

# Emergency Medical Services/Emergency Room Information

## SHORTNESS OF BREATH .....OXYGEN and ALS

- **Oxygen given alone may depress respiratory drive in ALS, causing elevated CO<sub>2</sub>, leading to respiratory failure.** Often lungs are healthy, but respiratory muscles including the diaphragm, may be weak.
- If shortness of breath or low oxygen saturation (SpO<sub>2</sub>) is present, may use supplemental O<sub>2</sub> with close monitoring of patient.
- **Use pulse oximetry and capnography for monitoring.**
- Non-invasive ventilation (Bipap™ or Trilogy™) **or bag-valve-mask assisted breathing** should be used to expel CO<sub>2</sub> and increase SpO<sub>2</sub>. **CPAP is contraindicated as it may increase the work of breathing.**
- Bleeding in oxygen to non-invasive ventilator is best for adding oxygen, thereby increasing SpO<sub>2</sub> while keeping CO<sub>2</sub> down.

## VENTILATION

- Non-invasive ventilation may help avoid the necessity of invasive ventilation.  
**Note: Weaning/extubation is often difficult or impossible once invasive ventilation is initiated.**
- If patient is on non-invasive ventilation at home, **bring equipment, tubing and mask and use enroute as required.** The caregiver will know how to use it and may better understand speech while wearing it. **If possible, caregiver should accompany patient on the ambulance.**
- If using ambulance or hospital non-invasive ventilator, consider beginning use at same settings as home equipment to start, then titrate.
- If new to non-invasive ventilation, therapy might be started with beginning pressures of 10/5 and backup respiratory rate of 10 via mask, then titrate as needed for efficacy.

## AVOIDANCE OF MEDICATIONS CAUSING RESPIRATORY DEPRESSION

- Avoid paralytic or general anesthetics, narcotics, muscle relaxants or other sedation unless absolutely necessary as they may dangerously decrease respiratory drive.
- **If meds must be used, the ability to rapidly assist ventilation should be available.**

## ORTHOPNEA

- Lying supine may cause SOB due to respiratory muscle weakness, perhaps resulting in CO<sub>2</sub> retention and low SpO<sub>2</sub>.
- If lying flat is necessary, wearing non-invasive ventilator (Bipap™) would likely help breathing, though protection of airway should be monitored.

## AIRWAY PROTECTION

- Aspiration is a danger and may be the cause of SOB. Many patients have decreased ability to protect their airway.
- Have a suction machine available and set up, oral secretions may be excessive.
- If a gastrostomy tube is in place, consider using for administration of “oral” medications, as appropriate.
- Swallowing may be compromised, evaluate prior to PO intake. Patient/caregiver may have prior recommendations.

## COMMUNICATION

- Dysarthria is common including slurring, slowness, inability to speak at all. Do NOT assume alcohol or drug use.
- Speak in a normal voice and **allow time to communicate.** Yes/no questions may be best. Speech boards and other devices may be utilized.
- Avoid separating patient from caregiver, they are knowledgeable about speech, treatment needs and equipment.
- If possible, allow caregiver to be present during interventions to assure appropriate handling and communication.
- **If patient is left alone ensure they have call system that they can use.** Many patients cannot push a button, consider alternative system, for example pillow, tent or microlight switch for use with head or other body part.

## TRANSFERS AND POSITIONING

- Use caution moving; muscles may be atrophied or stiff and range of motion limited. The caregiver can guide.
- Gait may be unsteady from ALS, take precautions as needed.