Nutritional support for children during critical illness: European Society of Pediatric and Neonatal Intensive Care (ESPNIC) metabolism, endocrine and nutrition section position statement and clinical recommendations.

Intensive Care Med. 2020 Mar;46(3):411-425.

Background: Nutritional support is considered essential for the outcome of paediatric critical illness. There is a lack of methodologically sound trials to provide evidence-based guidelines leading to diverse practices in PICUs worldwide.

Objective: To provide an ESPNIC position statement and make clinical recommendations for the assessment and nutritional support in critically ill infants and children.

ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet

Nutrition in Critical Illness in Children

Few points for nutritional support for children during critical illness :

1. Anthropometric measurements like weight, height/length, mid upper arm circumference and head circumference in young children should be checked on admission and regularly during admission and follow up.	2.Initiate early enteral nutrition within 24 h of admission unless contraindicated & increase enteral nutrition slowly.
3. Early enteral nutrition is recommended in term neonates/children who are stable on pharmaceutical haemodynamic support.	4. Enteral nutrition should be considered in term neonates with umbilical arterial catheters or critically ill term neonates on PGE1 infusion with adequate observation and monitoring.
5. The recommended glucose provision should be sufficient to avoid hypoglycemia and to prevent hyperglycemia. Enteral protein intake of minimum 1.5 g/kg/d can be considered to avoid negative protein balance.	6. Polymeric feeds should be considered as the first choice, protein and energy-dense formulations may be considered in fluid restricted critically ill children.
7. Either continuous or intermittent/bolus feeds can be used as feeding method. Gastric feeding is as safe as post pyloric feeding. Post-pyloric feeding can be used when there is high risk of aspiration or requiring frequent fasting for surgery or procedures. Routine measurement of gasteric residual volume (GRV) in critically ill children is not recommended	8. Defer starting parenteral nutrition for up to one week in critically ill term neonates and children, independent of nutritional status, while providing micronutrients.

EXPERT COMMENT

“Malnourishment and macronutrient deficits during critical illness have been associated with increased morbidity as well as increased mortality. Initiate early enteral feeding (oral/ NG) of critically ill neonates and children, unless clear contraindications exist. On the spot prepared Polymeric formula feeds are easy to start & to know the provided energy and protein content to the child. EBM is preferred whenever available.”

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With warm regards,

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Reference

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