



FOREIGN BODY REMOVAL TECHNIQUES

FOREIGN BODIES IN THE EAR, NOSE AND THROAT

- An infant or young child may put an object in his or her ears, nose, or mouth. Objects in the mouth may be swallowed or breathed (aspirated) into the lungs. Objects in the ears and nose can make it difficult to hear or breathe and can cause infection. An object that is swallowed may need general anesthesia and a procedure to remove it. An object that is aspirated may cause serious difficult breathing and needs a procedure for removal.

FOREIGN BODIES IN THE EAR, NOSE AND THROAT

- 1. FOREIGN BODIES IN THE EAR
- Foreign bodies in the ear canal can be anything a child can push into his or her ear. Some of the items that are commonly found in the ear canal include the following:
 - A. Food
 - B. Insects
 - C. Toys
 - D. Buttons
 - E. Pieces of crayon
 - F. Small batteries





FOREIGN BODIES IN THE EAR, NOSE AND THROAT

- Some objects placed in the ear may not cause symptoms. Other objects, such as food and insects, may cause pain in the ear, redness, or drainage. Hearing may be affected if the object is blocking the ear canal.
- The treatment for foreign bodies in the ear is prompt removal of the object by your child's healthcare provider. The following are some of the techniques that may be used by your child's healthcare provider to remove the object from the ear canal:
 - 1. Instruments may be inserted in the ear
 - 2. Magnets are sometimes used if the object is metal
 - 3. Flushing the ear canal with water
 - 4. A machine with suction to help pull the object out

Instrument

Type of Foreign Body



Alligator forceps

Graspable (e.g., paper, cotton, or foam)



Suction tip

Nongraspable round, smooth, or free-floating (e.g., bead, bean)



Wire loop
Right-angle hook
Curette

Nongraspable round, smooth, or free-floating (e.g., bead, bean)

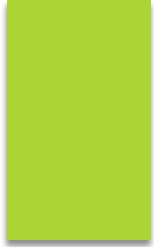


Irrigation syringe

Nongraspable round, smooth, or friable (e.g., bead)

FOREIGN BODIES IN THE EAR, NOSE AND THROAT

- 2. FOREIGN BODIES IN THE NOSE
- Objects that are put into the child's nose are usually soft things. These would include:
 - 1. Tissue
 - 2. Clay
 - 3. Pieces of toys
 - 4. Erasers
- Sometimes, a foreign body may enter the nose while the child is trying to smell the object.



- **What are the signs of a foreign body in the nose?**

- You may suspect that your child has put something in their nose, but are unable to see it when you look up their nose. Foreign objects in the nose may cause other signs.

- **Nasal drainage**

- A foreign body in the nostril will cause nasal drainage. This drainage may be clear, gray, or bloody. [Nasal drainage](#) with a bad odor may be a sign of an infection.

- **Breathing difficulty**

- Your child may have difficulty breathing through the affected nostril. This occurs when the object clogs the nostril, making it difficult for air to move through the nasal passage.



- **How to remove the object**

- Keep calm if you discover an object in your child's nose. Your child may begin to panic if they see you panicking.
- The only treatment for this condition is to remove the foreign object from the nostril. In some cases, blowing the nose gently may be all that's necessary to treat this condition. Here are some tips for removing the object:
 - Try removing the object with tweezers. Only use tweezers on larger objects. Tweezers may push smaller objects farther up the nose.
 - Avoid sticking cotton swabs or your fingers into your child's nose. This can also push the object farther into the nose.
 - Stop your child from sniffing. Sniffing could cause the object to move farther up their nose and pose a choking hazard. Encourage your child to breathe through their mouth until the object is removed

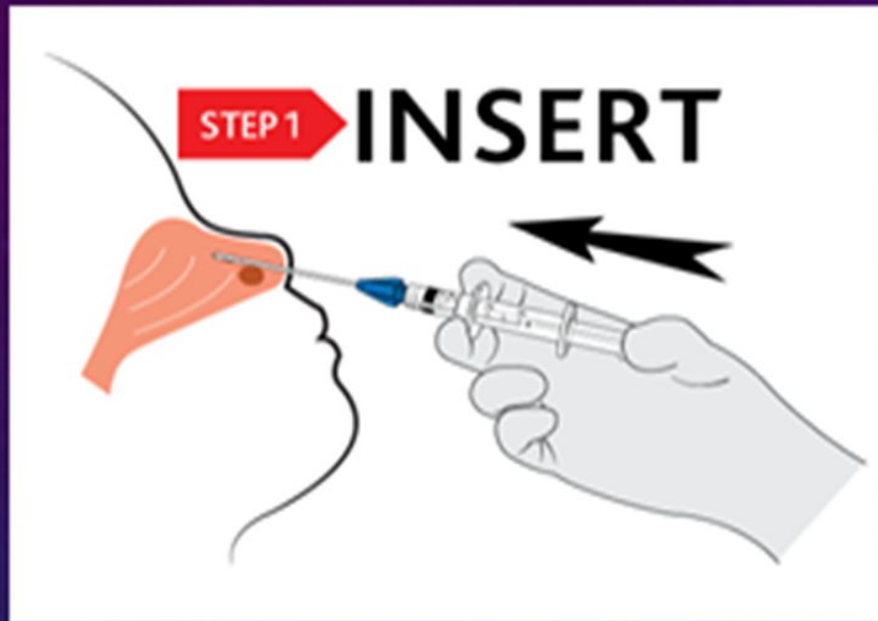


KATZ EXTRACTOR



Insert / Inflate / Extract

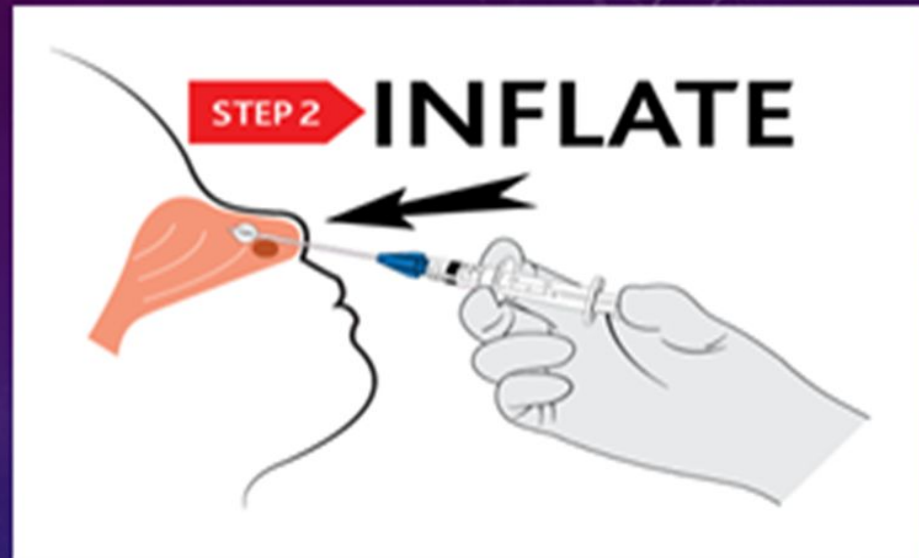
Removal of foreign bodies has never been easier. It only takes three simple steps to complete an extraction with the Katz Extractor Oto-Rhino Foreign Body Remover.



Step 1: Insert Katz Extractor past foreign body

Step 2: Depress syringe to inflate balloon.

Step 3: Retract Katz Extractor out of canal with balloon inflated





Aspirated Foreign Bodies



Nishant

Aspirated Foreign Bodies Epidemiology

- Possibly 1500 to 3000 deaths per year in Russia.
- Age <3 years old: 50%
- Age <10 years old: 95%
- Sex : male > female
- 10 to 20 % require endoscopy
- 1 % require surgery



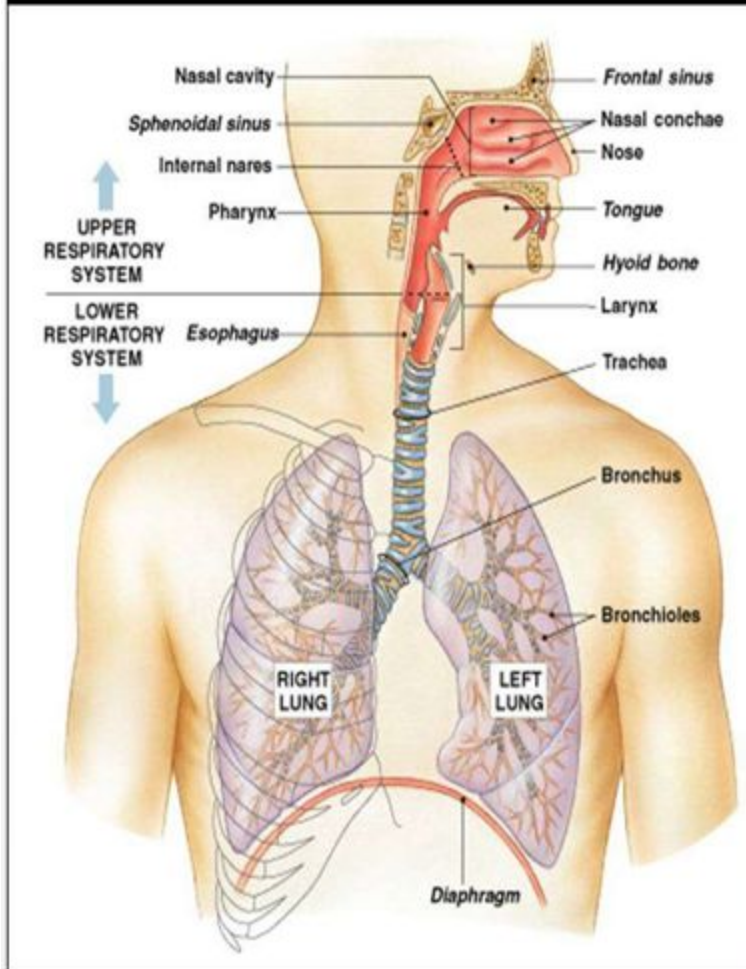


What are the usual foreign bodies ?

- Food items are the commonest (65- 85%) FB encountered.
- In India, peanuts are the most common.
- Generally organic FB produce intense inflammation and hence worsen the obstruction.
- Certain edible objects like toffee, chocolate and lozenges draw water from mucosa, swell and produce progressive obstruction.



Location of Impacted Foreign Bodies



□ Larynx 1-5%

□ Trachea 5-15%

□ L Main Bronchus 30-35%

□ R Main Bronchus 30-40%

□ L Lobar Bronchus 5-15%

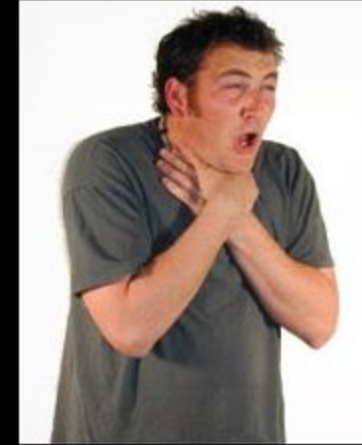
□ R Lobar Bronchus 5-15%

1. In **10-20% cases**, the FB can lodge in the larynx or trachea.

2. Commonly the FB may lodge in the bronchial tree (**80-90%**).

Effects of Aspirated Foreign Bodies

- Complete upper airway obstruction : death
- Partial upper airway obstruction
 - wheezing
 - chest pain
 - mucosal injuries : bleeding
- Lower airway obstruction
 - atelectasis
 - pneumonia
 - decreased breath sounds



STAGES/PHASES OF FOREIGN BODY ASPIRATION

□ **Initial phase** - Choking and gasping, coughing, or airway obstruction at the time of aspiration



□ **Asymptomatic phase** - Subsequent lodging of the object with relaxation of reflexes that often results in a reduction or cessation of symptoms, lasting hours to weeks

□ **Complications phase** - Foreign body producing erosion or obstruction leading to pneumonia, atelectasis, or abscess



Types of Bronchial Obstruction



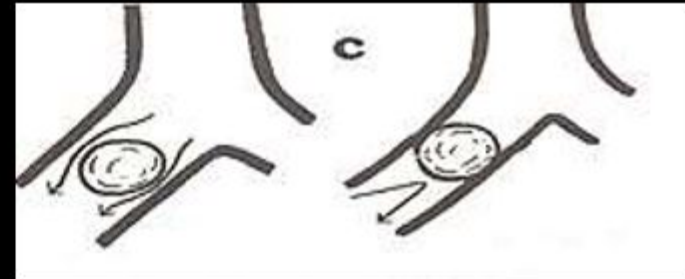
- **Bypass valve obstruction**

- air passes in and out
- no radiographic changes
- may cause no symptoms



- **Check valve obstruction**

- exhalation around object prevented
- obstructive emphysema results



- **Stop valve obstruction**

- both inspiration and expiration blocked
- distal atelectosis results
- pneumonitis may occur



Emergency Treatment for Aspirated Foreign Bodies

- Heimlich maneuver
- Back blows
- Chest thrusts
 - *note : none of these should be applied if patient is able to speak or cough*
- Finger sweep / grasp
 - *should be done only if object is visible and will not be wedged deeper*

Heimlich Maneuver—Victim Standing



1. Rescuer stands behind victim and wraps his arms around victim's waist
2. Rescuer makes a fist with one hand and places the thumb side of the fist against the victim's abdomen, slightly above the navel and below the rib cage
3. Rescuer grasps fist with other hand and presses into victim's abdomen with a *quick upward thrust*
4. Thrust is repeated several times if necessary

Rescuer must recognize signs of airway obstruction and take action immediately. If patient is able to speak or cough effectively, rescuer *should not* interfere with his attempts to expel foreign body



Four back blows

If patient is unable to speak or cough effectively, rescuer delivers 4 rapid, forceful blows between shoulder blades with heel of hand while supporting patient's chest with other hand. This maneuver may dislodge foreign body before it is forced upward by abdominal or chest thrusts



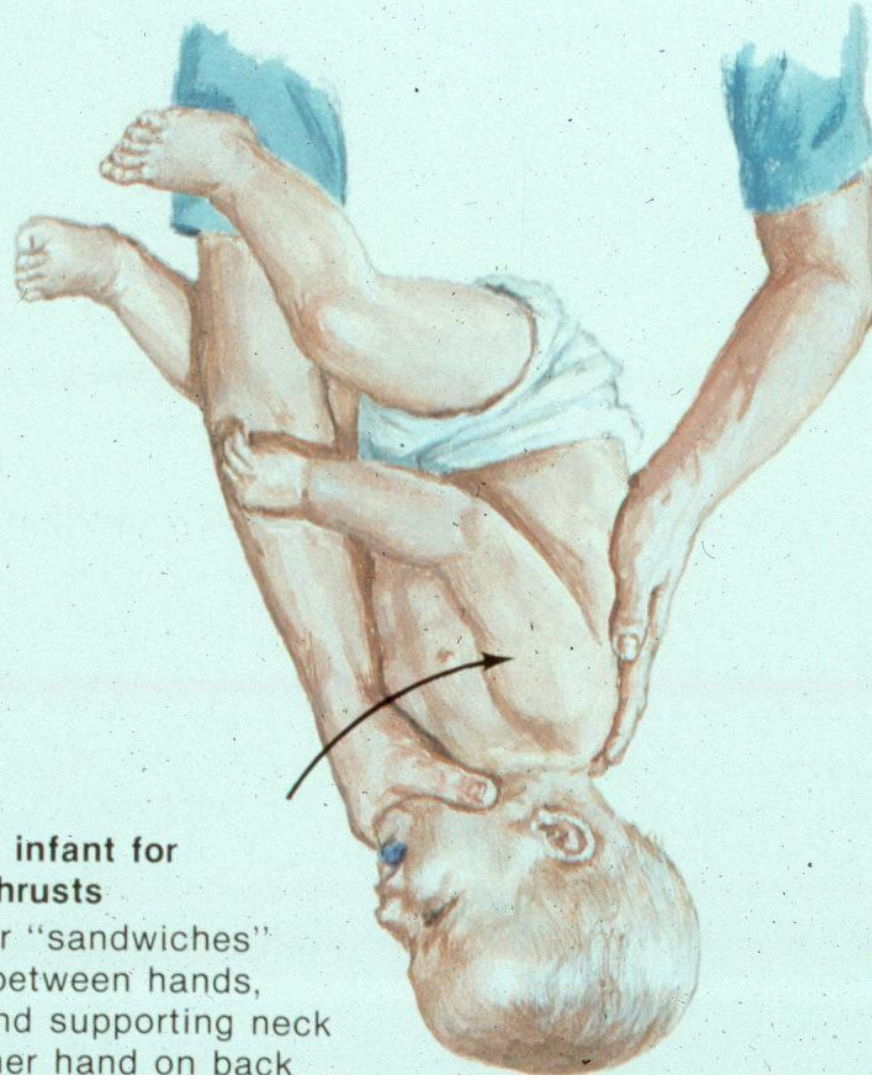
**Chest thrusts for
pregnant victims**





Back blows

Rescuer holds infant in head-down position while delivering back blows



Turning infant for chest thrusts

Rescuer "sandwiches" infant between hands, one hand supporting neck and other hand on back



Chest thrusts

Rescuer holds infant on thigh in head-down position and delivers up to 4 chest thrusts in same manner as chest compressions (see below)





If above measures fail:

□ **urgent cricothyrotomy**

□ **tracheostomy.**

□ **Endotracheal intubation**
with smaller size tube.

Intubation should not be tried in cases of:

- **Large FB,**
- **Subglottic FB**
- **Certain seeds such as tamarind seeds, as they can slip down and straddle across the carina,**

Precautions in Partial Airway Obstruction in Children

- **Don't do chest physical therapy**
 - **may dislodge object higher in airway**
- **General anesthesia required for safe object removal**
- **May be more than one object aspirated**



Thank you
Спасибо за внимание