

DISEASE / PATHOLOGY

- Air enters the pleural space and cannot escape, creating a one-way valve effect.
- Primary process: rising intrathoracic pressure collapses the lung and shifts the mediastinum.
- Why it matters: decreases venous return and can cause obstructive shock or arrest.

RISK FACTORS

- Who is most at risk? Trauma patients, ventilated patients, existing pneumothorax.
- History / exposure: chest procedures, penetrating injury, rib fracture.
- Genetics / lifestyle: underlying lung disease increases risk.
- Can be caused by PPV like CPAP and BiAP with an existing pneumothorax

SIGNS AND SYMPTOMS

- Hallmark findings: severe dyspnea, absent breath sounds on one side, chest pain.
- Early: tachycardia, low SpO₂, anxiety, respiratory distress.
- Late / urgent: hypotension, JVD, tracheal deviation, cyanosis, collapse.

DIAGNOSTIC TESTING

- Tests, labs, imaging, procedures: bedside assessment, pulse oximetry, ultrasound if available.
- Gold standard: clinical recognition in an unstable patient.
- What confirms it: classic findings with rapid deterioration; do not delay for x-ray.

TREATMENT

- First-line: assess ABCs first and call for immediate help.
- Prepare for needle decompression followed by chest tube placement.
- Give high-flow oxygen and support ventilation as needed.
- Nursing considerations: continuous monitoring for shock and arrest.
- Nursing need-to-know: treat first, image later if unstable.
- Nursing need-to-know: absent breath sounds plus hypotension is a major clue.

PATIENT EDUCATION

- Home care: follow provider instructions after treatment and avoid smoking.
- Understand recurrence warning signs.
- When to call: any sudden chest pain or shortness of breath is an emergency.

ADDITIONAL NOTES:

- NCLEX must know: this is a medical emergency.
- Red flag: tracheal deviation with hypotension.
- Common exam trap: tension pneumothorax is more emergent than simple pneumothorax.
- Priority action: prepare for immediate decompression.