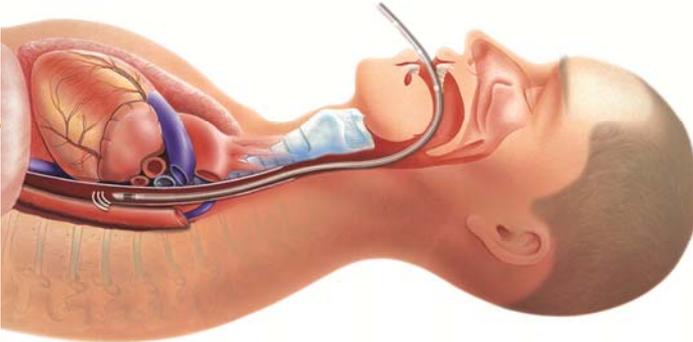
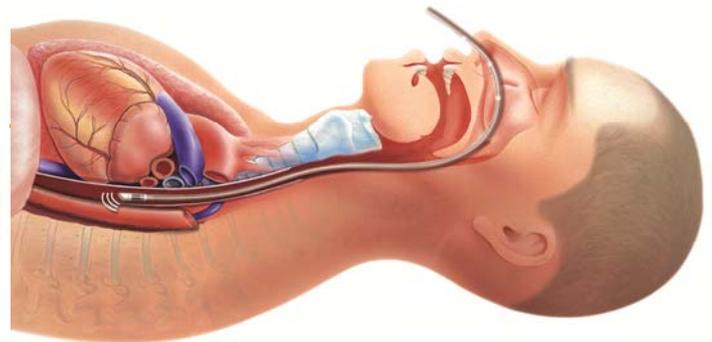


Using the CardioQ-ODM Monitor in the OR

1. Turn on the CardioQ-ODM (*use the switch at the back of the monitor*).
2. Attach a probe to the interface cable.
3. Select "New Patient".
4. Input patient data (patient ID, gender, age, weight, height). *Use Control Knob to input data and press enter, check and then accept data.*
5. Apply water-based lubricant to distal part of probe.
6. Insert probe, bevelled edge upwards (*patient incisors usually between distal & middle markers for oral insertion or middle & proximal for nasal insertion*).

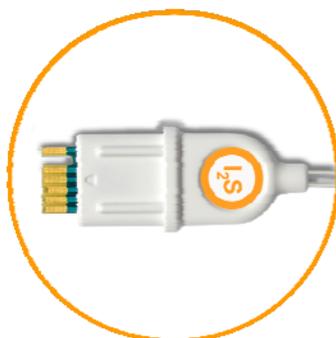
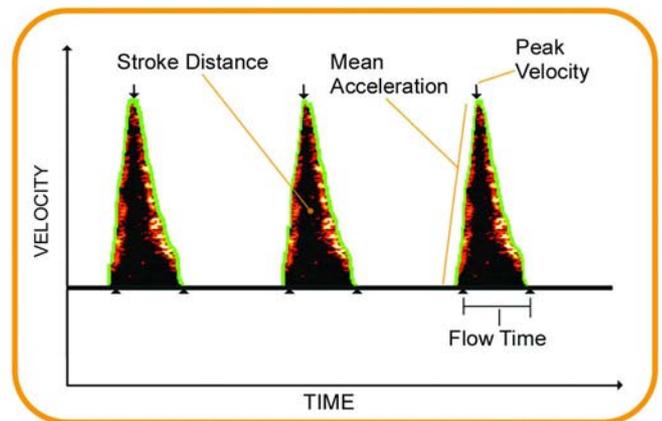


Oral Insertion



Nasal Insertion

7. Locate descending aortic waveform (*gently rotate or adjust depth as necessary*).
8. Optimise waveform (*sharpest sound, tallest peaks, spectrum of colours*).
9. Use Auto gain if necessary.



The CardioQ-ODM Waveform

The **green line** indicates the velocity/time envelope which the monitor uses to make calculations. The **white arrows** indicate time and velocity values used for CardioQ-ODM™ calculations.

The Stroke Distance (SD) is the area under the waveform and is the basic measured parameter upon which calculations of Stroke Volume (SV) and all other Cardiac Output (CO) and indexed measurements are made. Stroke Volume is the parameter of choice for fluid management protocols, however changes in Stroke Distance (SD) or Stroke Volume Index (SVI) can also be utilised.

The waveform base, (flow time) depends on heart rate, left ventricular filling and afterload. The flow time corrected to a heart rate of 60bpm (FTc) is inversely correlated with the systemic vascular resistance (SVR).

FTc is often used as an indicator of hypovolaemia and fluid responsiveness, however during anaesthesia the vasodilatory effects of anaesthetic agents should be considered. Under anaesthesia or other vasodilators there may be a decrease in left ventricular afterload such that the baseline FTc may be elevated above the normal range (330 to 360 ms). A longer FTc may also be seen in conditions associated with a low SVR eg sepsis and pregnancy.

If FTc does not increase after an appropriate fluid challenge, other causes of vasoconstriction, (eg excess vasopressors, cold temperature, or obstructed circulation such as pulmonary embolus) should be considered.

Typical Parameter Values

(These values should not be confused with a physiological target)

Flow Time Corrected (FTc)

330 - 360 milliseconds

NB -The effects of vasodilating drugs may elevate the FTc (see above).

Peak Velocity (PV)

20 years 90 - 120 cm/s

30 years 85 - 115 cm/s

40 years 80 - 110 cm/s

50 years 70 - 100 cm/s

60 years 60 - 90 cm/s

70 years 50 - 80 cm/s

80 years 40 - 70 cm/s

90 years 30 - 60 cm/s

Fluid Management

