

# Non-invasive lung ventilation/secondary school (nurse)

Possibility to perform pulmonary ventilation techniques without the need for invasive airway securing – using an oxygen mask with a sealing cuff or using an oxygen helmet.

## ***Non-invasive lung ventilation (NIPV) has the task of:***

- In the short term, → reduce respiratory rate, increase volume, improve gas exchange and reduce the patient's breathing work.
- In the long term, → an increase in the quality of sleep, a better quality of life, an increase in survival time.

### **Most often used:**

- CPAP therapy.
- Ventilation by positive pressure.
- diaphragmatic stimulation.

## **Indication**

- Acute respiratory failure, pulmonary edema.
- COPD.
- Sleep apnea.
- Neurological onem., condition after encephalitis.
- Patients prior to lung transplantation in the terminal stage.
- Myopathy.

## ***Contraindications:***

- Circulatory instability, AIM.
- Risk of aspiration.
- Inability to clear your throat.
- Mask leakage.
- Uncooperative and aggressive sick.

## **Indications for**

- Mask intolerance.
- Progression of the state within 30 min. to 1h, development of circulatory instability, deterioration of consciousness.
- Inability to clear your throat.

## **Complications**

- Skin defects, erythema in the face, soreness.
- Drying of mucous membranes with insufficient moisturizing.
- Distension of the stomach.
- Leakage of breathing mixture.

## **Design**

1. Patient education – explanation of the procedure and reason for NIVS, agreement on the method of communication.
2. Mask preparation – size and fan selection – mode selection and humidification.
3. Patient monitoring.
4. Semi-sitting position.
5. Connect the mask to the fan and start mode.
6. Putting on and fixing the mask on the patient's face.
7. We are increasing pressure support and PEEP gradually.
8. Adjustment of alarms and parameters.
9. Checking the effectiveness of NIVS – in case of poor toleration of ventilation, light sedatives can be administered.

## **Links**

## **Related articles**

- Overview of airway provision
- Intubation – in children
- Endotracheal intubation
- Difficult intubation
- Tracheostomy
- Coniotomy
- Laryngospasm
- Artificial lung ventilation/secondary school (nurse)
- Patient/client monitoring at UPV/high school (nurse)
- Oxygen therapy
- PEEP
- Lung volumes

## References

- DOSTÁL, Pavel. *Basics of artificial lung ventilation..* 2nd., extended edition edition. 2005. ISBN 80-7345-059-3.