

12 LEAD ECG

1. Level: AEMT, Paramedic, RN
2. Purpose: Early detection and notification of acute myocardial infarction
3. Indications:
 - 3.1. Chest pain or anginal equivalents (dyspnea, syncope, near syncope, weakness, DKA, diaphoresis disproportionate to the environment, palpitations, etc.)
 - 3.2. Electrical Injuries
 - 3.3. Suspected Stroke
 - 3.4. Altered mental status, unknown cause
 - 3.5. Post cardio-version of unstable patients (including post arrest) when possible
 - 3.6. Suspected electrolyte disturbances
 - 3.7. Overdose
 - 3.8. Blunt chest trauma (only after transport or more urgent care)
 - 3.9. Dysrhythmia (to aid in the cause and diagnosis of the dysrhythmia)
 - 3.10. Respiratory failure
 - 3.11. Ventricular failure (CHF)
4. Procedure:
 - 4.1. Assess patient and monitor cardiac status.
 - 4.2. Administer oxygen as patient condition warrants.
 - 4.3. If the patient is unstable, definitive treatment is the priority. If the patient is stable or stabilized after treatment, perform a 12 lead ECG. If the patient is stable, the initial 12 lead should be performed on scene and before nitroglycerin administration, when possible.
 - 4.4. Prepare ECG monitor and connect patient cable with electrodes.
 - 4.5. Enter required patient information into the monitor.
 - 4.6. Expose chest and prep as necessary. Modesty of the patient should be respected.
 - 4.7. Apply chest leads and extremity leads using the following landmarks (note: the extremity leads will be applied to the extremities, and not the torso):
 - 4.7.1. RA→right arm
 - 4.7.2. LA→left arm
 - 4.7.3. RL→right leg
 - 4.7.4. LL→left leg
 - 4.7.5. V1→4th intercostal space at right sternal border
 - 4.7.6. V2→4th intercostal space at left sternal border
 - 4.7.7. V3→directly between V2 and V4
 - 4.7.8. V4→5th intercostal space at midclavicular line
 - 4.7.9. V5→level of V4 at left anterior axillary line
 - 4.7.10. V6→level of V5 at left midaxillary line
 - 4.8. Instruct the patient to remain still.
 - 4.9. Press the appropriate button to acquire the 12 lead ECG.
 - 4.10. If the monitor detects signal noise (such as patient motion or a disconnected electrode), the 12 lead acquisition will be interrupted until the noise is removed.
 - 4.11. Transmit 12 lead ECG when transporting to a destination capable of receiving transmission, if:
 - 4.11.1. Obvious STEMI is noted.

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- 4.11.2. 12 lead ECG with questionable STEMI and associated ACS symptoms are noted.
- 4.11.3. Abnormal ECGs that would require significant care during transport and/or immediate specialized treatment upon arrival at the ED (i.e. external pacing, cardioversion, ACLS medications for stabilization of patient condition).
- 4.11.4. AEMT is the highest level provider on the unit.
- 4.12. Documentation:
 - 4.12.1. Document ECG: 12-Lead in the treatment section of the ePCR
 - 4.12.1.1. Paramedics:
 - 4.12.1.1.1. Document the rhythm interpretation and all other follow-up items in the ePCR.
 - 4.12.1.2. AEMT:
 - 4.12.1.2.1. Rhythm should be documented as “Other (not listed)”
 - 4.12.1.2.2. STEMI? Should be documented as No