Target blood gas values in ventilated infants

- These cannot be generalised as in the sickest infants a compromise must often be made between the potentially damaging effects of the blood gas abnormality and the damage caused by changes in treatment aimed at normalising the blood gases
- **The figures given here apply to well or moderately ill babies**
- Therapeutic aims should always be discussed with the consultant in sicker babies
- Oxygen levels are kept lower in preterm infants than in term infants because of the concern about higher oxygen levels and retinopathy of prematurity (ROP). However, preterm infants targeted to sats of 91%-95% have been shown to have increased survival in comparison with infants targeted to 85%-89%
- Low CO_2 levels are particularly harmful in both preterm and term infants and are associated with increased risk of chronic lung disease, neurodevelopmental delay and hearing loss
- Increasing ventilation is not the most appropriate way of improving the pH in metabolic acidosis

Term infants

- SaO2 92%-98%
- PCO_2 >5 kPa (high PCO_2 is acceptable if pH is normal)
- pH 7.20 - 7.45

Preterm infants

- SaO2 90 - 95%
- PCO_2 5 - 8 kPa (for the first 5 days, then pH dependent)
- pH 7.20 - 7.45