- In infants younger than 32 weeks' gestation, initial oxygen supplementation of 30% oxygen is as safe as 65% oxygen with no differences in chronic lung disease or oxidative stress markers (Rook, Schierbeek, Vento, et al, 2014).

- Systematic review of 21% oxygen versus 100% oxygen use for stabilization or resuscitation of newborns found a significant reduction in risk for newborn mortality as well as hypoxic ischemic encephalopathy when 21% oxygen was used (Saugstad, Ramji, Soll, et al, 2008).

In moderately asphyxiated term infants, those resuscitated with 100% oxygen had elevated had oxidative stress markers in their blood at 28 days of age, whereas those resuscitated with 21% oxygen had levels similar to non-asphyxiated control infants (Vento, Escobar, Cernada, et al, 2012).

- In neonates 24 to 34 weeks' gestational age, a low oxygen strategy beginning with room air with a 10% increase in oxygen concentration every 30 seconds until satisfactory oxygen saturations were achieved resulted in less oxygen exposure, lower oxidative stress, and decreased respiratory morbidities compared to infants resuscitated with a high oxygen strategy (100% oxygen to start followed by 10% decreases in oxygen concentration every 30 seconds).

- In neonates 32 weeks' gestational age or younger, initiating resuscitation with 100% oxygen and titrating downward was more effective than initiating resuscitation with 21% oxygen (Rabi, Singhal, and Nettel-Aguirre, 2011).

- Use of heated and humidified air in neonates 32 weeks' gestational age or younger during resuscitation or stabilization in the delivery room minimized postnatal heat loss (te Pas, Lopriore, Dito, et al, 2010).

- Infants receiving 100% oxygen with positive-pressure ventilation and healthy infants transitioned in room air had similar increase in oxygen saturation, but a slower increase in oxygen saturation was observed in infants receiving 100% oxygen free flow (Rabi,