Proper positioning & handling as a part of an individualised developmental care programme, have been shown to affect many physiological and neuro-behavioural parameters in the preterm infants. (1,2) Appropriate positioning, including midline orientation, hand-to-mouth activity and proper flexion, promotes self-soothing and self-regulatory behaviours and contribute to neuro-behavioural development. Correct body positioning can prevent postural deformities such as hip abduction and external rotation, ankle eversion, retracted and abducted shoulders, increased neck hyper extension, shoulder elevation and cranial moulding. (3)

Prone positioning increases oxygenation, tidal volume and the compliance of the lungs when compared to infants in a supine position. (4,5,6,7,8,9) Supported prone positions improve the quality of sleep and decreases stress for un-sedated ventilated pre-term infants. (3,10,11) This position however, has some drawbacks and when considering postural outcome, there needs to be careful thought to prevent a flattened ‘frog-like’ posture. (10)

Side lying or lateral positioning has been found to also support oxygenation while decreasing the incidence of external rotation of the extremities. Side lying further promotes flexion and midline opportunities. (11,12,13,14)

Both prone and left lateral positions significantly reduce the severity of GOR. (15,16). The supine position allows unrestricted access to the baby for certain procedures like intubation & catheterisation. It can, therefore be beneficial during these procedures.

Reference:

8 Keene et al, Does Supine positioning increase apnoea, bradycardia and desat. in preterm infants J of perinatal 2000; 20:17-20


14 Schlessel-J, Rappa-H et al. Pulmonary mechanics and gas exchange: effect of lateral positioning during recovery from respiratory distress syndrome; Paediatric Pulmonology, 1993;15:36-40

15 Ewer-AK, James-ME, Tobin-JM Prone and left lateral positioning reduce gastro-oesophageal reflux in preterm infants; Arch dis Child Fetal Neonatal Ed 1999; 81:F201-F205

16 Tobin-JacintaM, McCloud-Phillip, Cameron-DonaldJS Posture and gastro-oesophageal reflux: a case for left lateral positioning, Arch Dis Child 1997; 76:254-258