

Unit 53: Recognising ECG Abnormalities in Adults

Level:	4
Unit type:	Optional (Cardiac Physiology)
Credit value:	10
Guided learning hours:	80

Unit summary

The aim of this unit is to equip you with the knowledge and skill to be able to recognise a wide range of ECG abnormalities in adults. You will be expected to develop a framework for ECG identification. You will be expected to build your patient-centred professional practice to enable you to undertake this skill safely in the workplace.

Unit assessment requirements

There are no specific assessment requirements for this unit. Please refer to the assessment strategy in *Annexe B*.

Additional information

It is suggested that learners will have completed the Level 2 *Unit 73: Performing Routine Electrocardiography in Adults* or the new Level 3 *Unit 134: Performing Routine Electrocardiography in Adults*.

AC1.1 includes examining the following principles:

- Einthoven's triangle
- Wilson's central terminal
- Uni-polar and bipolar leads.

AC3.1 includes recognising the ECG changes associated with:

- sinus arrhythmia
- sinus bradycardia
- sinus tachycardia
- atrial fibrillation
- atrial flutter
- atrial ectopics
- ventricular ectopics
- atrioventricular conduction blocks

- supraventricular tachycardia
- asystole
- ventricular fibrillation
- ventricular tachycardia.

AC3.2 includes recognising the ECG changes associated with:

- myocardial infarction
- myocardial ischaemia
- ST segment depression
- ST segment elevation
- how physiological changes result in ST depression and elevation
- the causes of ST segment elevation
- how to localise the site of the myocardial infarction on the ECG.

AC3.3 includes recognising the ECG changes associated with:

- left and right atrial abnormalities
- left and right ventricular hypertrophy
- left and right bundle branch block
- fascicular blocks.

AC3.4 includes recognising the ECG changes associated with:

- hyperkalaemia
- hypokalaemia
- thyrotoxicosis
- hyperthyroidism
- hypocalcaemia.

AC3.5 includes recognising the ECG changes associated with:

- Long QT syndrome
- Brugada syndrome
- digoxin effect and toxicity
- cardiomyopathies
- pulmonary embolism
- neurological/neuromuscular disorders
- pericarditis
- myocarditis

Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet **in own area of work and in accordance with Standard Operating Procedures (SOPS)** to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand the principles and practice of electrocardiography	1.1	Explain the principles of the ECG			
		1.2	Evaluate the strengths and weaknesses of 12-lead ECG recording			
		1.3	Explain the relationship between ECG leads and cardiac anatomy			
		1.4	Explain the relationship between the normal ECG and cardiac physiology			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Understand the normal ECG in adults	2.1	Explain the relationship between the electrical and mechanical action of the heart during a normal cardiac cycle			
		2.2	Explain the main waves, complexes, segments, duration and intervals of the normal ECG			
		2.3	Explain the term cardiac axis and how to measure the cardiac axis			
		2.4	Explain how to measure heart rate from an ECG			
		2.5	Know the normal ranges for each component of the ECG in adults			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Be able to identify a range of ECG changes in adults	3.1	Recognise arrhythmias, including life-threatening arrhythmias on a 12-lead ECG recording			
		3.2	Recognise ECG changes associated with myocardial infarction and ischaemia			
		3.3	Recognise ECG changes associated with conditions affecting the left and right sides of the heart			
		3.4	Recognise the ECG changes associated with conditions not primarily affecting the heart			
		3.5	Recognise the ECG changes associated with a range of general disorders			
4	Be able to produce a factual ECG report	4.1	Evaluate ECG reporting frameworks			
		4.2	Produce factual ECG reports on a range of normal and abnormal adult ECGs			

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)