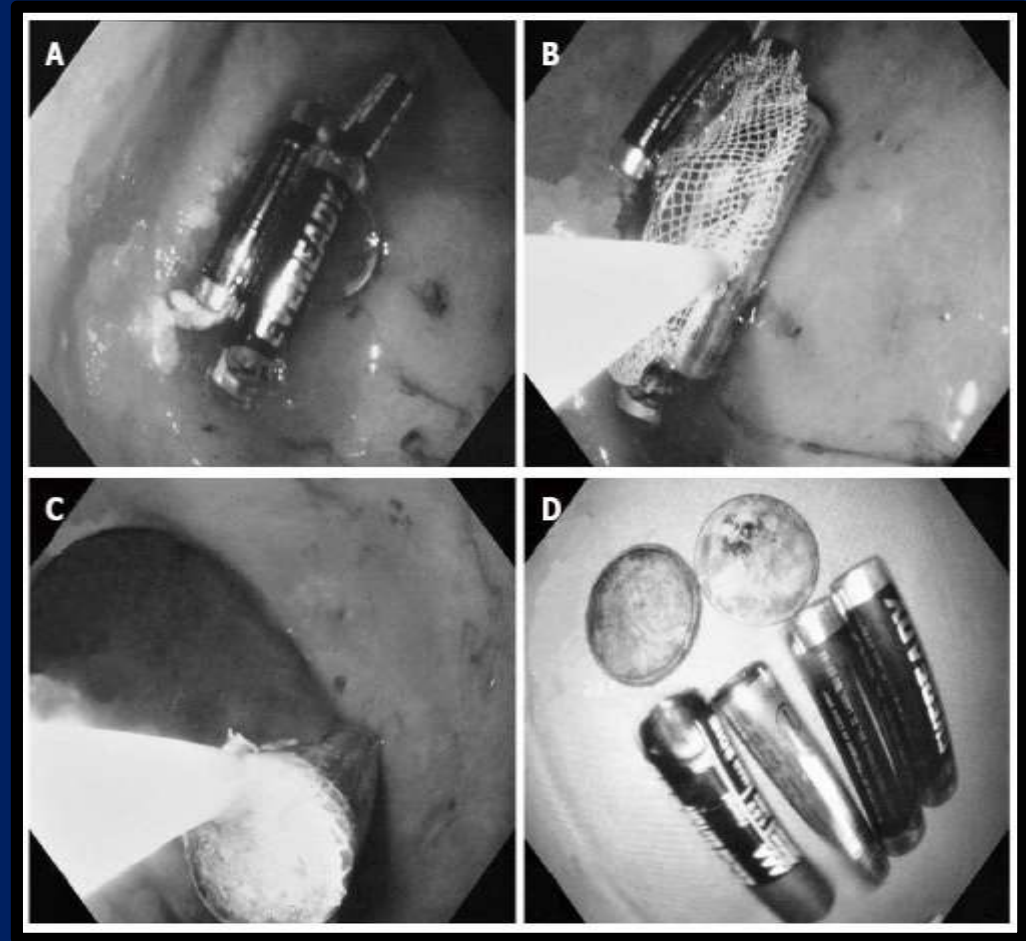
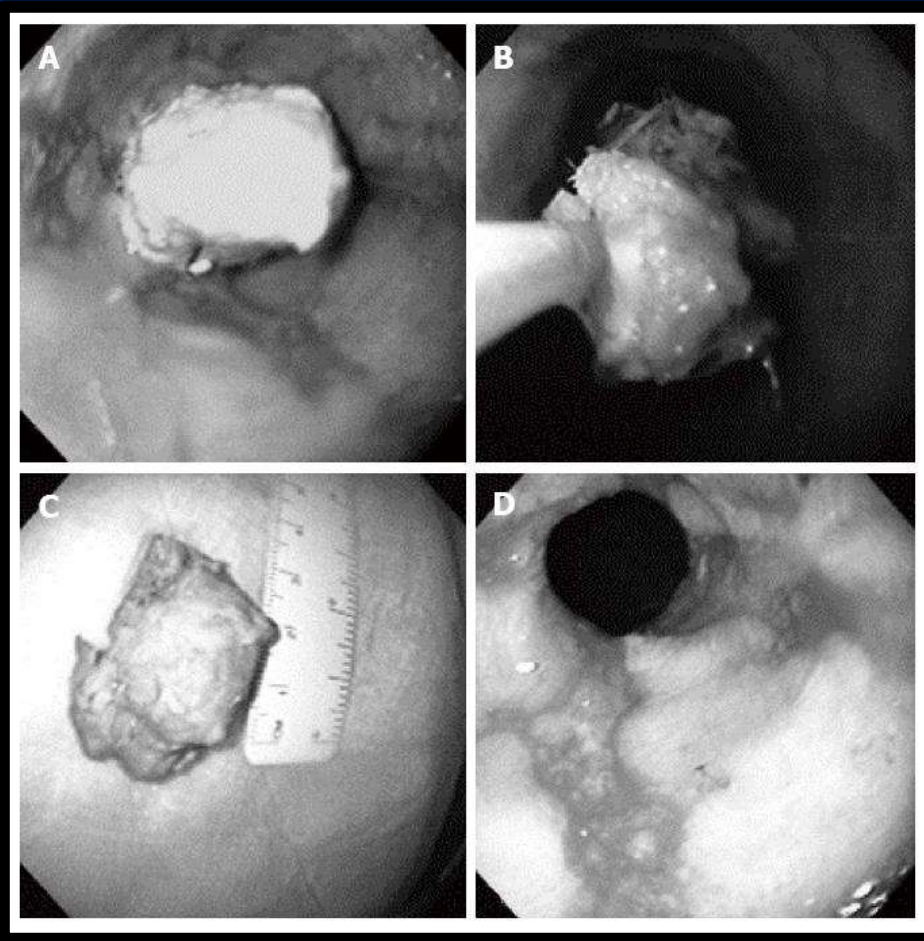
Objects greater than 6 cm, such as toothbrushes and forks, spoons, or knives, endoscopic removal is recommended, as these are unlikely to pass through the duodenum. A snare or a basket should be used to remove these objects.

### **Sharp pointed objects**

For objects such as needles, nails, bread bag clips and toothpicks, endoscopic removal can be achieved with a retrieval net, forceps, or a polypectomy snare. In addition, for sharp objects, use of a condom-type hood or overtube is recommended. It is critical to remember that the sharp end should be a trailing point, as this will significantly reduce the risk of perforation. <sup>[1]</sup>



# IMAGES OF FOREIGN BODY RETRIEVAL



# GRASPING FORCEPS

COMBINATION JAW

8.1mm JAW OPENING



# GRASPING FORCEPS



FEATURES	BENEFITS
ERGONOMIC HANDLE	<ul style="list-style-type: none"><li>• Accommodates various hand sizes</li><li>• The three-ring handle features a shortened throw and comfortable grip</li></ul>
8.1 MM JAW OPENING	<ul style="list-style-type: none"><li>• Ability to remove large size foreign bodies</li></ul>
COMBINATION JAW – ALLIGATOR AND RAT TOOTH	<ul style="list-style-type: none"><li>• Optimal grasping capability</li></ul>
AVAILABLE IN TWO WORKING LENGTHS AND CHANNEL SIZES	<ul style="list-style-type: none"><li>• Meets the retrieval needs for both Gastroenterology and Urology</li></ul>

# DISPOSABLE RETRIEVAL NET

REINFORCED NET  
FULLY ROTATABLE



# DISPOSABLE RETRIEVAL NET



FEATURES	BENEFITS
STRONG REINFORCED NET	<ul style="list-style-type: none"><li>Designed to perform optimally for foreign body retrieval, food impactions and polyp retrieval</li></ul>
FULLY ROTATABLE NET BASKET	<ul style="list-style-type: none"><li>Improved capturing ability, facilitating decreased procedure time which can support decreased anaesthetic time</li></ul>



# REFERENCES

1. Bekkerman M, Sachdev A H, Andrade J, Twersky Y, Iqbal S. Endoscopic Management of Foreign Bodies in the Gastrointestinal Tract: A Review of the Literature.  
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