EXHALE ACADEMY CSE CHEAT SHEET #1

CSE EXAM STRUCTURE

Scenario -> Information Gathering -> Decision Making

1) SCENARIO

The scenario sets the patient, location, and problem. Read it like a mini chart, not like a random test stem.

- Age and setting: adult, pedi, neonatal, ER, ICU, home, delivery room.
- Chief complaint and appearance: distress, cyanosis, stridor, trauma, mental status.
- History and current event: COPD, CHF, burn, infection, surgery, overdose.

2) INFORMATION GATHERING

Choose the information that will change your next decision. Do not click everything.

- Start with what is visible and bedside.
- Use ABG/CXR/labs when they confirm the clinical pattern.
- Special tests must be specific to the case.

3) DECISION MAKING

Now choose the safest next action. Sometimes the perfect answer is not listed, so pick the best available option.

- Treat the main problem, not a random symptom.
- Reassess after the patient responds.
- Expect the case to cycle through several decisions.

EMERGENCY RULE

Unstable patient = act now. Do not keep gathering data while the airway, breathing, or circulation is failing.

- Severe distress, cyanosis, apnea, altered LOC.
- Stridor or airway burn.
- Tension pneumothorax clues.
- Severe acidosis or ventilatory failure.

COMMON MISTAKES

Students lose points by treating the CSE like a checklist. It is a patient-management exam.

- Over-clicking unnecessary choices.
- Ordering advanced tests before basics.
- Waiting too long to ventilate.
- Ignoring the scenario directions.

EXHALE MEMORY LINE

Look first. Decide if it is urgent. Gather only what matters. Treat the main problem.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #2

INFORMATION GATHERING

What to click, what to skip, and when to stop.

CLICKING ORDER

- Visual: color, general appearance, respiratory pattern, posture, sensorium.
- Bedside: SpO2, pulse, BP, breath sounds, percussion, trachea, capnometry.
- Basic tests: ABG, CXR, CBC, electrolytes, 12-lead EKG when indicated.
- Special tests: CT, V/Q, bronchoscopy, PFT, ICP, sweat chloride, Apgar, hemodynamics.

ALWAYS ASK

Before each click, force the choice to earn its place.

- Is the patient stable enough to gather more data?
- Is this quick, safe, and relevant?
- Will it change what I do next?
- Is a simpler bedside clue available first?

HIGH-YIELD PICKS

- ABG: acid-base, oxygenation, ventilation, failure.
- CXR: infiltrates, pneumothorax, tube placement, trauma.
- MIP/NIF and VC: neuro weakness or weaning.
- Sputum/CBC: fever, infection, colored secretions.
- Co-oximetry: suspected carbon monoxide poisoning.

STOP GATHERING WHEN

- The patient cannot protect the airway.
- Severe respiratory distress is obvious.
- Signs point to tension pneumothorax.
- Upper airway obstruction is developing.
- ABG shows severe ventilatory failure.

AVOID

- PFTs during an acute severe exacerbation.
- Unrelated urine/lab tests.
- Advanced imaging without a reason.
- Delaying emergency treatment for confirmatory testing.

EXHALE MEMORY LINE

Look -> Bedside -> Basic Tests -> Special Tests -> Decide.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #3

DECISION MAKING

THE GOAL

Decision Making tests whether you can convert data into action. You are managing the patient, not proving how much you know.

- Identify the primary problem.
- Choose the safest next step.
- Treat urgent threats first.
- Reassess after each intervention.

MATCH THE CLUE

- Wheezing from bronchospasm -> bronchodilator.
- Wheezing with CHF signs -> CPAP/BiPAP and diuresis.
- Rhonchi/secretions -> suction or bronchial hygiene.
- Dull percussion/consolidation -> lung expansion therapy.
- Stridor -> upper-airway support, racemic epi/cool mist if appropriate.

ABG DECISIONS

- Low pH + high $PaCO_2$ -> ventilatory failure; support ventilation.
- Chronic high CO_2 with compensated pH -> avoid aggressive oxygen/intubation unless failing.
- Severe hypoxemia despite high FiO_2 -> add PEEP/CPAP and treat cause.
- Metabolic problem -> support ventilation and treat underlying cause.

BEST AVAILABLE ANSWER

The exact answer you want may not be listed. Do not freeze. Select the option that most directly improves patient safety.

- Rule out harmful options first.
- Avoid unfamiliar choices unless all others are clearly worse.
- Only select multiple answers when directed.

RED FLAGS

- Physician disagrees: stay calm and select the next best option.
- Do not choose treatments unrelated to the cause.
- Do not delay airway/ventilation for comfort measures.
- Do not treat a number while ignoring the patient.

EXHALE MEMORY LINE

Problem -> Cause -> Safest action -> Reassess.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #4

EMERGENCY ALGORITHM

Stable vs unstable: when to act immediately

UNSTABLE CLUES

- Severe respiratory distress, cyanosis, apnea, gasping.
- Altered mental status, obtunded, unresponsive, unable to protect airway.
- Severe acidosis, rising $PaCO_2$, falling pH.
- Stridor, facial burns, sooty secretions, airway swelling.
- Hypotension/bradycardia after chest trauma.

ACT NOW ACTIONS

- Airway positioning and suction as needed.
- 100% oxygen for severe distress, trauma, smoke inhalation, CO poisoning.
- Bag-mask ventilation if apnea or inadequate breathing.
- Intubation/mechanical ventilation for failure or airway protection.
- Needle decompression/chest tube for tension pneumothorax signs.

STABLE PATHWAY

- Gather visual and bedside information.
- Confirm with ABG/CXR/labs when indicated.
- Choose treatment based on the cause.
- Reassess response and adjust.

DO NOT WAIT FOR

- Chest x-ray when tension pneumothorax is obvious.
- PFTs during severe distress.
- Lengthy history when the airway is closing.
- Extra labs when ventilation is failing.

REASSESSMENT TARGETS

- Work of breathing improves.
- SpO_2/PaO_2 improves.
- pH and $PaCO_2$ trend safer.
- Mental status improves.
- Heart rate and respiratory rate normalize.

EXHALE MEMORY LINE

If unstable: support airway, breathing, circulation first. If stable: gather targeted data.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #5

CSE SCORING RULES

POINT MINDSET

Every click has value. Helpful choices can gain points; unnecessary or harmful choices can lose points.

- A high-value choice is necessary for safe care.
- A useful choice supports the diagnosis or next action.
- A neutral choice does not help or hurt much.
- A harmful choice delays care or risks the patient.

OVER-CLICKING

The CSE punishes shotgun clicking. More data is not automatically better.

- Clicking all options can expose you to negative points.
- Choose what matches the disease pattern.
- Skip tests that will not change the next decision.

DANGEROUS CHOICES

- Delaying emergency treatment.
- Ordering contraindicated or invasive tests without a reason.
- Giving therapy that worsens the patient.
- Ignoring oxygenation or ventilation failure.

SAFE SCORING HABITS

- Read the scenario directions carefully.
- Prioritize visual and bedside findings first.
- Use ABG/CXR/labs to confirm, not to fish.
- Act immediately in emergencies.
- Pick the best available response.

STUDENT TRAP

Do not choose an answer just because it sounds advanced. The CSE rewards appropriate care, not fancy care.

- Simple oxygen can be correct.
- Basic suction can be correct.
- Bedside assessment can be more valuable than imaging.

EXHALE MEMORY LINE

Score like a clinician: click less, think more, act when safety demands it.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #6

COPD CONSERVATIVE MANAGEMENT

RECOGNIZE COPD

- Long smoking history or chronic lung disease.
- Dyspnea, cough, wheezing, barrel chest, accessory muscles.
- Obstructive PFT pattern: low flow rates, low FEV1/FVC.
- Air trapping/hyperinflation and chronic CO_2 retention may appear.

GATHER

- General appearance, respiratory pattern, color, SpO_2.
- Breath sounds: wheezes, rhonchi, diminished sounds.
- ABG if oxygenation/ventilation status is needed.
- CXR if exacerbation, infection, or other cause suspected.
- Sputum/CBC only when infection clues are present.

TREATMENT CORE

- Smoking cessation and education.
- Pulmonary rehab and trigger avoidance.
- Low-flow oxygen when hypoxemic; avoid over-oxygenation in chronic retainers.
- Bronchodilators for airflow obstruction.
- Inhaled steroids for frequent exacerbations when appropriate.

OXYGEN TARGET THINKING

COPD students often panic over oxygen. The goal is not no oxygen; the goal is controlled oxygen when needed.

- Use low-flow oxygen or controlled FiO_2.
- Monitor mental status and ABG response.
- Escalate if acidosis or work of breathing worsens.

AVOID

- Antibiotics without infection clues.
- Mucolytics as a default COPD answer.
- Ignoring rising $PaCO_2$ and decreasing pH.
- Treating chronic compensated COPD like acute failure.

EXHALE MEMORY LINE

Stable COPD: controlled oxygen, bronchodilation, education, rehab, and watch for failure.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #7

EMPHYSEMA VS CHRONIC BRONCHITIS

Classic COPD comparison

EMPHYSEMA

Think: air-trapping and alveolar wall destruction. Often described as the classic pink puffer pattern.

- Thin appearance, barrel chest, pursed-lip breathing.
- Severe dyspnea and accessory muscle use.
- Diminished breath sounds, prolonged expiration.
- Hyperresonance, hyperinflation, flattened diaphragms.
- DLCO often decreased.

CHRONIC BRONCHITIS

Think: productive cough and mucus hypersecretion. Often described as the classic blue bloater pattern.

- Chronic productive cough.
- Cyanosis, stockier build, edema/JVD may appear.
- Rhonchi, crackles, wheezes.
- Chronic respiratory acidosis may be present.
- DLCO often normal compared with emphysema.

BOTH ARE OBSTRUCTIVE

- FEV1/FVC is reduced.
- Airflow limitation is not fully reversible.
- Bronchodilators may still improve symptoms.
- COPD exacerbations can become critical care cases.

EXAM CLUES

- Late, small sputum + hyperinflation -> emphysema.
- Early copious sputum + cyanosis -> chronic bronchitis.
- Barrel chest and pursed lips -> obstructive pattern.
- High RBC/Hb/Hct can reflect chronic hypoxemia.

TREATMENT OVERLAP

- Controlled oxygen for hypoxemia.
- Short-acting bronchodilator for acute symptoms.
- Long-acting bronchodilator maintenance.
- Pulmonary rehab and smoking cessation.
- Escalate to NPPV/intubation if acute failure develops.

EXHALE MEMORY LINE

Emphysema = air destruction. Chronic bronchitis = mucus production. Both obstruct airflow.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #8

ASTHMA

Reversible obstruction and acute bronchospasm

RECOGNIZE IT

- Trigger exposure: smoke, pollen, dust, mold, exercise, cold air, infection, GERD.
- Wheezing, chest tightness, cough, dyspnea.
- Tachypnea, accessory muscles, anxiety, diaphoresis.
- Severe attack may have diminished breath sounds: little air movement.

GATHER

- SpO_2, respiratory rate, work of breathing, ability to speak.
- Breath sounds and chest percussion.
- ABG if severe or not improving.
- Peak flow/spirometry when stable enough.
- CXR if alternative problem or complication suspected.

ACUTE TREATMENT

- Oxygen for hypoxemia.
- Short-acting bronchodilator, often repeated or continuous if severe.
- Add anticholinergic during significant exacerbation.
- Systemic corticosteroids for inflammation.
- Intubate and ventilate if exhaustion, rising $PaCO_2$, falling pH, altered LOC.

LONG-TERM CONTROL

- Avoid triggers.
- Inhaled corticosteroids for control when indicated.
- Long-acting bronchodilator only as appropriate with controller therapy.
- Peak flow monitoring and action plan.

EXAM TRAPS

- Normalizing $PaCO_2$ during a severe attack can mean fatigue, not improvement.
- Silent chest is worse than wheezing.
- Do not delay ventilation in impending failure.
- Do not treat foreign body wheeze like asthma.

EXHALE MEMORY LINE

Asthma: bronchodilate fast, reduce inflammation, ventilate before exhaustion becomes arrest.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #9

COPD CRITICAL CARE

Acute exacerbation, BiPAP, and escalation

RECOGNIZE EXACERBATION

- Increased dyspnea, cough, sputum, wheezing, chest tightness.
- Tachypnea, tachycardia, accessory muscle use.
- Change in sputum color suggests infection.
- Mental status change suggests worsening ventilation.

GATHER

- Vital signs, SpO_2, work of breathing.
- ABG to evaluate pH and $PaCO_2$ trend.
- CXR for infiltrate, pneumothorax, edema, other cause.
- Sputum/CBC if fever or purulent secretions.

BASIC MANAGEMENT

- Controlled oxygen target commonly around SpO_2 88-92%.
- Increase short-acting beta agonist therapy.
- Add inhaled anticholinergic.
- Systemic steroids.
- Antibiotics only with infection clues such as purulent secretions/fever.

NPPV THINKING

Use BiPAP when ventilation is failing but the patient can protect the airway and tolerate the mask.

- Increase IPAP to improve ventilation/CO_2 removal.
- Use EPAP to support oxygenation/airway pressure.
- Allow enough expiratory time to prevent air trapping.

ESCALATE IF

- pH keeps falling or $PaCO_2$ keeps rising.
- No improvement after a reasonable BiPAP trial.
- Respiratory rate remains very high.
- Mental status worsens or airway protection is poor.

EXHALE MEMORY LINE

COPD exacerbation: controlled oxygen + bronchodilators + steroids; BiPAP if failing; intubate if deteriorating.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #10

BiPAP VS INTUBATION

BiPAP IS REASONABLE WHEN

- Patient is awake enough to cooperate.
- Can protect airway and clear secretions.
- Hemodynamically stable.
- No major facial trauma or mask leak issue.
- Ventilatory failure is present but not immediately crashing.

INITIAL BiPAP CONCEPTS

- IPAP supports ventilation and lowers CO2.
- EPAP supports oxygenation and airway pressure.
- Use enough FiO2 to meet oxygenation target.
- Set a rate if backup support is needed.
- Monitor ABG and work of breathing soon after starting.

INTUBATE WHEN

- Respiratory arrest or severe apnea.
- Unable to protect airway or high aspiration risk.
- Severe mental status change.
- Hemodynamic instability or cardiac arrest.
- Severe acidosis/hypoxemia or failure to improve on NPPV.

NPPV CONTRAINDICATIONS

- Upper airway obstruction.
- Active vomiting/upper GI bleeding.
- Facial surgery, burns, or trauma preventing mask seal.
- Copious secretions or weak cough.
- Severe agitation or inability to cooperate.

REASSESSMENT

- RR decreases, accessory muscle use decreases.
- pH improves, PaCO2 trends down.
- SpO2/PaO2 improves without excessive FiO2.
- Patient is more alert and less fatigued.

EXHALE MEMORY LINE

BiPAP buys time only when safe. If airway, mental status, or ABG worsens: intubate.

EXHALE ACADEMY CSE CHEAT SHEET #11

PNEUMOTHORAX VS HEMOTHORAX

Air vs blood in the pleural space

PNEUMOTHORAX

Air in pleural space. Often sudden distress and unilateral findings.

- Sudden dyspnea and chest pain.
- Decreased/absent breath sounds on affected side.
- Hyperresonant percussion.
- Trachea may shift away in large/tension pneumo.
- CXR: hyperlucency and absent vascular markings.

HEMOTHORAX

Blood in pleural space, usually after trauma.

- Chest pain, dyspnea, tachypnea.
- Decreased/absent breath sounds on affected side.
- Dull or flat percussion.
- CXR: increased density/opacity.
- CBC may show decreased Hb/Hct from bleeding.

TREATMENT

- Give oxygen for hypoxemia/distress.
- Chest tube for pneumothorax or hemothorax.
- Needle decompression if tension pneumothorax with instability.
- Ventilate with PEEP if ventilatory failure.
- After chest tube, use lung expansion therapy when appropriate.

TENSION PNEUMO CLUES

- Severe distress plus hypotension/bradycardia.
- Tracheal shift away from affected side.
- Absent breath sounds and hyperresonance.
- Sudden high airway pressure on ventilator.
- Do not wait for chest x-ray if crashing.

MEMORY TABLE

- Air = hyperresonant = pneumothorax.
- Blood/fluid = dull = hemothorax.
- Both can reduce breath sounds.
- Both may need chest tube.

EXHALE MEMORY LINE

Air rings loud. Blood sounds dull. Tension pneumo is treat first, image later.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #12

BURNS & SMOKE INHALATION

Airway edema, CO poisoning, and inhalation injury

RECOGNIZE IT

- Fire victim, enclosed-space smoke exposure, car exhaust, firefighter injury.
- Sooty/black secretions, facial burns, singed nasal hair.
- Hoarse voice, stridor, pharyngeal swelling.
- Confusion, headache, altered LOC can suggest CO exposure.
- Pulse oximeter may look falsely normal/high with CO poisoning.

GATHER

- Airway assessment repeatedly - swelling can worsen.
- SpO2, but do not trust it for CO poisoning.
- Co-oximetry for carboxyhemoglobin.
- ABG for oxygenation/ventilation and acid-base.
- CXR may be normal early; later injury/ARDS can appear.
- Bronchoscopy may evaluate airway injury.

TREATMENT

- 100% oxygen immediately.
- Early intubation if airway edema, stridor, severe distress, or altered LOC.
- Hyperbaric oxygen when indicated/available for significant CO poisoning.
- Cover burns and prevent heat/fluid loss.
- IV fluids/electrolyte monitoring.

BRONCHOSPASM/SECRETIONS

- Bronchodilators if bronchospasm is present.
- Airway clearance if secretions are present.
- Mucolytics only when clinically appropriate.
- Monitor for infection; antibiotics only if infection is suspected/confirmed.

EXAM TRAPS

- Do not rely on pulse ox in CO poisoning.
- Do not wait too long to secure an airway that is swelling.
- Do not assume a normal early CXR means no inhalation injury.

EXHALE MEMORY LINE

Smoke injury: 100% oxygen now, check COHb, and secure the airway before swelling wins.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #13

ARDS

Refractory hypoxemia and stiff lungs

RECOGNIZE ARDS

- Acute onset after pneumonia, sepsis, aspiration, trauma, burns, overdose, shock.
- Severe hypoxemia that does not correct easily.
- Bilateral infiltrates/opacities on CXR.
- Noncardiogenic pulmonary edema pattern.
- Low compliance and high oxygen needs.

GATHER

- ABG: PaO_2, P/F ratio, pH/$PaCO_2$.
- CXR: bilateral infiltrates/ground-glass appearance.
- Hemodynamics can help separate ARDS from cardiogenic edema.
- Sputum/cultures when infection is suspected.
- Monitor plateau pressure and compliance on the ventilator.

VENTILATOR STRATEGY

- Use lung-protective tidal volumes around 6 mL/kg IBW.
- Keep plateau pressure under 30 cmH_2O when possible.
- Use PEEP to improve oxygenation.
- Accept permissive hypercapnia if pH remains acceptable.
- Titrate FiO_2 down first when oxygenation improves.

ADJUNCTS

- Treat the underlying cause.
- Consider prone positioning for severe oxygenation failure.
- Diuretics if fluid overloaded or to avoid excess fluid.
- Alternative modes/rescue therapies may be considered in severe cases.

AVOID AS DEFAULT

- Do not rely on bronchodilators unless bronchospasm exists.
- Do not choose surfactant as routine adult ARDS therapy.
- Do not ignore plateau pressures.
- Do not confuse CHF pulmonary edema with ARDS.

EXHALE MEMORY LINE

ARDS = refractory hypoxemia + bilateral infiltrates + low compliance: low VT, PEEP, treat cause.

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EXHALE ACADEMY CSE CHEAT SHEET #14

MYASTHENIA GRAVIS VS GUILLAIN-BARRE

Descending vs ascending weakness

MYASTHENIA GRAVIS

Mind to ground: descending weakness.

- Ptosis/drooping eyelids is a major clue.
- Face, throat, swallowing, and respiratory muscles can weaken.
- Weakness worsens with repetitive use.
- Myasthenic crisis can cause rapid respiratory failure.
- Tensilon/edrophonium concept: improvement supports MG.

GUILLAIN-BARRE

Ground to brain: ascending weakness.

- Often follows viral/bacterial illness.
- Weakness starts in legs and moves upward.
- May progress to flaccid paralysis and respiratory failure.
- Loss of gag reflex/dysphagia may appear.
- Lumbar puncture/CSF testing is the classic special test.

GATHER FOR BOTH

- Spontaneous tidal volume.
- Vital capacity.
- MIP/NIF.
- Respiratory rate and work of breathing.
- ABG if ventilation/oxygenation is worsening.
- Breath sounds and secretion clearance.

TREATMENT FOR BOTH

- Oxygen for hypoxemia.
- Airway clearance and lung expansion as needed.
- Intubation/mechanical ventilation when respiratory muscle failure develops.
- Closely trend VC, VT, and MIP/NIF.

DIFFERENTIATE FAST

- MG: ptosis + descending weakness + anticholinesterase therapy.
- GBS: recent infection + ascending weakness + plasmapheresis/immune therapy concepts.
- Both can kill through ventilatory failure.

EXHALE MEMORY LINE

MG drops down from the eyes. GBS climbs up from the ground. Monitor VC/MIP/VT.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #15

CHF & PULMONARY EDEMA

Cardiogenic fluid in the lungs

RECOGNIZE IT

- History: MI, CAD, hypertension, cardiomyopathy, heart failure.
- Sudden or gradual dyspnea and orthopnea.
- Pink frothy secretions = classic pulmonary edema clue.
- Crackles/rales, rhonchi, increased fremitus.
- Pedal edema, JVD, fluid overload signs.

GATHER

- Blood pressure and heart rate are important.
- SpO2 and work of breathing.
- ABG if respiratory distress or failure.
- CXR: pulmonary edema, cardiomegaly may appear.
- ECG/cardiac markers if MI/ischemia suspected.
- Hemodynamics if shock/unclear edema type.

TREATMENT

- Oxygen for hypoxemia.
- CPAP/BiPAP for pulmonary edema with distress if patient can tolerate.
- Diuretics to remove fluid.
- Vasodilators may be used depending on BP/orders.
- Intubation/mechanical ventilation if failing or unable to protect airway.

DIFFERENTIATE FROM ARDS

- CHF edema is cardiogenic/fluid overload.
- ARDS edema is noncardiogenic and often follows sepsis/trauma/aspiration.
- CHF often has cardiac history and fluid overload clues.
- ARDS has refractory hypoxemia and low compliance pattern.

EXAM TRAPS

- Wheezing with CHF is not asthma - look for fluid clues.
- Do not ignore BP in cardiovascular disease.
- Do not give bronchial hygiene for frothy edema secretions as the primary move.

EXHALE MEMORY LINE

Pink frothy secretions: think CHF pulmonary edema -> positive pressure + diuresis + oxygen.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #16

CROUP VS EPIGLOTTITIS

Pediatric upper-airway emergencies

CROUP

Viral upper-airway inflammation. Usually less toxic appearing than epiglottitis.

- Barking cough.
- Inspiratory stridor.
- Low-grade fever may occur.
- Neck x-ray can show steeple sign if needed.
- Treatment: cool mist, racemic epinephrine, corticosteroids as appropriate.

EPIGLOTTITIS

Potentially life-threatening airway obstruction. Do not agitate the child.

- High fever, toxic appearance.
- Drooling and difficulty swallowing.
- Tripod position, muffled voice.
- Severe stridor and anxiety.
- Treatment priority: secure airway with skilled team; antibiotics after airway safety.

GATHER SAFELY

- Observe general appearance, work of breathing, color.
- Do not force throat exam in suspected epiglottitis.
- SpO2 and respiratory status.
- Neck imaging only if stable and safe.
- Prepare airway equipment early.

DECISION RULE

- Mild/moderate croup: mist/epinephrine/steroids depending on severity.
- Severe croup or exhaustion: airway support.
- Epiglottitis: airway first, minimize stimulation.
- Intubate if obstruction is worsening.

EXAM TRAPS

- Do not lay an epiglottitis patient flat.
- Do not shove a tongue blade in the mouth.
- Do not delay airway management for tests when the child is unstable.

EXHALE MEMORY LINE

Croup barks. Epiglottitis drools. If airway is threatened, protect it first.

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #17

NEONATAL DELIVERY ROOM

First minutes after birth

FIRST LOOK

- Term or preterm? Tone? Breathing or crying?
- Heart rate is the key number.
- Color and respiratory effort matter, but HR drives resuscitation decisions.
- Warm, dry, stimulate, position airway.

BASIC STEPS

- Maintain temperature.
- Position head/neck and clear airway only as needed.
- Dry and stimulate.
- Assess breathing and heart rate.
- Start positive-pressure ventilation if apnea/gasping or HR remains low.

OXYGEN/VENTILATION

- Use PPV for inadequate breathing or low HR.
- Check chest rise and mask seal.
- Consider intubation if PPV ineffective or prolonged.
- Use CPAP for spontaneous breathing with distress when appropriate.

MECONIUM THINKING

- Routine aggressive suctioning is not the main move for vigorous babies.
- If nonvigorous with airway obstruction/poor ventilation, airway management matters.
- Ventilation and oxygenation are the priority.

ESCALATION

- If HR remains very low despite effective ventilation, compressions and medications may be needed.
- Reassess often: HR, respirations, tone, oxygenation.
- Call for neonatal team support early.

EXHALE MEMORY LINE

Newborn resuscitation starts with warmth, airway position, stimulation, HR, and effective ventilation.

EXHALE ACADEMY CSE CHEAT SHEET #18

ABG PATTERN RECOGNITION

Turn numbers into decisions

STEP 1: pH

- Low pH = acidemia.
- High pH = alkalemia.
- Normal pH with abnormal CO_2/HCO_3 may be compensated.
- Severe low pH is a danger sign.

STEP 2: $PaCO_2$

- High $PaCO_2$ causes respiratory acidosis.
- Low $PaCO_2$ causes respiratory alkalosis.
- Rising $PaCO_2$ with falling pH = ventilatory failure.
- Normalizing $PaCO_2$ during severe asthma can be bad if the patient is tiring.

STEP 3: HCO_3

- Low HCO_3 supports metabolic acidosis.
- High HCO_3 supports metabolic alkalosis or compensation.
- Chronic CO_2 retainers may have elevated HCO_3.
- Treat the underlying metabolic cause while supporting ventilation as needed.

OXYGENATION

- PaO_2 and SpO_2 tell oxygenation, not ventilation.
- Hypoxemia with high FiO_2 suggests shunt/severe V/Q problem.
- P/F ratio helps grade oxygenation severity.
- Add PEEP/CPAP when oxygen alone is not enough.

ACTION PATTERNS

- Acute respiratory acidosis -> improve ventilation.
- Chronic compensated COPD -> controlled oxygen and monitor.
- Metabolic acidosis -> support ventilation, treat cause.
- Severe hypoxemia -> oxygen/PEEP and treat underlying disease.

EXHALE MEMORY LINE

pH tells danger. CO_2 tells ventilation. HCO_3 tells metabolic/compensation. PaO_2 tells oxygenation.

EXHALE ACADEMY CSE CHEAT SHEET #19

WHAT TEST SHOULD I PICK?

CSE diagnostic choices made simple

ABG

Pick when you need acid-base, oxygenation, or ventilation data.

- Respiratory failure.
- Severe distress.
- Ventilator changes.
- COPD/asthma/ARDS/CHF/overdose.

CHEST X-RAY

Pick when lung structure, tube placement, infiltrates, or trauma patterns matter.

- Pneumonia, atelectasis, pneumothorax.
- ARDS/CHF patterns.
- Tube/line placement.
- Chest trauma or post-op pulmonary changes.

LABS/CULTURES

Pick labs that match the suspected cause.

- CBC/WBC: infection or bleeding.
- Hb/Hct: hemothorax/blood loss.
- Electrolytes: arrhythmia/metabolic issues.
- Sputum culture: infection with secretions/fever.
- Co-oximetry: carbon monoxide exposure.

SPECIAL TESTS

- MIP/NIF + VC: neuromuscular weakness/weaning.
- V/Q scan or CT angiography concept: pulmonary embolism.
- Bronchoscopy: foreign body, airway evaluation, secretion removal.
- ICP/GCS: head trauma/neuro status.
- Sweat chloride: cystic fibrosis.

SKIP WHEN

- Test is unrelated to the patient problem.
- Patient is unstable and needs immediate action.
- Result would not change treatment.
- A safer bedside option comes first.

EXHALE MEMORY LINE

Pick tests that answer one question: Will this change the next safest action?

Student Reminder: This is an original exam-prep study aid. Match every choice to the patient scenario and current guidance.

EXHALE ACADEMY CSE CHEAT SHEET #20

NORMAL VALUES QUICK GUIDE

ABG BASICS

- pH: 7.35-7.45.
- $PaCO_2$: 35-45 mmHg.
- HCO_3: 22-26 mEq/L.
- PaO_2: roughly 80-100 mmHg on room air in healthy adults.
- SaO_2/SpO_2: usually 95-100% in healthy adults.

VENTILATION/WEANING

- Normal adult VT: about 5-8 mL/kg.
- VC concern when very low; trend matters in neuro weakness.
- MIP/NIF: more negative is stronger.
- RSBI = f/VT; lower is generally better for weaning readiness.

HEMODYNAMICS

- Normal BP: around 120/80 as a reference point.
- MAP target is often at least 65 mmHg in critical care contexts.
- CVP and PCWP trends help fluid/heart status.
- High PCWP suggests cardiogenic pulmonary edema; ARDS tends to be noncardiogenic.

OXYGENATION INDICES

- P/F ratio = PaO_2 / FiO_2.
- Lower P/F = worse oxygenation.
- Severe hypoxemia on high FiO_2 suggests shunt/refractory problem.
- Use PEEP/CPAP when oxygen alone is not enough.

TEST DAY TIP

- Do not memorize numbers without context.
- Trends matter: worsening pH, rising $PaCO_2$, falling PaO_2.
- Always connect the number to the patient appearance.
- A normal number can be misleading in CO poisoning or exhaustion.

EXHALE MEMORY LINE

Numbers do not treat patients. Numbers confirm the pattern and guide the next safe move.

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