1. **GOAL OF PREOXYGENATION**: Preoxygenation extends the duration of safe apnea and is recommended for every tracheal intubation in the emergency department (ED).

2. **BEST SOURCE OF HIGH FiO₂**: Standard reservoir facemasks with the flow rate of oxygen set as high as possible are the recommended source of high FiO₂ for preoxygenation in the ED.

3. **LENGTH OF PREOXYGENATION**: Patients with an adequate respiratory drive should receive preoxygenation for 3 minutes or take 8 breaths, with maximal inhalation and exhalation.

4. **AUGMENTING PREOXYGENATION BY INCREASING MEAN AIRWAY PRESSURE**: Continuous positive airway pressure masks, noninvasive positive pressure ventilation, or positive end expiratory pressure valves on a bag-valve-mask device should be considered for preoxygenation and ventilation during the onset phase of muscle relaxation in patients who cannot achieve saturations above 93%-95% with high FiO₂.

5. **PATIENT POSITIONING**: Patients should receive preoxygenation in a head-elevated position whenever possible. For patients immobilized for possible spinal injury, a reverse Trendelenburg position can be used.

6. **TIME TO DESATURATION**: Given the unique variables involved in each ED tracheal intubation, it is impossible to predict the exact duration of safe apnea in a patient. Patients with high saturation levels on room air or after oxygen administration are at lower risk and may maintain adequate oxygen saturation as long as 8 minutes. Critically ill patients and those with values just above the steep edge of the desaturation curve are at high risk of hypoxemia with prolonged tracheal intubation efforts and may desaturate immediately.

7. **EFFECT OF APNEIC OXYGENATION**: Apneic oxygenation can extend the duration of safe apnea when used after the administration of sedatives and muscle relaxants. A nasal cannula set at 15 L/minute is the most readily available and effective means of providing apneic oxygenation during tracheal intubations performed in the ED.

8. **MANUAL VENTILATIONS DURING THE APNEIC PERIOD**: The risk/benefit of active ventilation during the onset phase of muscle relaxants must be carefully assessed in each patient. In patients at low risk for desaturation (> 95% saturation), manual ventilation is not necessary. In patients at higher risk (91%-95% saturation), a risk–benefit assessment should include an estimation of desaturation risk and the presence of pulmonary pathology. In hypoxemic patients, low-pressure, low-volume, low-rate ventilations will be required.

9. **PATIENT POSITIONING DURING THE APNEIC PERIOD**: Patients should be positioned to maximize upper airway patency before and during the apneic period, using ear-to-ster nal notch positioning. Nasal airways may be needed to create a patent upper airway. Once the apneic period begins, the posterior pharyngeal structures should be kept from collapsing backward by using a jaw thrust. Cricoid pressure may negatively affect apneic oxygenation; however, to our knowledge, studies examining this question in the setting of modern emergency airway management do not exist.
10. **EFFECT OF VARIOUS PARALYTIC AGENTS ON PREOXYGENATION**: In patients at high risk of desaturation, rocuronium may provide a longer duration of safe apnea than succinylcholine.