EMT Medical Study Guide

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This study guide focuses on Medical Emergencies for EMTs. It aligns with the NREMT EMT certification exam (updated format effective April 2025), National EMS Education Standards, National EMS Scope of Practice Model 2019 (with Change Notices), and current prehospital care principles. Medical emergencies represent a significant portion of the NREMT EMT exam, covering patient assessment, common medical pathologies, and appropriate interventions within the EMT scope of practice. EMT Scope in Medical: Recognition of altered mental status, respiratory distress, diabetic emergencies, allergic reactions, overdose, and abdominal pain. Administration of medications like oxygen, oral glucose, activated charcoal, epinephrine auto-injector (assist patient's or administer per protocol), and naloxone (per protocol). Key Principle: Thorough patient assessment, identification of life threats, and rapid, appropriate interventions are crucial for positive patient outcomes in medical emergencies.

Disclaimer: This is a study aid, not official. For PDF, copy into a word processor and export. Always follow current local protocols, NREMT skill sheets, and the latest AHA 2025 BLS guidelines.

Section 1: Patient Assessment in Medical Emergencies (EMT Focus)

Primary Assessment:

Identify immediate life threats (unresponsive, no breathing/agonal, no pulse → start CPR/AED).

General Impression: Apparent distress, position (tripoding for respiratory distress), mental status (AVPU/GCS).

Airway: Open, maintain.

Breathing: Rate, rhythm, quality, lung sounds (wheezing, rales, rhonchi), O&sub2; saturation.

Circulation: Pulse (rate, rhythm, quality), skin (color, temp, condition – warm/dry for diabetic, cool/clammy for shock), capillary refill, obtain BP.

Secondary Assessment:

SAMPLE history (Signs/Symptoms, Allergies, Medications, Past medical history, Last oral intake, Events leading to).

OPQRST for pain/discomfort (Onset, Provocation/Palliation, Quality, Radiation, Severity, Time).

Focused Physical Exam: Head-to-toe or focused on chief complaint.

Section 2: Respiratory Emergencies

Asthma/COPD Exacerbation:

Signs/Symptoms: Dyspnea, wheezing, coughing, accessory muscle use, prolonged expiratory phase.

Interventions: Position of comfort, O&sub2; (NRB or nasal cannula to maintain SpO&sub2; >94%), assist with patient's prescribed inhaler (albuterol), CPAP if protocol allows and patient meets criteria.

Pneumonia:

Signs/Symptoms: Cough (productive), fever, chills, dyspnea, localized crackles/rhonchi.

Interventions: O&sub2; for hypoxia, transport.

Pulmonary Edema (CHF):

Signs/Symptoms: Dyspnea, orthopnea, crackles/rales, pedal edema, JVD, pink frothy sputum.

Interventions: Position of comfort (sitting upright), O&sub2; (NRB, CPAP), rapid transport.

Section 3: Diabetic Emergencies

Hypoglycemia (Low Blood Sugar):

Signs/Symptoms: Rapid onset, altered mental status, cool/clammy skin, weakness, hunger, combativeness, rapid pulse.

Interventions: Check blood glucose (if trained/allowed). If conscious and able to swallow, administer oral glucose. If unconscious or unable to swallow, maintain airway, transport rapidly.

Hyperglycemia (High Blood Sugar - DKA/HHNS):

Signs/Symptoms: Slower onset, altered mental status (lethargy), warm/dry skin, increased thirst/urination, fruity breath (DKA), rapid/deep breathing (Kussmaul for DKA).

Interventions: O&sub2; for hypoxia, transport.

Section 4: Allergic Reactions & Anaphylaxis

Allergic Reaction:

Signs/Symptoms: Hives, itching, localized swelling, mild respiratory distress (wheezing), nausea/vomiting.

Interventions: Remove allergen if possible, O&sub2; for respiratory distress, transport.

Anaphylaxis (Severe Allergic Reaction):

Signs/Symptoms: Systemic reaction – severe respiratory distress (stridor, severe wheezing), hypotension, rapid pulse, widespread hives/angioedema, feeling of impending doom.

Interventions: High-flow O&sub2;, assist with/administer epinephrine auto-injector (0.3 mg adult, 0.15 mg pediatric IM) per protocol, rapid transport.

Section 5: Overdose & Poisoning

General Management:

Scene safety, primary assessment, support ABCs.

Identify substance (if safe to do so).

Activated Charcoal: For ingested poisons (check protocol/medical control).

Naloxone: For opioid overdose (0.4 mg IM/IN, repeat as needed).

Transport rapidly to appropriate facility.

Section 6: Neurological Emergencies

Stroke:

Signs/Symptoms: Sudden onset unilateral weakness/numbness, facial droop, slurred speech, vision changes, severe headache.

Interventions: Rapid transport to stroke center, Cincinnati Prehospital Stroke Scale, maintain airway, O&sub2; if hypoxic, time of symptom onset is critical.

Seizure:

Signs/Symptoms: Convulsions, altered LOC, postictal state.

Interventions: Protect patient from injury, maintain airway, O&sub2; if hypoxic, monitor vital signs.

Section 7: Abdominal Emergencies

Signs/Symptoms: Abdominal pain (location, quality, radiation), nausea/vomiting, diarrhea/constipation, distension, guarding.

Interventions: Position of comfort, O&sub2; if hypoxic, transport. Be alert for signs of shock.

Section 8: NREMT EMT Skill Emphasis & High-Yield Scenarios

Oxygen Administration: Nasal cannula, non-rebreather mask, BVM. Titrate to SpO&sub2; ≥94%.

Oral Glucose: For conscious patient with suspected hypoglycemia (BGL <60-80 mg/dL per protocol).

Epinephrine Auto-injector: For anaphylaxis. Ensure proper training and protocol.

Naloxone: For opioid overdose. Watch for potential patient agitation.

Scenarios: Patient with sudden dyspnea and wheezing → O&sub2;, assist with albuterol. Unresponsive diabetic with cool, clammy skin → O&sub2;, rapid transport, consider oral glucose if patient becomes conscious/able to swallow.

Example Question:

A 45 y/o male complains of severe shortness of breath. He is alert but anxious, sitting upright and tripoding. He has a history of asthma and states he ran out of his inhaler. Lung sounds reveal diffuse bilateral wheezing. Vital signs are BP 130/80, HR 118, RR 26, SpO&sub2; 90% on room air. What is the most appropriate initial intervention? A) Administer high-flow oxygen via non-rebreather mask. B) Assist with his prescribed albuterol inhaler. C) Transport immediately without further intervention. D) Administer oral glucose. **Solution:** A) Administer high-flow oxygen via non-rebreather mask. **Reasoning:** While the patient needs bronchodilation (albuterol), his immediate life threat is hypoxia (SpO&sub2; 90%). Administering high-flow oxygen is the priority to improve oxygenation. After oxygen, assisting with albuterol would be the next appropriate step. Transport should occur after initial life threats are managed. Oral glucose is for hypoglycemia. Mastering EMT medical emergencies requires recognizing life threats, prioritizing interventions, and knowing your medication indications and contraindications. Practice medical scenarios, understand assessment findings, and always follow your local protocols. Good luck on your EMT certification—assess, intervene, and transport wisely!

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