



Oxygen Workstation

UHS team



Simple steps:

- ▶ Consider cycle of breathing
- ▶ Good positioning
- ▶ Deep breathing exercises
- ▶ Early mobilisation
- ▶ Expectoration, taking samples
- ▶ What are you looking for?

Nasal Specs

- ▶ Low flow oxygen- max 2 l
- ▶ Pros:
- ▶ Less invasive than mask
- ▶ Tolerated well

- ▶ Cons:
- ▶ Low flow only
- ▶ Pressure sore risk- if appropriate to hospital- Oxygen care assessment tool
- ▶ Often sited incorrectly



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Hudson Mask

- ▶ Higher flow than nasal specs
- ▶ Pros:
 - ▶ Short term use
 - ▶ Readily available
- ▶ Cons
 - ▶ Dry- consider mouth care as well as pressure areas



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Humidified Oxygen





Humidified Oxygen

Can be used for any woman requiring longer term oxygen

Pros:

Can aid in expectoration as moisture loosens sputum

Can give differing % of oxygen aiming for SpO₂ of 94-98% dependent on normal for that woman

Cons:

Noisy

Not readily available and takes time to set up

Check IP in your area for how often to change humidified sets

Oxygen driven nebuliser

- ▶ Invariably use saline nebs to loosen expectorant or Ventolin for either infection related wheeze or in asthma
- ▶ Nb: If giving less than five mls- make up to 10mls with NaCl to aid action of nebuliser.
- ▶ Put drugs into base chamber (by unscrewing part in picture with green disk), attach to O2 and turn on to up to 15l, will hear it bubbling until completion
- ▶ How do you know if helped?



Non Rebreathe mask

- ▶ Use: Emergency situation to provide approximately 85% oxygen when bag filled with o₂
- ▶ Connect to oxygen supply, turn supply up to 15 l and fill bag, if not filling- press down on disk to fill bag, then put on lady. (If bag not filled then similar percentage given as normal Hudson mask)



Bag Valve Mask (BVM)

- Should be readily available on both resuscitation trolleys and HDU environments
- Use for assisting respirations either before adjunct placed or with an adjunct- always us with head tilt, chin lift
- Unless skilled in this should use two person approach, one to secure mask (using chin lift jaw thrust) and provide a good seal. The other to deflate bag aiming for a resp rate of 8-12.
- May use concurrent oropharyngeal airway (guedel)
- or nasophayngeal airway





Any questions?





ECG workstation



► Aim of session:

Understand how you may monitor an ECG

How to complete each type of ECG

What it will show and components of an ECG



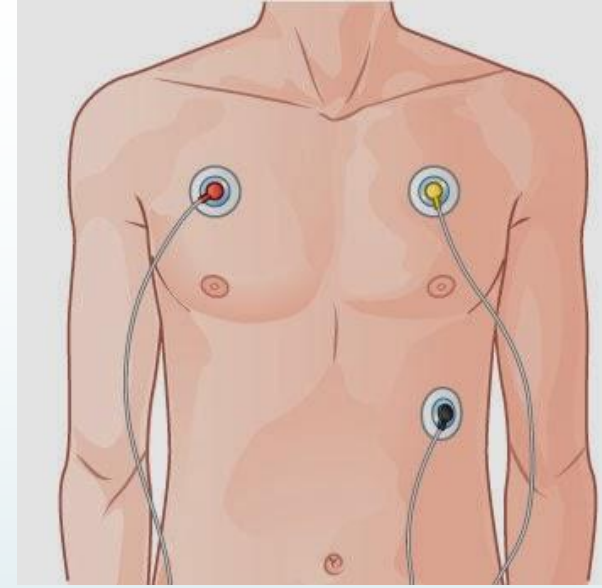
Why do an ECG?

- ▶ An Electrocardiogram is done to view the electrical activity of the heart
- ▶ When? (not exhaustive but most likely)
- ▶ Anyone who is either tachycardic or bradycardic
- ▶ If you have anyone with cardiac disease they may require it (see cardiac plan)
- ▶ Anyone who has a provisional diagnosis of a PE
- ▶ Any other issues that requires full assessment, chest pain, shortness of breath, palpitations, shock including symptoms such as syncope, hypotension.

3 and 5 lead ECGs

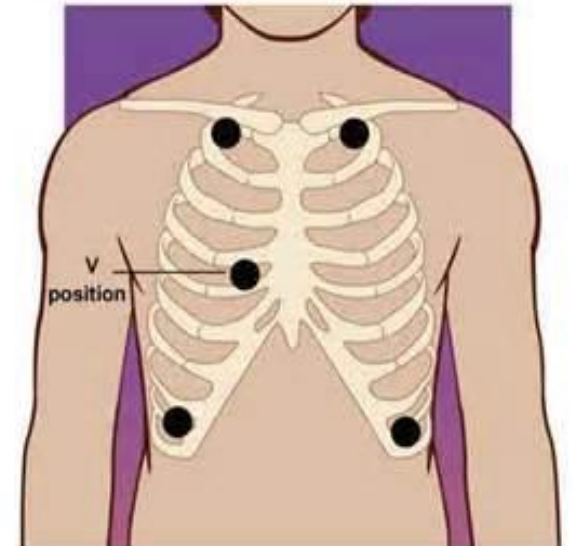
- ▶ A 3 lead and 5 lead ECG are used to do continuous ECG monitoring such as in HDU
- ▶ They are monitored using lead 2 as this follows the natural action potential of the heart which follows from the SA node (atria) through to the AV Node and across the ventricles.

▶ 3 Lead ECG



▶ 5 Lead ECG

Lead Placement, 5 Electrodes

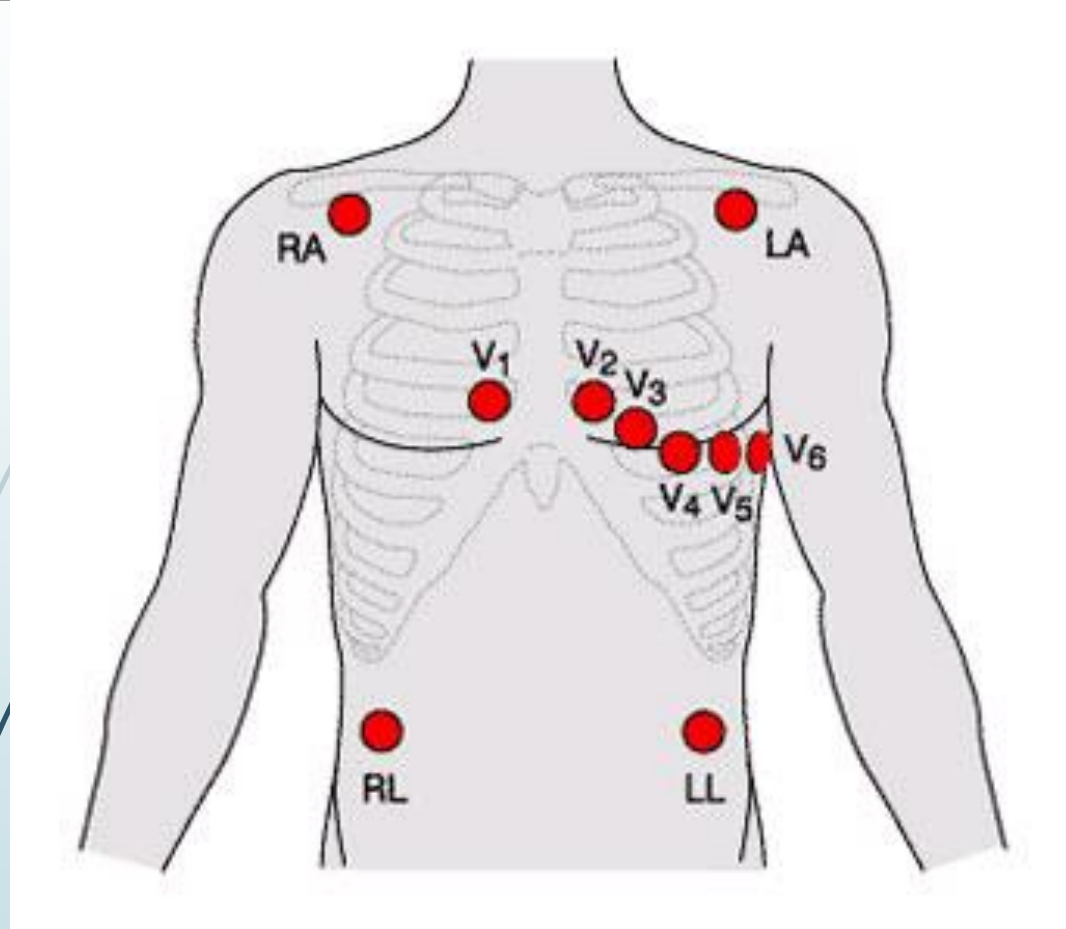




12 lead ECG's

- ▶ These are a brief snapshot of the hearts activity
- ▶ Although called 12 lead there are 10 leads but looks at 12 views of the heart
- ▶ Please check own machine and have training to see how to work it
- ▶ Then lay the lady flat (if pregnant still then need to have bump to the left), place leads in situ, once all in place, ask lady to stay as still as possible as even a deep breath can alter the print out.

Lead Placement



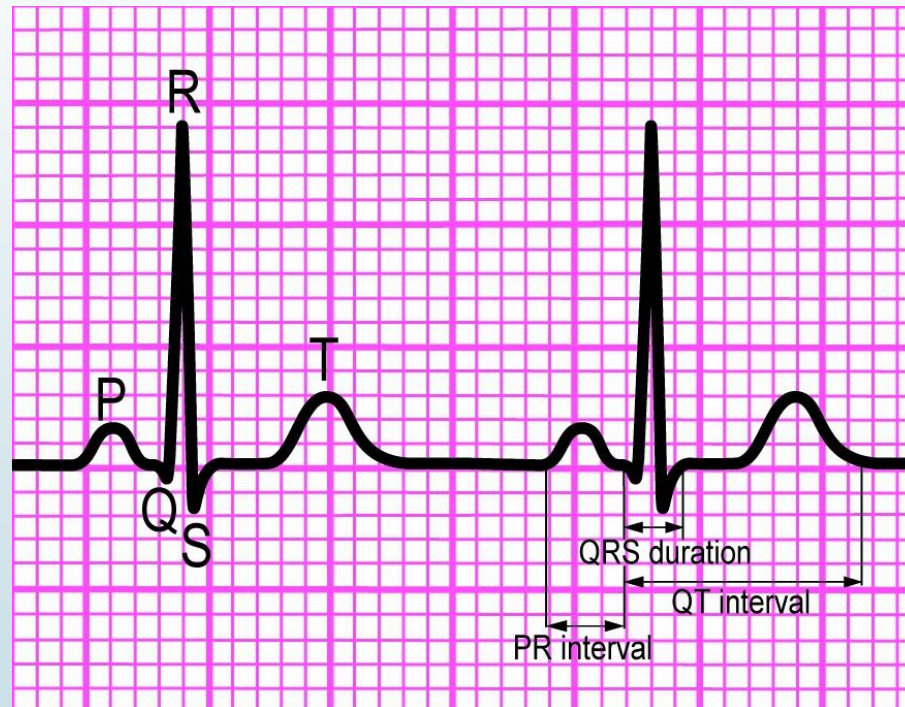
- Note start in 4th intercostal space for v1 and v2, then place v4 mid nipple (more difficult in women as breasts get on the way and nipples move, then place v 3 between v2 and v4. Then follow line of breast and place v6 in mid axillary line and v5 is placed between v4 and v6.
- Limb leads follow Ride Your Green Bike mnemonic

A dark grey arrow points to the right from the left edge of the slide. Below it, several thin, curved lines in shades of blue and grey sweep across the left side of the slide.

Troubleshooting

- ▶ Remove jewellery/ underwired bras
- ▶ Check skin dry/ Hair free (if male visitor that has collapsed)
- ▶ Check stickers position and ensure correct stickers (flat squares with clip wire/ round ones with electrode)
- ▶ If dotted line recheck position

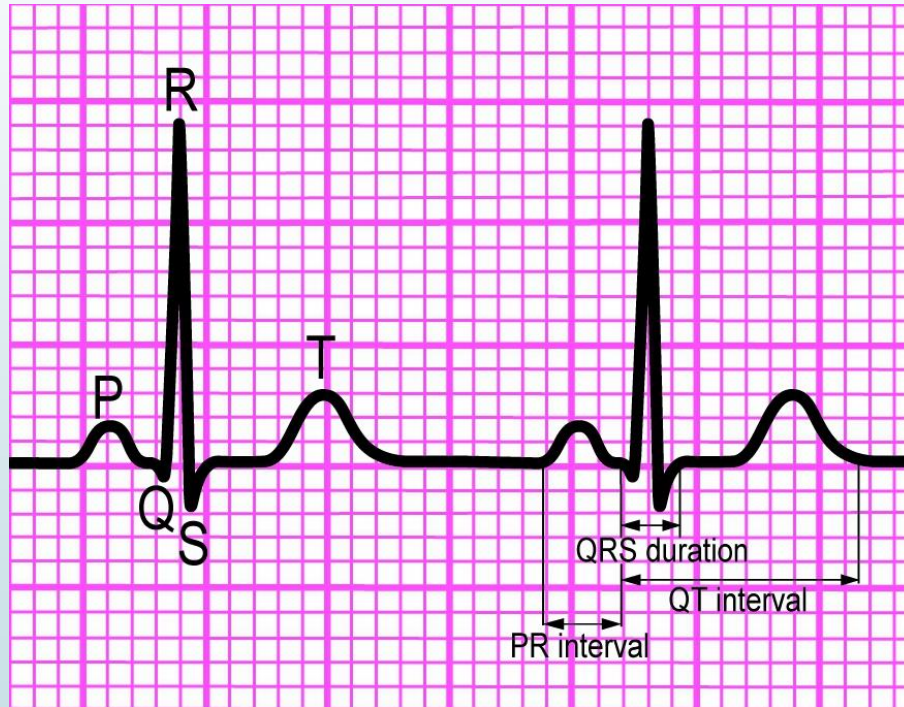
Normal ECG



► Normal PR Interval-
0.20 seconds

► Normal QRS duration –
0.12 seconds

What is each part?



- P Wave- Atrial depolariation. Atria Contract in response causing blood to push through to ventricles.
- QRS wave- electrical activity passes through ventricles and in response ventricles contract and push blood out either to pulmonary system (right ventricle) or the body (left ventricle)
- T wave- all repolarises to start cycle again.



Any questions?

- ▶ In Summary:
- ▶ Looks at electrical activity of heart, can use continuous 3 lead or 5 lead or a 12 lead ECG
- ▶ A Normal ECG consists of a P, QRS and T wave complex and if you want further information on how to interpret let me know.