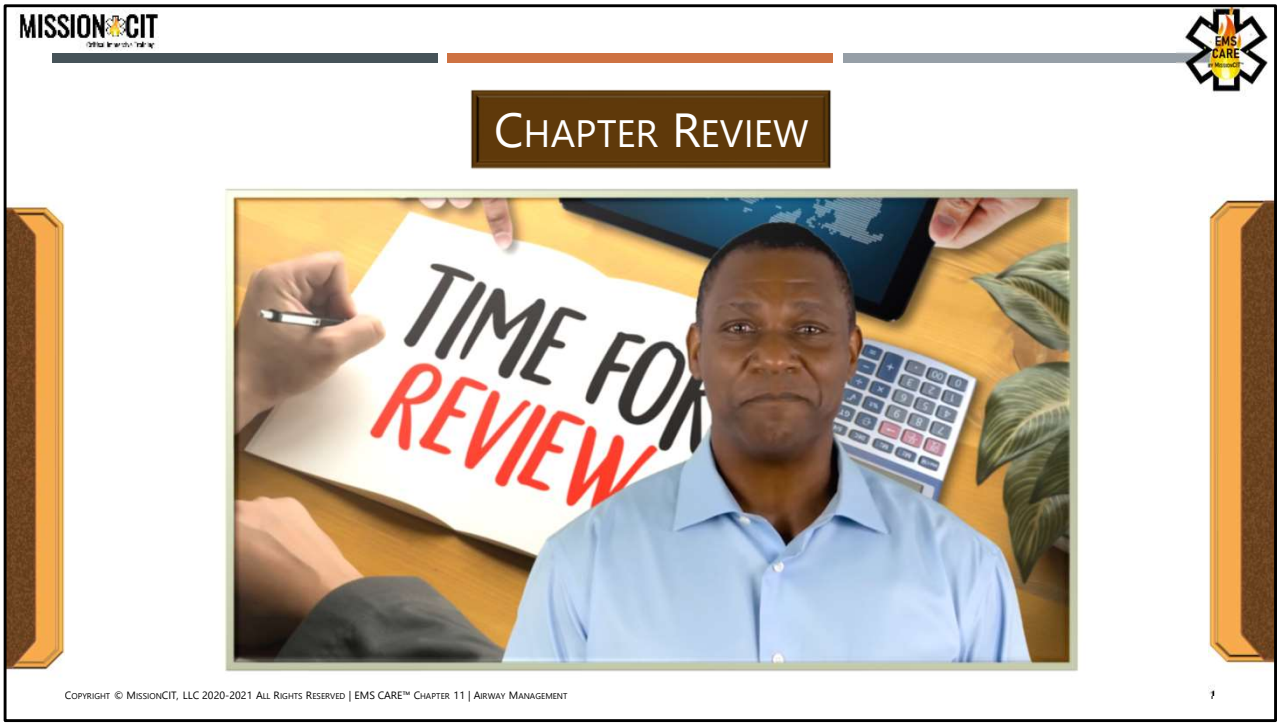


Missah and I, hope you are doing well, and ready to review this chapter on Airway Management. As there was a lot of material, we are going to keep this review short and crisp. Don't forget, you can go back to any of the lessons at your convenience.
The 7 lessons we covered in this chapter are:
Number one, Airway physiology. This explores the Physiology of the Upper and Lower Airways. Make sure you understand the relevant anatomy.
Next, we covered Airway Pathophysiology. Besides the pathophysiology, we focused on patent and inadequate airways. Be sure you understood the key concepts in the video on Responding to an Adult with an Obstructed Airway.
Third, we looked at various methods of Opening a blocked Airway. You should understand how, when and why to use the Jaw-Thrust and Head-Tilt Chin-Lift maneuvers.
Fourth, we covered Airway Adjuncts. You should know how and when to use an Oropharyngeal and Nasopharyngeal Airway, how to size and insert. There was a good video on the detailed use of an N P A as well.
In the fifth lesson, we looked at various Suctioning Techniques. You should understand how and when to use a Rigid Yankauer tip or Flexible suction catheter.
Lesson six focused on the challenges of Keeping an airway open; and knowing when to call for advanced life support. Be sure you know the LEMON, and BE FAST

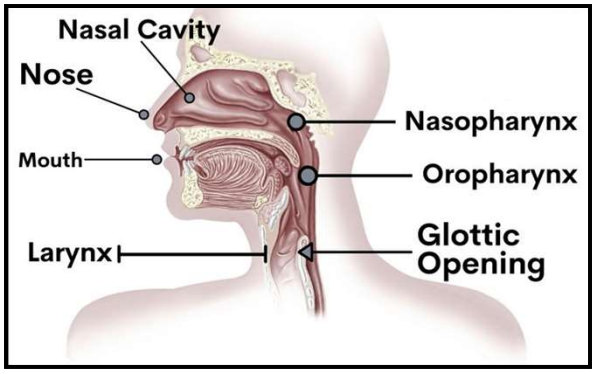
mnemonics.
And in lesson seven, we looked at four Special Considerations, concentrating on the differences in caring for infants, toddlers and adults.

After the upcoming review, there will be a test. You will need to score 75% or better to receive credit.
And please remember to sign up for a skills validation session.
Good studying.

MISSION CIT

CHAPTER REVIEW

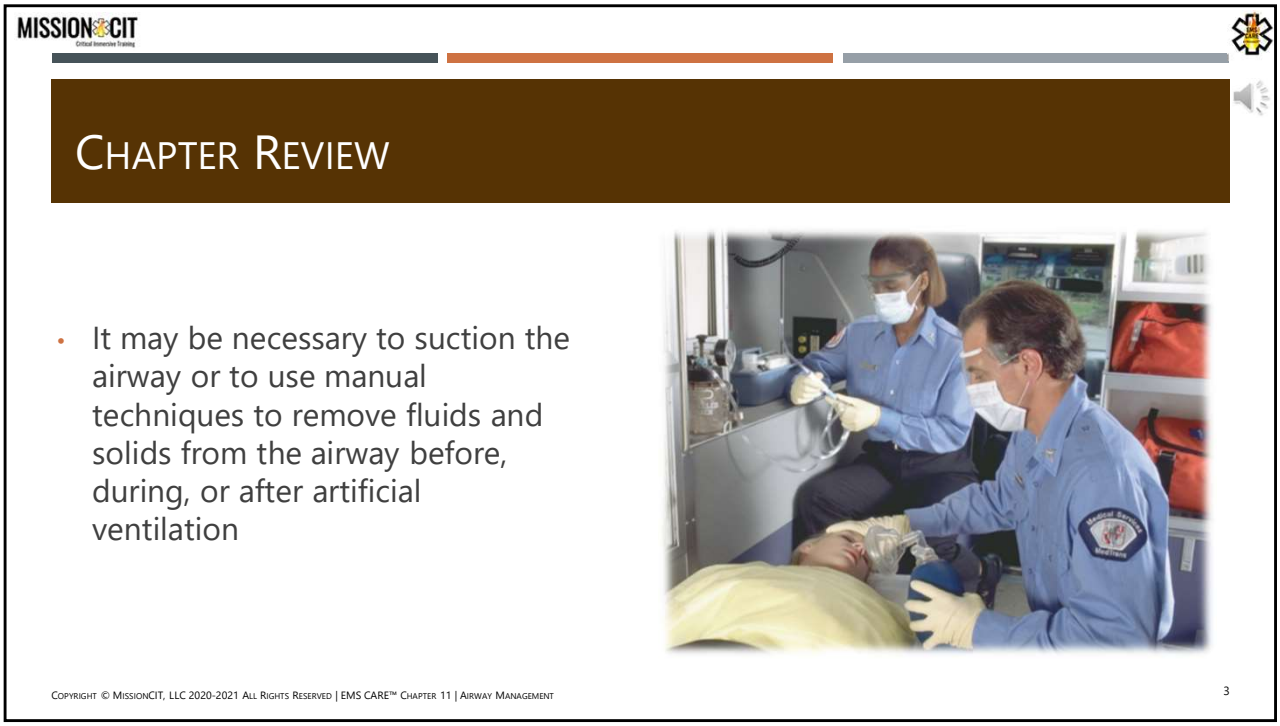
- The airway is the passageway by which air enters the body during respiration or breathing
- A patient cannot survive without an open airway
- Airway adjuncts – the oropharyngeal and nasopharyngeal airways – can help keep the airway open



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The airway is the passageway by which air enters the body during respiration or breathing. A patient cannot survive without an open airway, so this is job one for an EMT. Make sure you understand the relevant anatomy.
You should know how and when to use an Oropharyngeal and Nasopharyngeal Airway adjunct: and how to size and insert.
We also discussed nine Rules for Using Airway Adjuncts:

1. Use the O P A, only on patients not exhibiting a gag reflex.
2. Open the patient's airway manually before using the adjunct device.
3. When inserting the airway, take care not to push the patient's tongue into the pharynx.
4. Have suction ready prior to inserting any airway.
5. Do not continue inserting the airway if the patient gags.
6. Maintain the patient's head position after the adjunct insertion and monitor the airway.
7. Continue to be ready to provide suction if the fluid or blood obstructs the airway.
8. If the patient regains consciousness or develops a gag reflex, remove the airway immediately; and
9. Be sure to use strict infection control practices while maintaining the airway.



It may be necessary to suction the airway or to use manual techniques to remove fluids and solids from the airway before, during, or after artificial ventilation.

If you recall, during a patient assessment, there are five key indicators that secretions are present in the upper airway, which may be accessible via suction. These include:

1. Audible, upper airway transmitted sounds.
2. Muffling of a patient's voice by secretions.
3. Transmitted sounds when listening to the chest wall with a stethoscope.
4. Tactile fremitus or a vibration felt on the patient's chest during vocalization.
5. A Moist, rattling cough

Also, before you suction, there are contra-indicators and precautionary conditions to consider: Contraindicators are:

1. A Pharyngeal obstruction.
2. The Presence of acute pulmonary edema.
3. Base of the skull fractures which indicates the use of an Oropharyngeal Airway only. Hence, NPA and nasal suction are contraindicated.

Precautionary conditions include:

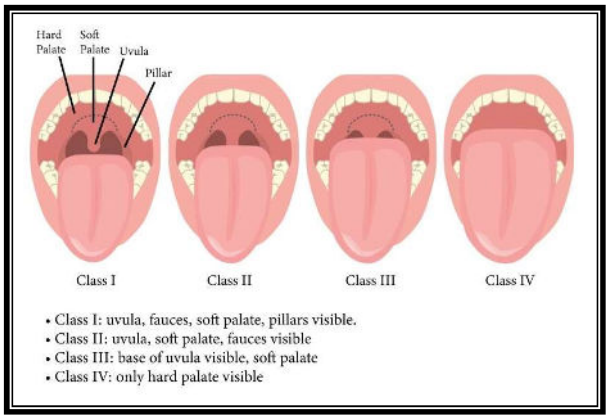
1. Bleeding risk.
2. Hemodynamic instability.
3. Hemoptysis.

4. Acute face, neck, or head injury.
5. Septal deviation and/or prior nasal surgery.
6. Children.
7. False teeth.
8. Recent oral surgery.

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REMEMBER

- Always use proper personal protective equipment when managing an airway
- Airway assessment must be an ongoing process. Airway status can change over time
- Airway management should start simply and become more complicated only if necessary



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Remember: Always use proper personal protective equipment when managing an airway. Keep in mind that Airway assessment must be an ongoing process as airway status can change over time.

Airway management should start simply and become more complicated only if necessary. We reviewed the BE FAST and LEMON mnemonics.

BE FAST stands for.

- B for Blood,
- E for Emesis or vomit.
- F is for Facial trauma.
- A is for Airway edema or swelling.
- I is for when immobilization of the spine or short neck is indicated.
- And T is for an enlarged Tongue.

the LEMON mnemonic is:

- L: Look externally; these include External indicators of either difficult intubation, or difficult ventilation, such as the presence of a beard or mustache, abnormal facial shape, extreme cachexia, edentulous mouth, facial trauma, obesity, large front teeth or “buck teeth”, high arching palate, receding mandible, or short bull neck.
- E: Evaluate the 3-3-2 rule; this is where 3 fingers between the patient’s teeth, where The patient’s mouth should open adequately to permit three fingers to be

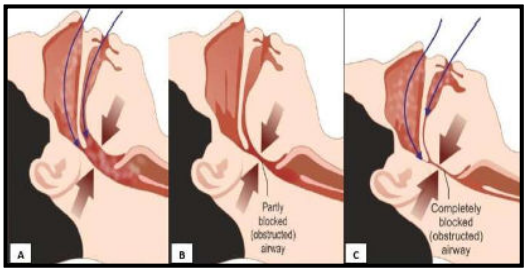
placed between the upper and lower teeth; 3 fingers between the tip of the jaw and the beginning of the neck or under the chin; and 2 fingers between the thyroid notch and the floor of the mandible or top of the neck.

- M: is for the Mallampati score; this refers to the four classes of the patient's mouth anatomy ranging from easy to difficult that we covered in a prior lesson.
- O: is for Obstruction such as a tumor, abscess, epiglottis, or expanding hematoma.
- N: is for Neck Mobility; Ask the patient to place their chin on their chest and to tilt their head backward as far as possible. Obviously, this will not be possible in the immobilized trauma patient.

MISSION CIT

QUESTIONS TO CONSIDER

- Name the main structures of the airway
- Explain why care for the airway is the first priority of emergency care
- Describe the signs of an inadequate airway
- No signs of breathing or air movement
- Evidence of foreign bodies in airway
- No air felt or heard
- Inability or difficulty speaking
- Unusual hoarse or raspy voice
- Absent, minimal, or uneven chest movement



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Some questions to consider. First, be sure you know the main structures of the airway. Next, understand why we emphasize that care for the airway is the first priority of emergency care.

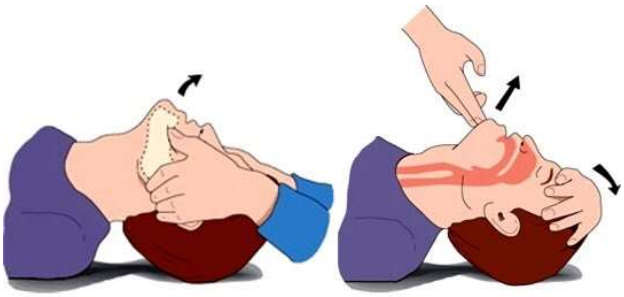
And we must be hyper-aware of the indicators of an inadequate airway that include:

- No signs of breathing or air movement
- Evidence of foreign bodies in the airway
- No air felt or heard
- Inability or difficulty speaking
- An unusual hoarse or raspy voice
- Absent, minimal, or uneven chest movement

MISSION CIT

QUESTIONS TO CONSIDER

- Explain when the head-tilt, chin-lift maneuver should be used and when the jaw-thrust maneuver should be used to open the airway – and why
- Explain how airway adjuncts and suctioning help in airway management



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So, it's critical to know when the head-tilt, chin-lift maneuver, or when the jaw-thrust maneuver should be used to open the airway—and why.

We covered that EMTs must evaluate the potential for head, neck, and spinal injury in order to choose the most appropriate method for opening an airway. Considerations include:

1. The Mechanism of injury known to cause such injuries.
2. Any injury at or above the level of the shoulders.
3. Requesting Family or bystanders to give information that may lead you to suspect an adverse condition.

While the head-tilt, chin-lift maneuver causes the neck and c-spine to move, but the jaw-thrust maneuver minimizes neck movement.

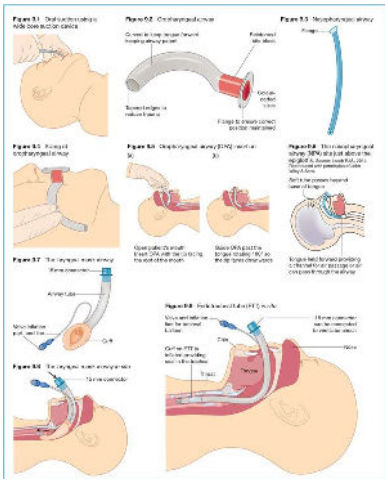
Then, we covered if the physical maneuvers are insufficient, we need to use Adjuncts to help create a channel for air into the lungs.

And when adjuncts are not enough, we learned how Suctioning clears liquids out of the path of air, and prevents aspiration of those liquids into the lungs.

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CRITICAL THINKING

- On arrival at the emergency scene, you find an adult female patient with gurgling sounds in the throat and inadequate breathing slowing to almost nothing
- How do you proceed to protect the airway?
- Treatment options:
  - ✓ Suctioning
  - ✓ Position
  - ✓ Airway Adjunct
  - ✓ Positive Pressure Ventilation

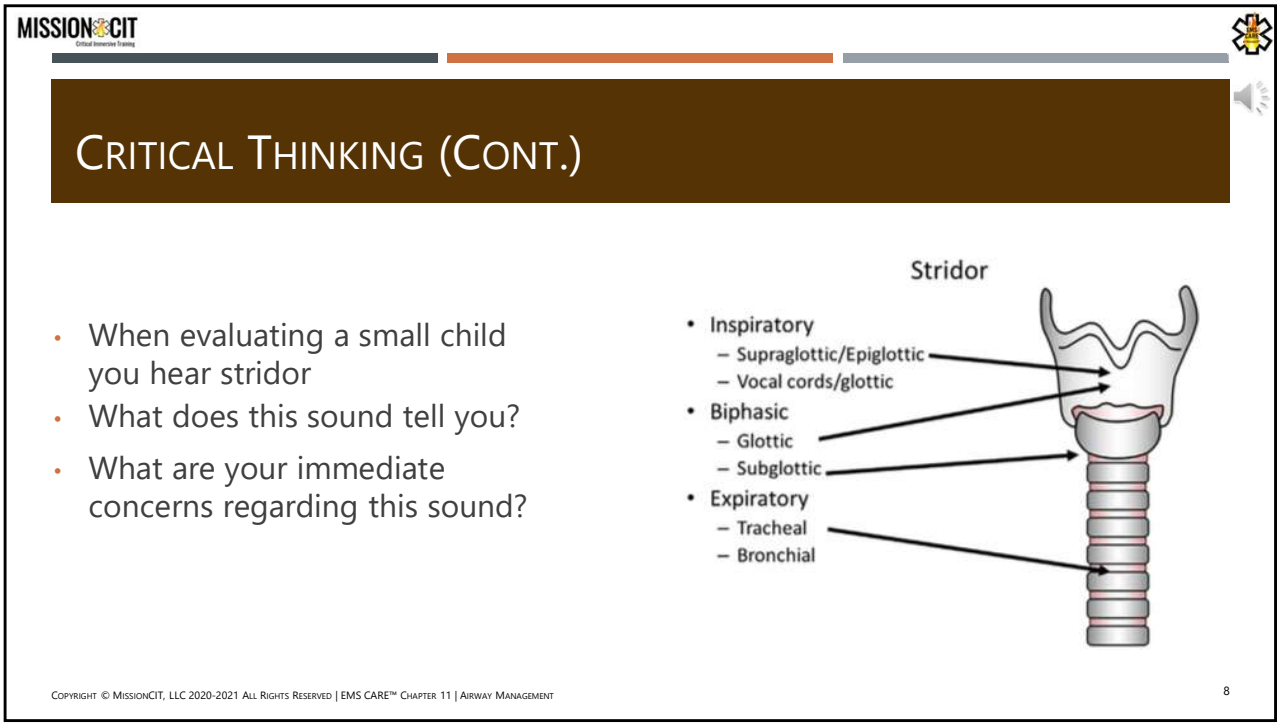


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So, let's start to think about real world situations. Consider, on arrival at the emergency scene, you find an adult female patient with gurgling sounds in the throat, and inadequate breathing slowing to almost nothing.
How do you proceed to open and protect the airway? Your treatment options are:

1. Suctioning.
2. Position.
3. Use of an Airway Adjunct.
4. Positive Pressure Ventilation.

You may engage others on the forum, or reach out to your instructor to discuss.



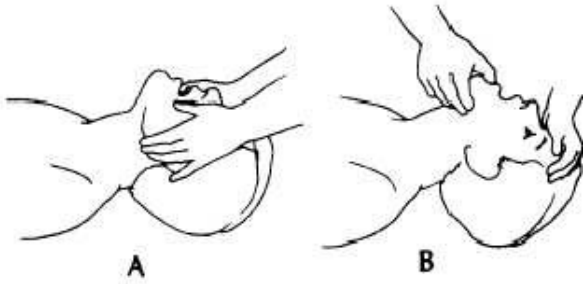
Now, consider that when evaluating a small child, you hear stridor. What does this sound tell you? What are your immediate concerns regarding this sound?
So, stridor indicates a partially obstructed airway. Immediate concerns include the fact that this airway is threatened and could become completely obstructed.
The sudden onset of respiratory distress and stridor, can suggest an upper airway obstruction. However, the causes of upper airway obstruction are numerous. Airway obstructions can be caused by foreign bodies, loss of muscle tone, or swelling in the airway.
Here are three obstructions that may interfere with air flow:

1. Foreign bodies such as food, and small toys.
2. Liquids including blood, and vomit.
3. Obstruction may also result from poor muscle tone caused by altered mental status.

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CRITICAL THINKING (CONT.)

- When assessing an unconscious patient, you note snoring respirations
- Should you be concerned with this and if so, what steps can you take to correct this situation?



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When assessing an unconscious patient, you note snoring respirations. Should you be concerned with this and if so, what steps can you take to correct this situation? So, snoring indicates at a minimum, airway impedance, and at its worst, poor muscle control of the airway. Typically, better positioning and/or insertion of an airway adjunct will resolve this problem.

Now, as we complete the chapter, be sure you are comfortable with these six key core concepts:

- Number 1, the Physiology of the airway.
- Number 2, the Pathophysiology of the airway.
- Number 3, How to recognize an adequate or an inadequate airway.
- Number 4, How to open an airway.
- Number 5, How to use airway adjuncts.
- And number 6, the Principles and techniques of suctioning.

So that's it. Be sure to sign up for your skills validation session.

Missah and I wish you good studying and good testing!