

Newborn Formula Volume Feeding Guideline

The American Academy of Pediatrics recommends exclusive human milk feeding for the first 6 months of life, however there are times when parents decide not to breastfeed or use donor milk due to a medical reason or personal preference. In these instances, formula can be used as the sole source of newborn nutrition or as a supplement to breastfeeding. For term asymptomatic newborns, feeding should be initiated within the first 90 minutes of life and should be fed every to 2-3 hours based on feeding cues (rooting, stirring, mouth opening, hand to mouth, turning head, fussing). Not uncommonly, overfeeding of formula occurs with infants receiving volumes in excess of the physiologic stomach volumes for their age. At MMC, guidelines for recommended volumes for term newborns have been utilized within MMC nursery for donor breastmilk since 2019 based on the Academy of Breastfeeding Medicine's protocol (1), but have not been outlined for formula feeding. Despite depictions of physiologic capacities of newborn stomach (marble (5-7ml) for first 24 hours, to a ping pong ball (25ml) at 48 hours), newborns are frequently ingesting volumes much higher during the first days of life with the subsequent possible health risks including emesis, discomfort, aspiration and a decrease in breastfeeding rates.

Obtaining and storing formula

- a. Newborn Observation and Procedural Area (NOPA) CNA, or NOPA RN if no CNA available, will use the ready to feed 60ml formula bottle and divide into 4 snappies, each containing 15ml.
- b. 10 individual snappies should be readily available for use.
- c. Pre-measured snappies to be individually labeled with expiration date and time. Formula expires 48 hours after the original bottle is opened.
- d. Pre-measured snappies to be stored in NOPA refrigerator until patient requests formula.
- e. RNs, IBCLCs, LPNs, and CNAs are permitted to dispense formula to patients.
- f. Dispense amount of formula based on chart below.

Educating Patients

When delivering pre-measured formula to the patient's room, educate caregivers on:

- i. The recommended amounts of formula to feed their baby based on evidence-based practice. See chart below.
- ii. Methods to bring cold formula to room temperature prior to feeding.
- iii. Formula must be discarded within one hour of the start of a feeding.

Prior to discharge, education should be provided on how to safely mix powdered formula and appropriate volumes to feed until the next pediatric follow-up appointment.

Recommended intake of formula by healthy, term infants

Time (hours)	Intake (ml/feed) determined by feeding cues
First 24	2-15
24-48	5-15
48-72	15-30
72-96	30-60

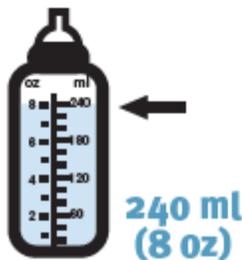
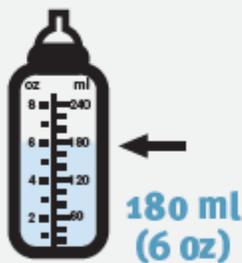
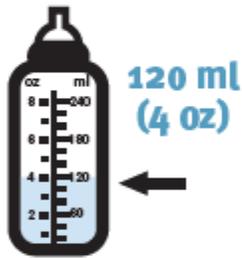
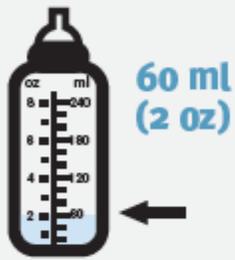
Algorithms are not intended to replace providers' clinical judgment or to establish a single protocol. Some clinical situations may not be adequately addressed in this guideline. Clinicians should document management strategies. *Last revised April, 2021. For questions regarding this guideline, please contact the Medical Director of the Newborn Nursery.*

Mixing Infant Formula

19 or 20 calories/oz

STEP
1

Measure water in bottle.

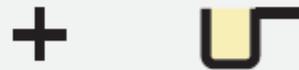


STEP
2

Scoop formula and add to bottle.



IMPORTANT: Only use the scoop that comes with the formula can.



References:

1. Kellarns, A. Harrel C, Omages S, Gregory C, Rosen-Carole C and the Academy of Breastfeeding Medicine. ABM Clinical Protocol #3: Supplementary Feeding in the Healthy Term Breastfed Neonate, Revised 2017. *Breastfeeding Medicine*. 2017;12 (3).
2. Watchmaker, B., Boyd, B. & Dugas, L.R. Newborn feeding recommendations and practices increase the risk of development of overweight and obesity. *BMC Pediatr*, 20, 104 (2020).
3. Dimaggio D, Cox A, Porto A. Updates in Infant Nutrition. *Pediatrics in Review*, October 2017, 38 (10) 449-462.

Last updated 5/6/2021