

DISEASE / PATHOLOGY

- Inadequate oxygen delivery to tissues. It may result from low oxygen level, poor ventilation, low hemoglobin, poor circulation, or impaired cellular use.
- Hypoxemia = low oxygen in blood; hypoxia = low oxygen at tissue level.

RISK FACTORS

- Airway obstruction, pneumonia, COPD/asthma, PE, shock, anemia, CO poisoning, opioid/sedative use.
- High altitude, heart failure, trauma, sepsis, post-op atelectasis, aspiration.

SIGNS AND SYMPTOMS

- Early: restlessness, anxiety, tachycardia, tachypnea, mild confusion.
- Late: cyanosis, bradycardia, hypotension, decreased LOC, dysrhythmias, respiratory arrest.

DIAGNOSTIC TESTING

- SpO₂, ABG, lung sounds, CXR, hemoglobin, ECG, capnography if ventilated/sedated.
- Assess skin color/temp, mental status, work of breathing, perfusion, and response to oxygen.

TREATMENT

- Open airway, position high-Fowler, apply oxygen, encourage cough/deep breathing, suction if needed.
- Notify provider/rapid response for worsening distress, altered LOC, chest pain, or poor response to oxygen.

PATIENT EDUCATION

- Teach prescribed oxygen use, breathing exercises, incentive spirometer, smoking cessation, and medication adherence.
- Seek emergency care for severe shortness of breath, blue color, confusion, or chest pain.

ADDITIONAL NOTES:

- NCLEX: mental status changes are a priority oxygenation cue.
- For COPD, use ordered oxygen target; do not withhold oxygen from a severely hypoxic patient.