



PROCEDURE CHECKLIST

Recording a 12-lead ECG

Standardised recording of a resting 12-lead electrocardiogram with correct electrode placement, so that the trace is accurate, comparable and immediately reviewed.



EM Orbit

Patient reference	Date	Time	Completed by
Equipment ready			
☐ 12-lead ECG machine, calibrated and with paper		☐ V3: midway between V2 and V4.	
☐ Ten disposable electrodes (in date, with moist gel)		☐ V5: left anterior axillary line at the same horizontal level as V4.	
☐ Skin preparation: gauze or abrasive tape, alcohol wipe, razor or clippers for chest hair		☐ V6: left mid-axillary line at the same horizontal level as V4 and V5.	
☐ Privacy screen or curtain, gown or blanket for modesty		☐ In women, place V4–V6 under the breast rather than on it.	
☐ Chaperone as needed		During · Recording	
☐ Clinical wipes to clean the leads		☐ Connect the leads to the correct electrodes; avoid tension and let leads lie without crossing.	
Before · Patient preparation		☐ Check settings: paper speed 25 mm/s, calibration 10 mm/mV, and the correct filter settings (diagnostic 0.05–150 Hz where available).	
☐ Identify the patient and enter their details on the machine (name, identifier, date of birth, date and time).		☐ Check the preview for a clear, stable baseline without artefact; ask the patient to stay still.	
☐ In chest pain, record the ECG within 10 minutes of arrival and show it to a decision-making clinician immediately. Do not wait until the end of triage.		☐ Record the ECG and check the printout for a calibration pulse, correct patient details and all 12 leads.	
☐ Explain the procedure, obtain consent and offer a chaperone.		☐ Check for lead reversal: a negative P and QRS in lead I with a positive aVR suggests arm lead reversal.	
☐ Ensure privacy and expose the chest, wrists and ankles; cover the patient where possible.		☐ Record a rhythm strip (long lead II) if an arrhythmia is present.	
☐ Position the patient semi-recumbent at about 45° with arms relaxed at the sides, warm and still.		During · Additional leads	
☐ Ask the patient to relax, breathe normally and not talk during the recording.		☐ If inferior ST elevation is present, record right-sided leads (V4R: fifth intercostal space, right mid-clavicular line) to look for right ventricular infarction.	
Before · Skin preparation		☐ If posterior infarction is suspected (ST depression in V1–V3), record posterior leads V7–V9 in the fifth intercostal space at the left posterior axillary line, mid-scapular line and paraspinal border.	
☐ Clean the electrode sites to remove oil or cream; dry the skin.		☐ Label any non-standard lead positions clearly on the trace.	
☐ Clip or shave hair at the electrode sites if it prevents good contact.		After · Completion	
☐ Lightly abrade the skin if needed to reduce impedance.		☐ Remove the electrodes, help the patient dress and ensure they are comfortable.	
During · Limb electrodes		☐ Clean the leads and cables and perform hand hygiene.	
☐ RA (red): right arm, on the inner wrist or forearm.		After · Review and documentation	
☐ LA (yellow): left arm, on the inner wrist or forearm.		☐ Annotate the ECG with the patient's symptoms at the time (e.g. 'with chest pain'), time recorded and any non-standard positions.	
☐ LL (green): left leg, above the ankle or on the lower leg.		☐ Hand the ECG to a clinician for review immediately; record who reviewed it and when.	
☐ RL (black): right leg, above the ankle or on the lower leg.		☐ Do not rely on the machine's automated interpretation to rule out acute myocardial infarction. A clinician must interpret every ECG.	
☐ Place limb electrodes distally and symmetrically; if they must be moved to the torso or proximally (e.g. amputation, tremor), annotate the trace.		☐ Compare with previous ECGs and repeat serial ECGs if symptoms persist, change or recur.	
During · Chest electrodes		☐ File or upload the ECG to the patient record.	
☐ Find the angle of Louis (sternal angle): the second rib attaches here; the space below it is the second intercostal space. Count down to the fourth intercostal space.			
☐ V1: fourth intercostal space at the right sternal edge.			
☐ V2: fourth intercostal space at the left sternal edge.			
☐ V4: fifth intercostal space in the left mid-clavicular line.			



A drafted procedure checklist, awaiting senior review. Perform procedures only within your training, competence and local policy. It does not replace your clinical judgement.
EM Orbit · Emergency medicine, in one orbit · proc-ecg · red rows are the steps that must not be missed