Feeding in the Neonatal Unit

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Normal feeding

- Act of feeding is a complex process
- Structure and function closely related
- 2 important elements essential for normal feeding
  - 1 = acquisition of adequate nutrition
  - 2 = protection of the airway
- When feeding problems arise, malnutrition and respiratory symptoms can arise  (Petty, 2013)
Types of milk

- Human verses formula milk
- Breast milk – nutritional advantages from Long chain polyunsaturated fatty acids, bile salt stimulated lipase, high bioavailability of calcium, copper and zinc. Well tolerated
- Preterm breast milk – different composition e.g. – phosphate, protein
- Fortification of breast milk required in preterm
- Formula – adapted to mimic breast milk
- ‘Special’ feeds – e.g. pre-digested formula for surgical neonates, additives to add calories etc
- King, 2005
Breast-feeding

- Hungry baby required in the well neonate
- Well positioned mother
- Baby horizontal at level of breast
- Baby brought to the breast
- Wide mouth, nipple in upper third, the whole areola into the mouth.
- Preterm neonates are started when ready

Jones and Spencer, 2005; Geddes, 2007
Supporting Breast feeding

- *Ongoing* support essential for both well neonates but particularly for the neonate in the neonatal unit (e.g. preterm)
- Support with expressing & storing breast milk (EBM) if neonate unable / too unwell to feed
- Mother’s health & hygiene– give advice & information giving
- Show sensitivity & maintain privacy / dignity plus consider culture
Bottle feeding?

- When a mother is unable to breast-feed or chooses not to, the nurse has a role to play in facilitation of formula feeding.
- General rule = 1 level scoop of powder for each 30 mls (= 1 fluid ounce).
- Follow Dept of Health Guidelines on making up feeds.
- Variety of bottles and teats available.
- Sterilisation of bottles.
Normal requirements

- Calorific requirements increase initially after birth and then increase slowly in 1st 2 weeks – reaching 150 mls/kg (100-120 kcal/kg/day)
- Small / preterm neonates have higher requirements to achieve ideal growth
- Requirements are based on metabolic rates and calories needed for physiological functioning
- Nutrients- Protein, Carbohydrate, Lipids, Vitamins, Electrolytes, Trace elements, Iron
‘Tube’ feeding

- Via nasogastric / orogastric for bolus (gavage) feeding until neonate is well enough to feed orally OR is physiologically able (i.e. suck / swallow from 34 weeks)

- Issues in the preterm neonate–

- ‘Trophic’ feeding (minimal enteral nutrition (MEN) with breast milk to prime the gut), Non nutritive sucking – neonate has pacifier to get used to stomach filling during a gavage feed
Feeding in the Neonatal Unit

- **Total Parenteral Nutrition (TPN)** – Parenterally delivered nutrients to support normal growth, required for a non-functioning gut
- Needed for intrauterine weight gain
- Start early and build up.
- Use Trophic feeding / MEN during TPN to prime gut

(Leaf, 2007;
Other feeding issues in the Neonatal Unit

- Bottle verses breast feeding
- Assisting with expression of breast milk and correct handling / storage
- Cup feeding
- Supplementation
- Specialist help and devices
- Persistent feeding difficulties
- Weaning onto solids
- Family support
Feeding problems

- Common in the new-born period
- Categorised as transient or persisting
- Transient relate to perinatal & / or maternal factors and resolve within days or weeks
- Persistent difficulties suggest an underlying organic cause
- **Specific problems** – respiratory distress, Cardiac, Surgical – structural defects or NEC, Reflux
Feeding Assessment

- Weight, Growth charts – full-term & Pre-term –
- Post-natal head growth & length
- Blood sugars & other bloods, intake / output – ‘balance’, observation of feeding, history, referral to speech and language therapist and/or dietician

- Assessment of the readiness to feed and feed tolerance. Readiness – bowel sounds, passing of stool, nil vomiting or aspirates, no abdominal distension
- Tolerance – aspirates, affected by stress & disease
Further Reading

- ROYAL COLLEGE OF PAEDIATRICS AND CHILD HEALTH (RCPCH)
  - http://www.rcpch.ac.uk/child-health/research-projects/uk-who-growth-charts/uk-who-growth-chart-resources-0-4-years/uk-who-0
Further Reading - websites

- NHS Breastfeeding page [http://www.nhs.uk/Planners/breastfeeding/Pages/breastfeeding.aspx](http://www.nhs.uk/Planners/breastfeeding/Pages/breastfeeding.aspx)
- [http://www.who.int/topics/breastfeeding/en/](http://www.who.int/topics/breastfeeding/en/)
- [http://www.nhs.uk/Conditions/Breastfeeding/Pages/Introduction.aspx](http://www.nhs.uk/Conditions/Breastfeeding/Pages/Introduction.aspx)