



Sound cardiology knowledge is essential for exam success. It is core material in both written and practical exams. A slick cardiovascular history and examination should be second nature by the time you are sitting your finals OSCE, and there is no substitute for practice.

"Observe, record, tabulate, communicate. Use your five senses. Learn to see, learn to hear, learn to feel, learn to smell, and know that by practice alone you can become expert."

Sir William Osler (1849-1919)



QUESTION BREAK

- What causes the first and second heard sounds?
 - S1 is due to _____
 - S2 is due to _____
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- On auscultation of the chest you detect a pansystolic murmur. What valvular pathology may this represent?

HISTORY ESSENTIALS

You should already be well practiced at the format of history taking. Below is a reminder of the cardiovascular essentials.

Example Stem:

"Mr Heart is a 65-year-old retired baker. He has presented with a two-hour history of central chest pain and nausea. You are the intern in Emergency. Please take a history from Mr Heart, present your findings leaving time for questions at the end"

SOCRATES

Features in Socrates that are concerning for cardiac chest pain:

- **Site:** Central/Left sided chest pain
- **Onset:** At rest or minimal exertion
- **Character:** Pressure/tightness
- **Radiation:** Shoulders/ left arm/neck/jaw
- **Associated symptoms:**
Diaphoresis/nausea/SOB/collapse
- **Timing:** Ongoing
- **Exacerbation or Relieving factors:** At rest or minimal exertion, relived by GTN
- **Severity:** 1-10 pain score

Pitfalls

Beware the diabetic patient

- this population is high risk and can present with atypical symptoms, always fully investigate pain in this group.

Cardio vascular history key points	
Past Medical Hx	History of Ischaemic Heart Disease Diabetes Hypertension Hypercholesterolaemia Previous Stroke or Peripheral Vascular Disease Rheumatic fever
Medication Hx	All medications but particularly cardiovascular medication – ACEi, Beta blockers, Digoxin etc.
Social Hx	SMOKING (important for all systems) Alcohol Recreational Drug use
Family Hx	Sudden Death IHD at a young age Diabetes Stroke Congenital Heart Disease Cardiomyopathy

EXAMINATION ESSENTIALS

It is the examination that often separates the good students from those who are borderline. As an examiner, it clear which students have been on the wards seeing patients and those that have not.

Example Stem:

“You are the RMO for Cardiology. You are asked to see a new patient who has been referred by his GP with shortness of breath and a new murmur”

GENERAL OBSERVATION

- **Look for clues in the room** – Oxygen, ECG, Monitoring, GTN, mobility aids.
- **Hands** – Temperature, Capillary refill time, stigmata of infective endocarditis.
- **Pulse** – Radial for rate and rhythm, Brachial/carotid for character.
- **Blood pressure** – Just say you would do this.
- **Face** – Xanthelasma and corneal arcus (hypercholesterolemia), central cyanosis, malar flush (mitral stenosis), conjunctival pallor (anaemia).

Infective Endocarditis

- Splinter Haemorrhages
- Osler's Nodes
- Janeway Lesions
- Clubbing
- Roth spots (on fundoscopy)
- Microscopic haematuria (from septic emboli)
- Changing Murmurs



Pulse

- **Radio-radio delay** = coarctation of the aorta
- **Collapsing pulse** = Aortic regurgitation
- **Slow rising** = aortic stenosis

Practice summarizing as your move thought each part of the examination. An example may be:

"The patient appears to be comfortable at rest. He/she is on 2l of oxygen via nasal cannula and monitoring. He is not pale, cyanosed or visibly dyspnoeic. I will now move onto inspect the hands"

CHEST

- **INSPECT** – Scars (median sternotomy, lateral thoracotomy), pacemaker, deformity's, visible apex beat, legs for vessel grafts.
- **JVP** – Positioning is everything. Patient at 45 degrees, head turned slightly to the left. The Jugular vein is behind the Sternocleidomastoid. You are looking for a pulsation, NOT a visible vein. It is sometimes described as 'flickering' due to its double waveform. If raised look for peripheral oedema.
- **PALPATE** – Apex beat (midclavicular line 5th intercostal space unless displaced), parasternal heaves (this is a palpable impulse due to right ventricular Hypertrophy. On examination, you feel the heel of your hand being lifted), Thrills (palpable vibration due to turbulent blood flow through a valve. Place your hand across the chest with the flats of your fingers across the heart valves in turn)

Schamroth's Window Test

