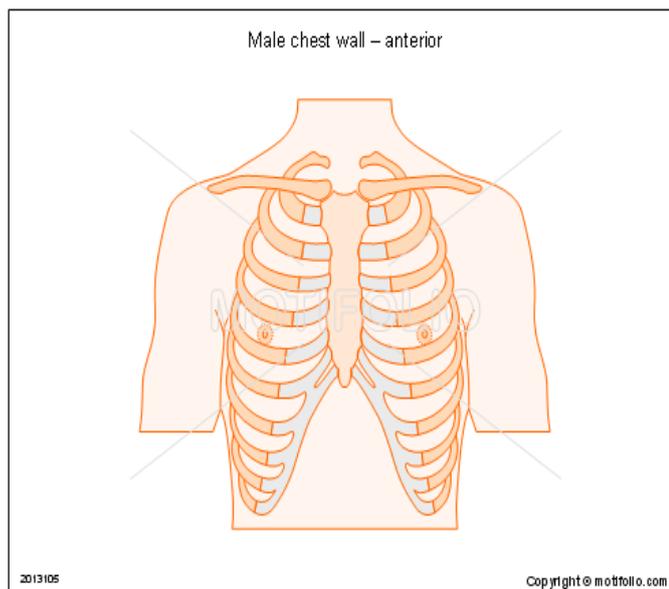


## Cardiac monitoring

Equipment required:

- Cardiac monitor (Fixed or telemetry)
- Monitoring electrodes (3 or 5 depending on the number of monitoring leads)
- ✓ Explain to the patient the reason for cardiac monitoring.
- ✓ Ensure patient is aware of restricted mobility due to cardiac monitoring (if fixed).
- ✓ Apply electrodes as shown in diagram above.
- ✓ Ensure patient is admitted onto the monitor i.e name, sex, paced or non-paced. Bed number.
- ✓ Document in the cardex.
- ✓ Remove on discharge or before on Dr's advice.
- ✓ Telemetry unit should be signed in and out of the locked cabinet in the pacing room.



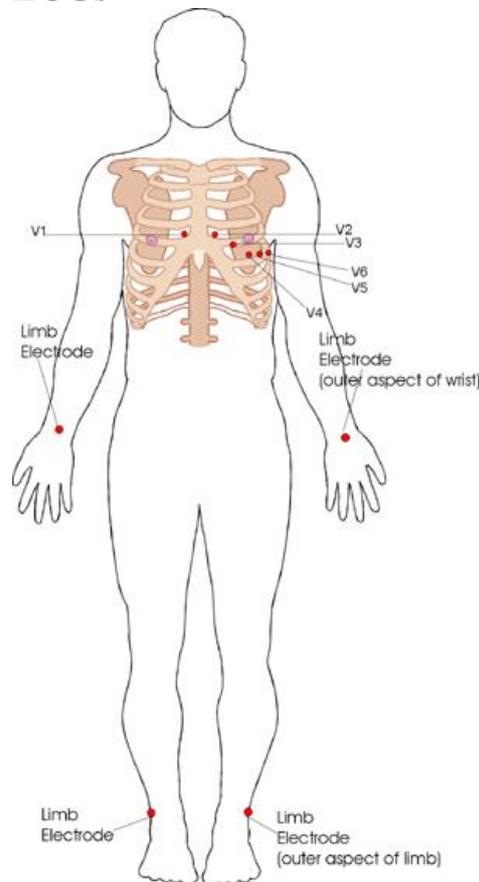
## Investigations and procedures

Here are some of the investigations and procedures you may encounter during your placement. Initial and date each procedure you have observed or participated in.

<i>Procedure</i>	<i>Observed</i>	<i>Participated</i>	<i>Initial and Date</i>
Attaching ECG stickers			

Taking a 12-lead ECG			
Attaching cardiac monitoring leads			
DIGAMI infusion			
Isoket infusion			
CPAP			
NIV			
Taking ABG			
Testing defibrillator			
Using defibrillator			
Temporary pacing wire insertion			
Using a pacing wire box			
Cardio version			
TOE			
Central line insertion			

## ECGs



### Taking an ECG

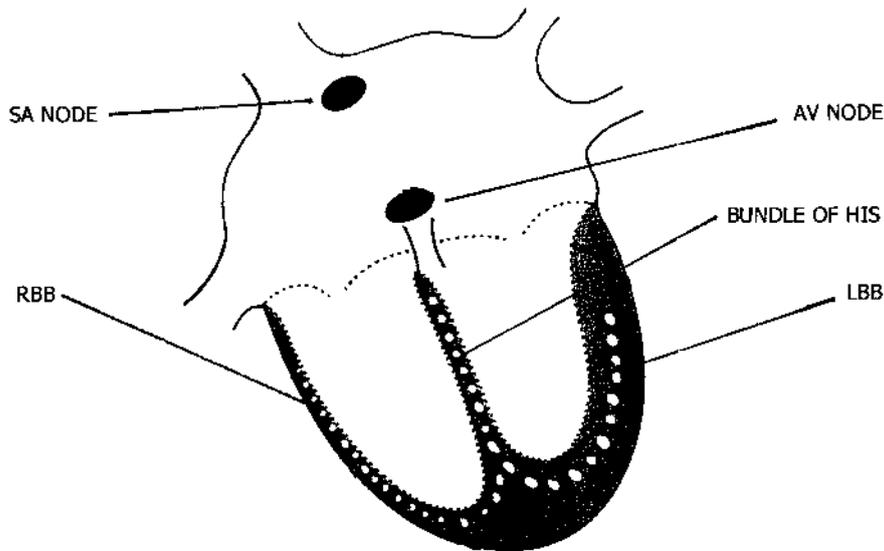
Explain to the patient the reason for the ECG.

- ✓ Ask their permission to perform the ECG.
- ✓ Apply the electrodes as shown in the diagram.
- ✓ Ensure the patients name, date of birth and hospital number are on the ECG
- ✓ Ask the patient to remain still while performing the ECG.
- ✓ Print and review comparing it to previous ECG.
- ✓ If patient admitted with MI they will require a discharge ECG to take home.

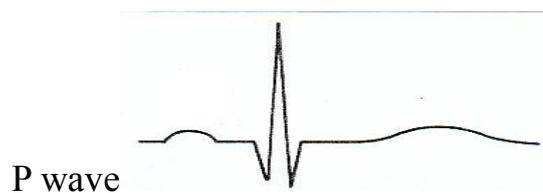
On Manvers ward most patients will have an electrocardiogram (ECG) recorded at least once daily to monitor for changes in heart rhythm. An ECG will also be recorded when a patient complains of cardiac pain.

### *What is an ECG?*

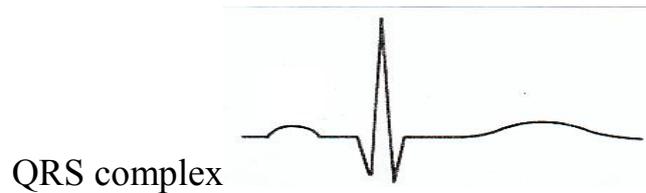
An ECG records the electrical activity within the heart, which controls its mechanical function.



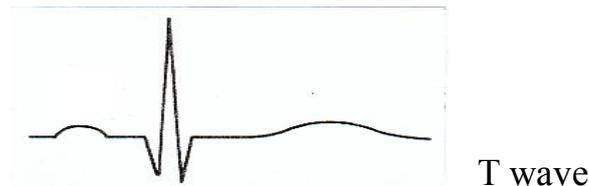
The electrical impulse initiating the cardiac cycle originates in the Sinoatrial (SA) node. Depolarisation (response of cells to electrical stimulus) spreads through the atrium causing atrial contraction, which can be seen on the ECG as the P wave.



The impulse spreads down to the Atrioventricular node, after a short delay, to allow complete atrial contraction. The impulse then passes down the Bundle of His to the left and right bundle branches (LBB/RBB) within the ventricular muscle (myocardium), which results in depolarisation of the myocardial cells, and in turn ventricular contraction. This activity is seen as the QRS complex of the ECG.



The T wave of the ECG represents the repolarisation of the ventricular myocardium in preparation for the beginning of the cardiac cycle.

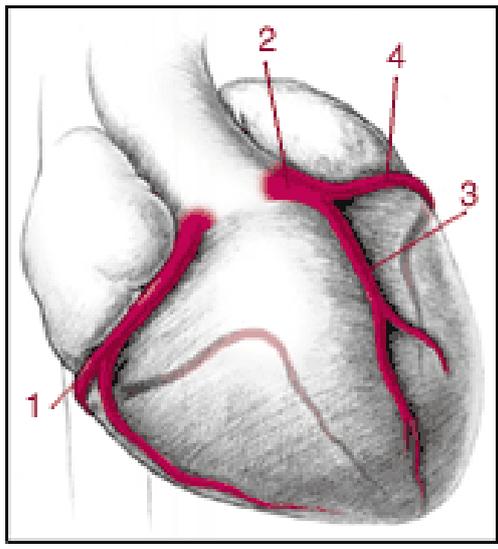
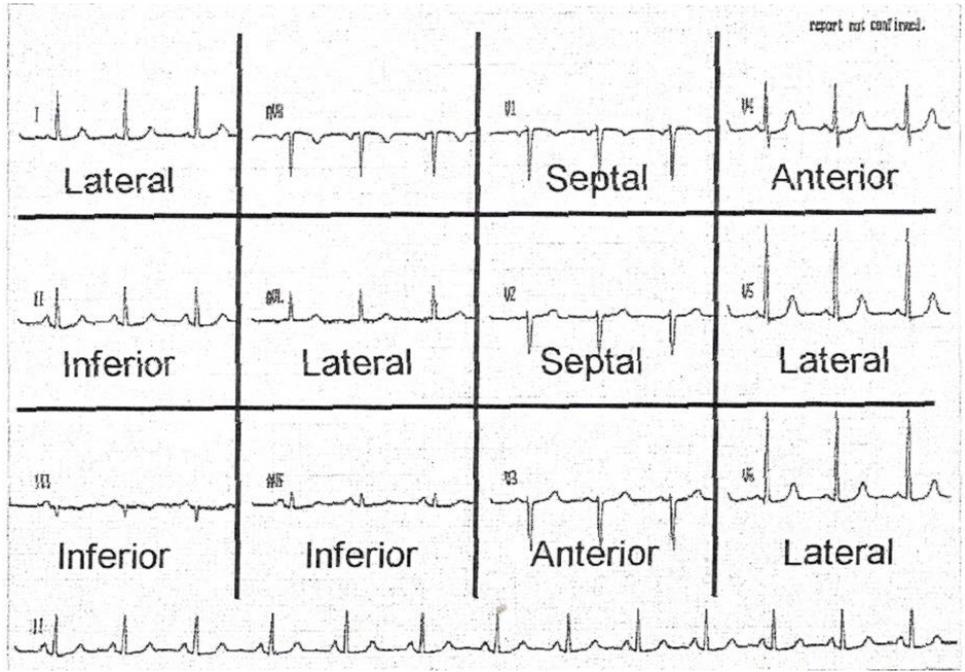


In a healthy heart this process will take slightly less than a second and will occur around 60-100 times a minute.

### Identifying Areas of Infarction

<i>Wall affected</i>	<i>Leads</i>	<i>Artery involved</i>	<i>Reciprocal changes</i>
Inferior	II, III, aVF	Right coronary artery	aVL
Lateral	I, aVL, V5, V6	Circumflex artery, branch of left anterior descending (LAD) artery	V1, V2
Anterior	V2 to V4	Left coronary artery, LAD artery	II, III, aVF
Posterior	V1, V2	Right coronary artery, circumflex artery	R wave greater than S wave, depressed ST segments, elevated T wave

Anterolateral	I, aVL, V4 to V6	LAD artery, circumflex artery	II, III, aVF
Anteroseptal	V1 to V3	LAD artery	None



CORONARY ARTERY SYSTEM