

## B02: Airway Obstruction

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### Introduction

Airway obstructions are relatively rare, yet life-threatening conditions that require immediate recognition and intervention to avert disaster. Whether they are complete or partial, airway obstructions can result from foreign bodies entering the trachea, pathological conditions that produce a narrowing of the upper airway, or trauma to the mouth, face, head, or neck. The core treatment of an airway obstruction involves attempting to obtain or maintain a patent airway while at the same time identifying and reversing the underlying clinical problem where possible.

This guideline focuses on foreign body airway obstructions (FBAO). Paramedics and EMRs/FRs should refer to other guidelines for the management of croup, epiglottitis, or anaphylaxis as necessary.

- [→ B04: Croup and Epiglottitis \(Stridor\)](#)
- [→ E09: Anaphylaxis](#)

### Essentials

- Unconscious patients should have their breathing and circulation assessed concurrently. If the patient is found to be pulseless, immediately begin chest compressions and attach a defibrillator – do not attempt to ventilate these patients prior to beginning CPR. In cardiac arrest, the lack of a patent airway is significantly less important than the need to establish circulation.
- Chest compressions are the core management of a complete FBAO. If in doubt as to the ability to ventilate an unconscious patient, begin chest compressions. The ratio of chest compressions to ventilation attempts is unimportant, but the sequence of actions is: visualize the oropharynx; attempt to remove any foreign body that is seen; attempt to ventilate; then resume chest compressions.
- Consider the use of patient positioning while attempting to manage partial airway obstructions, especially for patients with facial or oral trauma. 'Sit up and lean forward' can be a very useful technique when combined with aggressive suction.
- Partial airway obstructions often require only supportive care and encouragement, although paramedics and EMRs/FRs must be prepared to intervene if the situation deteriorates. However, patients with a partial airway obstruction and signs of poor air exchange – stridor, weak cough, and/or cyanosis – must be treated as a complete airway obstruction.
- Rapid conveyance, with intercept of additional resources and hospital notification, is indicated for persistent airway obstruction, whether partial or complete.

### Additional Treatment Information

- Abdominal or chest thrusts are indicated for complete airway obstructions in conscious patients. Use chest thrusts in pregnant or obese patients; these can be performed with the patient supine and are identical to chest compressions in CPR. No evidence exists to support the superiority of chest thrusts over abdominal thrusts (or vice versa) in any population and controversy exists among resuscitation councils as to the effectiveness of back blows in adult populations.
- Back blows may be effective in children under one year of age and should be alternated with chest thrusts as necessary. Children over one year old should be managed with abdominal thrusts.
- When confronted with a patient who cannot be ventilated, advanced providers should begin chest compressions or abdominal thrusts while preparing for both direct laryngoscopy and a surgical airway. Under laryngoscopic visualization, foreign bodies may be removed using Magill forceps – do not attempt to blindly insert forceps into the airway. High vacuum suction, coupled with the Ducanto catheter, may help relieve some airway obstructions.
- Advanced providers should have a low threshold to perform a surgical airway in patients who cannot be ventilated effectively and where the obstruction cannot be visualized and readily removed. The same applies in cases of pathological airway obstruction that cannot be immediately reversed.

- Open cricothyrotomy is contraindicated in children under the age of 12. In these patients, needle cricothyrotomy can be performed instead.

## Referral Information

- Paramedics and EMRs/FRs should be aware that abdominal thrusts have the potential to cause significant trauma, including lacerations of internal organs. Patients who received abdominal thrusts, whether from health care providers or lay rescuers, should be conveyed for observation and evaluation.
- Pathological airway obstructions must be conveyed for evaluation and treatment.

## General Information

- In adults, eating is the most common precipitating event of a FBAO, with meat being the most likely culprit. Children, by contrast, are more prone to have non-food foreign bodies.
- Submersion or drowning victims do not, as a general rule, experience airway obstructions. The use of abdominal thrusts is not recommended for these patients; the focus should be on the initiation of chest compressions as early as possible for those who are unresponsive and pulseless, with effective bag-valve mask ventilations to address the underlying hypoxia. Patients who are conscious and breathing spontaneously may benefit from CPAP use.

## Interventions

### First Responder

- Position patient for optimal intervention
- For partial airway obstruction: encourage patient to cough
- For complete airway obstruction **in conscious patients**: begin abdominal thrusts
  - In children under 1 year of age, administer alternating sequences of 5 back blows and 5 chest compressions until the obstruction clears or the patient becomes unconscious
- For complete airway obstruction **in unconscious patients**: begin chest compressions
  - → [PR06: High Performance CPR](#)
- Visualize oropharynx prior to every attempt at ventilation and remove foreign bodies if seen; do not attempt blind finger sweeps

### Emergency Medical Responder – All FR interventions, plus:

- Initiate conveyance with notification
- Consider intercept with additional resources

### Advanced Care Paramedic – All FR, EMR, and PCP interventions, plus:

- Consider video or direct laryngoscopy for FBAO removal using Magill forceps, with or without suction
- Consider surgical airway
  - → [PR22: Surgical Airways](#)

## Evidence Based Practice

Foreign Body Obstruction(Complete/Partial)

### Supportive

- [Abdominal Thrusts](#)
- [Direct Laryngoscopy and Magill forceps](#)
- [Oxygen](#)

Neutral

Against

## References

1. Panchal AR, et al. Part 3: Adult basic and advanced life support: 2020 American Heart Association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. 2020. [\[Link\]](#)
2. Topjian, AA, et al. Part 4: Pediatric basic and advanced life support: 2020 American Heart Association guidelines update for cardiopulmonary resuscitation and emergency cardiovascular care. 2020. [\[Link\]](#)

## Practice Updates

- 2023-12-18: Removed COVID-related restrictions.

