

# Acute Shortness of Breath - Practical ED and Ward Guide

Stepwise assessment, focused investigations and immediate actions. Pocket PDFs and checklists included.

## Why this matters

- Acute breathlessness is a common emergency presentation and can hide life threatening problems.
- A simple repeatable approach reduces missed diagnoses and speeds correct treatment.

## Rapid triage and red flags (first 60 seconds)

- Assess airway and breathing. If not maintained, secure airway and give oxygen.
- Assess perfusion. Systolic blood pressure below 90 mmHg or signs of shock require urgent resuscitation.
- Immediate red flags: severe hypoxia, severe respiratory distress, silent chest, new cyanosis, sudden chest pain with collapse, massive hemoptysis.
- If any red flag is present, call senior help and the resuscitation team immediately.

## Rapid bedside assessment (first 5 minutes)

- Look - work of breathing, accessory muscle use, chest wall symmetry, cyanosis.
- Listen - breath sounds both sides, wheeze, crackles, absent sounds.
- Hands on - SpO2, respiratory rate, blood pressure, capillary refill, temperature.
- Quick tests - 12-lead ECG, portable chest X-ray, point of care lung ultrasound if available.
- ABG or VBG plus lactate when severely unwell. Use the ABG flowchart for interpretation.

## Think of the five big categories

- Airway obstruction - foreign body, severe allergic reaction.
- Breathing problems - asthma, COPD exacerbation, pneumothorax, pneumonia.
- Circulation problems - acute heart failure, myocardial infarction, massive pulmonary embolism.
- Disability or metabolic causes - severe anaemia, acidosis, sepsis.
- Drugs and toxins - opioid overdose, poisoning.

## Focused investigations and how to use them

- Pulse oximetry and arterial blood gas for oxygenation and ventilation status.
- 12-lead ECG for ischaemia, arrhythmia or right heart strain.
- Portable chest X-ray for consolidation, effusion, pneumothorax and lines.
- Point of care ultrasound for pneumothorax, pleural effusion, interstitial syndrome and focused echo.
- D-dimer using clinical probability and age adjusted thresholds for pulmonary embolism where appropriate.
- Microbiology tests and blood cultures when infection is suspected. Start appropriate antibiotics guided by local antibiogram.

## Immediate management pathways - common scenarios

- Acute heart failure with pulmonary oedema: sit upright, high flow oxygen if needed, IV loop diuretics and consider CPAP.
- Pneumonia with hypoxia: oxygen to target saturations, blood cultures then empiric antibiotics guided by local antibiogram.
- Suspected pulmonary embolism: assess probability, use age adjusted D-dimer if low probability, and CT pulmonary angiogram if indicated. Consider thrombolysis for massive PE with haemodynamic compromise.
- Severe asthma or COPD exacerbation: bronchodilators, oxygen targets per COPD guidance, nebulised therapy and systemic steroids.
- Respiratory failure from sepsis or ARDS: follow sepsis bundle, consider high flow nasal oxygen or early intubation based on work of breathing and gas exchange.

## Practical trolley checklists

- Rapid ABC checklist for breathless patient.
- ABG quick interpretation flowchart for acid-base and ventilation checks.
- ECG checklist for right heart strain and ischaemia.
- Emergency drugs cheat sheet for immediate pharmacologic actions.

## Pocket PDFs and product links

- ABG flowchart PDF: [https://cdn.shopify.com/s/files/1/0916/2388/3028/files/abg\\_in\\_terpretation\\_flowchart.pdf?v=1758260914](https://cdn.shopify.com/s/files/1/0916/2388/3028/files/abg_in_terpretation_flowchart.pdf?v=1758260914)
- ECG cheat sheet PDF: [https://cdn.shopify.com/s/files/1/0916/2388/3028/files/ecg\\_quick\\_guide\\_cheatsheet.pdf?v=1758261317](https://cdn.shopify.com/s/files/1/0916/2388/3028/files/ecg_quick_guide_cheatsheet.pdf?v=1758261317)
- Antibiotics quick guide PDF: [https://cdn.shopify.com/s/files/1/0916/2388/3028/files/antibiotics\\_quick\\_guide\\_cheatsheet.pdf?v=1758260319](https://cdn.shopify.com/s/files/1/0916/2388/3028/files/antibiotics_quick_guide_cheatsheet.pdf?v=1758260319)
- Emergency drugs cheat sheet PDF: [https://cdn.shopify.com/s/files/1/0916/2388/3028/files/emergency\\_drugs\\_cheatsheet.pdf?v=1758261849](https://cdn.shopify.com/s/files/1/0916/2388/3028/files/emergency_drugs_cheatsheet.pdf?v=1758261849)
- OSCE checklists PDF: [https://cdn.shopify.com/s/files/1/0916/2388/3028/files/osce\\_mastery\\_checklists.pdf?v=1758262171](https://cdn.shopify.com/s/files/1/0916/2388/3028/files/osce_mastery_checklists.pdf?v=1758262171)
- Product bundles: <https://medicalnotes.in/products/1453-premium-medical-books-bundle> and <https://medicalnotes.in/products/all-21-medical-notes-bundle-first-1000-95-discount-applied>

## References

- NICE clinical resources - Breathlessness topic ([nice.org.uk](https://www.nice.org.uk)).
- ESC Guidelines - Pulmonary embolism diagnosis and management ([escardio.org](https://www.escardio.org)).
- Surviving Sepsis Campaign - Sepsis and ARDS guidance ([survivingsepsis.org](https://www.survivingsepsis.org)).
- BTS and NICE asthma guidelines.

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