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**EMS SKILL**

AIRWAY EMERGENCY / AIRWAY MANAGEMENT

**SUCTIONING**

**OROPHARYNGEAL**

**PERFORMANCE OBJECTIVES**

Demonstrate competency in performing oropharyngeal suctioning using a rigid, flexible suction catheter, and a bulb syringe.

**CONDITION**

Suction a simulated patient who is either conscious or unresponsive and is unable to maintain a patent airway due to copious oral secretions. The patient is currently on oxygen at 15L via a non-re-breather mask. Necessary equipment will be adjacent to the patient or brought to the field setting.

**EQUIPMENT**

Simulated adult and pediatric airway management manikin, oxygen tank with connecting tubing, non-suction device with connecting tubing, or hand-powered suction device with adaptor, hard and flexible suction catheters, bulb syringe, normal saline irrigation solution, container, non-sterile gloves, goggles, masks, gown, waste receptacle, timing device.

**PERFORMANCE CRITERIA**

• Items designated by a diamond (⧫) must be performed successfully to demonstrate skill competency.

• Items identified by double asterisks (\*\*) indicate actions that are required if indicated.

• Items identified by (§) are not skill component items, but should be practiced.

• A clean technique must be maintained throughout suctioning procedure.

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| **PREPARATION** |
| **Skill Component** | **Key Concepts** |
| ⧫ Establish body substance isolation precautions (BSI) | • Mandatory personal protective equipment - gloves, goggles• Situational - masks, gown* The application of gloves prevents contact between the EMT and the patient’s body fluids.
* Protected eyewear and mask are recommended since these fluids might scatter, or the patient may gag and cough, sending droplets to your face, eyes, and mouth.
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| ⧫ Assess the patient for the need to suction oral secretions | • The indications for suctioning include: noisy respirations, coughing up secretions, respiratory distress, or patient request. |
| ⧫ Open suction kit or individual supplies | • Use the inside of the wrapper to establish a clean field. |
| ⧫ Fill the sterile container with irrigation solution | • Saline or water is used to flush the suction catheter as needed. |
| ⧫ Ensure the suction device is working***\*\* Set the appropriate suction setting:***• ***Adult - between 80-120 mmHg***• ***Pediatric and the elderly - between 50-100mmHg*** | • A battery operated suction machine or hand-powered suction device may be used. An adaptor for a flexible catheter is required with a hand-powered suction device.• Excessive negative pressure may cause significant hypoxia, damage to tracheal mucosa or lung collapse.  |
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| **RIGID CATHETER (TONSIL TIP, YANKAUER)** **PROCEDURE** |
| **Skill Component** | **Key Concepts** |
| ⧫ Remove the oxygen source - *if applied* | • Oxygen delivery should be maintained on the patient until you are ready to suction.• A nasal cannula does not need to be removed for oropharyngeal suctioning. |

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| **Skill Component** | **Key Concepts** |
| ⧫ Connect a rigid catheter to suction tubing/device | • Keep the catheter in the package until you are ready to use it.• Provide a clean field for the catheter if you may need to use it again.  |
| **⧫** Open the patient’s mouth by applying pressure on the chin with the rescuer’s thumb | • Applying thumb pressure on the chin displaces the jaw forward. **DO NOT** use fingers to open the mouth. The crossed-finger technique may result in injury to the rescuer and may puncture the gloves.• **DO NOT** force the teeth open. Use a flexible catheter if unable to open the mouth.  |
| ⧫ Insert a rigid catheter into the patient’s mouth without applying suction | • The patient is not being oxygenated during this step so applying suction could deplete any oxygen reserve the patient may have. |
| ⧫ Advance the catheter gently into the oral cavity | • Never insert the catheter past the base of the tongue. This may stimulate the gag reflex, cause vomiting, and bradycardia. |
| ⧫ Suction while withdrawing the catheter using a circular motion around the mouth, pharynx and gum line***\*\* Maximum suction time of 5-15 seconds:***• ***Adults maximum 10-15 seconds***• ***Peds maximum of 5-10 seconds*** | • Suctioning for longer than the recommended timeframe may result in hypoxia. The maximum suction time depends on patient’s age and tolerance.• Rigid catheters are contraindicated in infants less than 1 year of age due to the incidence of bradycardia associated with their use. |
| ⧫ Replace the oxygen source or ventilate the patient at approximate rate of:• Adult – one (1) breath every 5-6 seconds or 10-12/min • Infants and Children – one (1) breath every 3-5 seconds or 12-20/min | • Follow the 2015 Emergency Cardia Care (ECC) Guidelines for ventilation rates for adults, children, and infants, |
| ⧫Evaluate for the patency of the airway after suctioning ***\*\*Monitor the patient’s pulse***‘ | • The signs and symptoms of hypoxia are: dysrhythmias, cyanosis, anxiety, bronchospasms, and changes in mental status. • Suctioning the airway may cause stimulation of the vagus nerve. Stimulation of the vagus nerve causes bradycardia. This is especially true in pediatric patients. Therefore, monitor the patient’s pulse after suctioning.• Allow patient to rest and regain adequate oxygen levels between suction attempts. |
| ⧫ Suction the remaining water into a canister,***\*\*Discard the canister*** ***\*\* Change gloves*** |  |
| ⧫ Discard the contaminated catheter into :***\*\*Discard into an approved receptacle*****OR*****\*\*Return the used catheter to package and place it in a clean area for future use*** | * Provide a clean field for the catheter if you may need to reuse it
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| **FLEXIBLE CATHETER (WHISTLE STOP, FRENCH)****PROCEDURE** |
| **Skill Component** | **Key Concepts** |
| ⧫ Measure the depth of catheter insertion from corner of mouth to the edge of ear lobe | • Never insert the catheter past the base of the tongue. This may stimulate the gag reflex and cause vomiting. |
| ⧫ Remove the oxygen source - *if applied* | • Oxygen should be maintained until you are ready to suction.• A nasal cannula does not need to be removed for oropharyngeal suctioning. |
| ⧫ Connect the flexible catheter to suction tubing/device | • Keep catheter in package until ready to use.• Provide a clean field for catheter if reuse is indicated. |
| ⧫ Open the patient’s mouth by applying pressure on the chin with your thumb | • Applying thumb pressure on the chin displaces the jaw forward. **DO NOT** use fingers to open the mouth. The crossed-finger technique may result in injury to the rescuer and may puncture gloves. • **DO NOT** force the teeth open. Use a flexible catheter if unable to open the mouth.  |
| ⧫ Insert the flexible catheter along the roof of the mouth without applying suction | • The patient is not being oxygenated at this time and applying suction could deplete any oxygen reserve present. |
| ⧫ Advance the catheter gently to depth measured | • **NEVER** insert the catheter past the base for the tongue. This may stimulate the gag reflex, cause vomiting, and bradycardia. |
| ⧫ Suction while withdrawing the catheter moving it from side to side around mouth, pharynx and gum line***\*\* Maximum suction time of 5-15 seconds:***• ***Adults maximum 10-15 seconds***• ***Children maximum of 5-10 seconds***• ***Infants – Up to 5 seconds*** | • Suctioning for longer than the recommended timeframe may result in hypoxia. The maximum suction time depends on patient’s age and tolerance. |
| ⧫ Replace the oxygen source **OR** ventilate patient at approximate rate of:• Adult – one (1) breath every 5-6 seconds or 10-12/min • Infants and Children – one (1) breath every 3-5 seconds or 12-20/min | • The range for pediatric patients varies due to a wide age range. • Follow the 2015 Emergency Cardiac Care (ECC) Guidelines for ventilation rates for adults, children, and infants, |
| ⧫Evaluate for the patency of the airway after suctioning ***\*\*Monitor the patient’s pulse***‘ | • The signs and symptoms of hypoxemia are: dysrhythmias, cyanosis, anxiety, bronchospasm, and changes in mental status. • If vagal stimulation occurs, the patient may experience bradycardia, especially pediatric patients.• Allow patient to rest and regain adequate oxygen levels between suction attempts. |
| ⧫ Suction the remaining water into canister, discard container and change gloves | • Rinse solution is contaminated and should be treated the same as secretions. |
| ⧫ Discard the catheter into an approved receptacle: - Coil the contaminated catheter around (dominant) gloved hand and pull the glove over catheter- Pull the glove from other hand over packaged catheter and discard in approved waste receptacle**OR**• Return the used catheter to its package and place it in a clean area for future use | * Provide a clean field for the catheter if you may need to reuse it
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| **BULB SYRINGE****PROCEDURE** |
| **Skill Component** | **Key Concepts** |
| ⧫ Prime the bulb syringe by squeezing out the air and hold in depressed position | • The bulb syringe acts as both the pump and collection container for manual suction. |
| ⧫ Open the patient’s mouth by applying pressure on the chin with your thumb | • Applying thumb pressure on the chin displaces the jaw forward. **DO NOT** use fingers to open the mouth. The crossed-finger technique may result in injury to the rescuer and may puncture gloves.  |
| ⧫ Insert tip of primed syringe into mouth and advance gently to back of mouth | • **DO NOT** insert the tip past the base of the tongue. This may stimulate the gag reflex, cause vomiting and bradycardia. |
| ⧫ Release pressure on bulb slowly to draw secretions into syringe |  |
| ⧫ Remove syringe from mouth |  |
| ⧫ Empty secretions into designated container by squeezing bulb several times | • All secretions are to be treated as contaminated waste.  |
| ⧫ Replace oxygen source or ventilate patient at approximate rate of:• Infants and Children – one (1) breath every 3-5 seconds or 12-20/min | • The rate for ventilating pediatric patients varies due to a large age range. |
| ⧫ Evaluate airway patency and heart rate - *repeat procedure if needed* | • The signs and symptoms of hypoxemia are: dysrhythmias, cyanosis, anxiety, bronchospasms, and changes in mental status. • If vagal stimulation occurs, the patient may experience bradycardia, especially pediatric patients.• Allow patient to rest and regain adequate oxygen levels between suction attempts. |
| ⧫ Rinse the bulb syringe with irrigation solution | • Rinsing the bulb syringe clears the secretions from the syringe which allows it to be prepared for additional suctioning. . The syringe can be flushed with Normal Saline or sterile water. |
| ⧫ Return the used bulb syringe to the package/container and place it in clean area for future use |  |
| ⧫ Discard the contaminated irrigation solution into a designated container***\*\*Change gloves*** | • The irrigation solution is contaminated and should be treated the same as secretions.* If you suspect the patient is suffering from an infectious disease, discard in an infectious waste receptacle
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| **RE-ASSESSMENT****(Ongoing Assessment** |
| **Skill Component** | **Key Concepts** |
| ⧫ Re-assess the patient a minimum of every **15 minutes or sooner:**• Primary assessment• Relevant portion of the secondary assessment• Vital signs: BP, P and RR***\*\*Manage patient condition as indicated.*** | • If the patient is stable, the patient should be re-assessed at least every 15 minutes or sooner. Unstable patients must be re-evaluated at least every five (5) minutes or sooner. * Evaluating and comparing results assists with recognizing if the patient is improving, responding to treatment, or if their condition is deteriorating.
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| **PATIENT REPORT AND DOCUMENTATION** |
| **Skill Component** | **Key Concepts** |
| § Verbalize/Document• Indication for suctioning• Oxygen liter flow• Patient’s tolerance of procedure• Problems encountered• Type of secretions:- color- consistency- quantity- odor• Respiratory assessment and heart rate:- respiratory rate- effort/quality- tidal volume- lung sounds | • Documentation must be on either the Los Angeles County EMS Report form or departmental Patient Care Record form, or ePCR. |

Developed: 12/02 Revised: 11/2018



AIRWAY EMERGENCY / AIRWAY MANAGEMENT

**SUCTIONING - OROPHARYNGEAL**

**Supplemental Information**

**INDICATIONS:** To clear the airway in patients who are unable to maintain a patent airway due to oral secretions.

• Excessive oral secretions (noisy respirations)

• Respiratory distress due to oral secretions/vomitus

• Prevent aspiration of secretions/vomitus

**COMPLICATIONS:**

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| • Hypoxia• Bronchospasm• Cardiac dysrhythmias• Hypotension | • Oral trauma/broken teeth • Infection/sepsis• Vomiting• Aspiration |

**CONTRAINDICATION:**

• Infants less than 1 year of age – use bulb syringe

**NOTES:**

• A clean technique must be maintained throughout suctioning procedure to prevent infection.

• Use rigid catheters with caution in conscious or semiconscious patients. Put the tip of the catheter in only as far as can be visualized to prevent activating the gag reflex.

• Rigid catheters are best for suctioning large amount of secretions or large particles.

• Hand-powered suction devices may be used as long as they have an adaptor for a flexible catheter.

• Pre-oxygenation may be required depending on patient’s condition. This offsets volume and oxygen loss during suctioning.

**PEDIATRIC CONSIDERATIONS:**

* Suctioning a pediatric patient requires taking the following factors into consideration
	+ The nose and mouth of infants and children are smaller and more easily obstructed.
	+ The tongue takes up more space proportionately in the mouth than in adults.
	+ The trachea is softer and more flexible.
	+ The trachea is narrower and is more likely to become obstructed.
	+ The chest wall is softer, and infants and children depend more than their diaphragm for breathing.
	+ Open the airway gently. The infant’s head should be placed in a neutral position and children only require slight neck extension. **DO NOT** hyperextend the neck because it may cause the trachea to collapse.
	+ Consider the use of an OP or NP airway when other measures fail to keep the airway open.
	+ A rigid tip catheter is contraindicated in infants < 12 months of age. If > 12 months, use a rigid tip suction catheter is permitted if the back of the oropharyngeal airway **IS NOT TOUCHED.**