

## Appendix

### PARENTERAL NUTRITION

Early start from the first day of life, preferably from a central access, with 2 g/kg/day of protein and at least 1 g/kg/day of fat.

Daily increase until reaching the goals as follows:

	<b>Term neonate</b>	<b>Preterm neonate</b>
<b>Glucose</b>	12-14 mg/kg	12-14 mg/kg
<b>Protein</b>	3 g/kg	4 g/kg
<b>Fat</b>	2-3 g/kg	2-3g/kg
<b>Calories</b>	100-130 kcal/kg/die	120-140 kcal/kg/die

Sodium restriction is not recommended in heart failure because Na<sup>+</sup> administration less than 2 mEq/kg/day may result in hyponatraemia and growth retardation.

Refer to birth weight for the first 7 days of life (is tolerable weight loss up to 10% in term newborn and up to 15% in preterm infant).

Consider dry weight, which can be estimated by using the appropriate weight for length or the 50th percentile, if patient is oedematous.

Concentrate parenteral substrates preparation as much as possible to reduce fluid intake.

Consider that prolonged administration of parenteral nutrition (above 2-3 weeks) increases incidence of cholestasis (hyperbilirubinemia and increase in transaminases), hepatocellular necrosis and liver damage up to cirrhosis.

Total parenteral nutrition in post-surgical chylothorax (whose incidence varies between 0.85% and 3.8%).

## ENTERAL NUTRITION

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Early start of MEF (bolus or continuous infusion via nasogastric tube) at 10-20 ml/kg/day. In fact, it is known that pre-operative enteral nutrition improves post-operative attitude to food.

MEF is safe and well tolerated even in patients on prostaglandin infusion or with shunts.

MEF is not to be considered in daily caloric intake (up to 145 kcal/kg/day in patients with CHD).

Pay attention to the risk of NEC in case of significant increases in enteral nutrition (are safe increases of 20 ml/kg/day in preterm neonates and 20-30 ml/kg/day in term neonates).

Monitor any abdominal distension, bilious residuals and bloody stools.

Introduce human milk fortifiers when daily intake is 60 ml/kg/day.

Wean parenteral nutrition stepwise to maintain overall caloric intake of 120-130 kcal/kg/day and goal protein and fat intake.

Monitor daily weight considering adequate a weight increase of 20-30 g/day to achieve adequate growth.

Monitor weekly weight, length and head circumference to assess adequacy of nutritional intake.

Periodic biochemical monitoring of nutritional status markers (urea, total proteins, albumin, prealbumin, calcium, phosphate and alkaline phosphatase).

Consider use of a formula enriched in medium chain triglycerides in case of chylothorax.

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