

# TECHNICAL BULLETIN

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Topic: Optimize Growth with an Exclusive Human Milk Diet

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Appropriate growth can be defined as approximately 1.5 g/kg/day weight gain velocity, 0.5-0.9 cm/week head circumference gain and approximately 0.9 cm/week body length gain.<sup>1</sup> The following factors can ensure your patients get the most out of an exclusive human milk diet (EHMD).

## Establish and adhere to a feeding protocol

Evidence suggests that implementation of a standard feeding protocol for very low birth weight (VLBW) infants results in earlier, successful enteral feeding without increased morbidities.<sup>2</sup> Reaching full enteral feeding faster results in earlier removal of central lines and reduction in central line-associated blood stream infections (CLABSI).<sup>3</sup>

## Fortify early and advance appropriately

Early and appropriate advancement of fortification is achievable with an EHMD and has been associated with weight gain exceeding targeted standards, and length and head circumference growth meeting targeted standards.<sup>4</sup>

## Factor in the impact of human milk variability

Mother's own milk and non-standardized donor milk have high variability in their nutrient content. In fact, there may be a two-to-threefold difference in fat content regardless of the stage of lactation.<sup>5</sup> Due to the variability in human milk, fortification may result in not meeting nutritional goals. Consider the use of a human milk-based human milk caloric fortifier.

## Monitor volume loss with transfers

When preparing fortified human milk feedings, monitor product loss, as it may adhere to product bottles and transfer devices.

## Use shorter tubing length

Using the shortest possible tubing prevents nutrient loss.<sup>3</sup> Substantial amounts of fat are lost due to fat adhering to the feeding bag, syringe, and tubing.<sup>6</sup>

## Position syringe with tip up

Fat is a necessary nutrient for premature infant growth. Because fat rises to the top, positioning the syringe tip facing up allows for improved fat delivery and calorie intake to the VLBW infant.

This document is intended to provide general information for healthcare providers in the use of an Exclusive Human Milk Diet for infants  $\leq$  1250 g birth weight. The information within is the collective opinion of the Nursing Practice Advisory Council (NPAC), a committee sponsored by ProLacta Bioscience®. As with all guidelines, appropriate medical judgment should be exercised. Be sure to review your clinical experience and outcomes around the management of nutrition in VLBW infants.

### References

1. ADA Pocket Guide to Neonatal Nutrition. *American Dietetic Association*. 2009.
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5. Wojcik KY, et al. Macronutrient analysis of a nationwide sample of donor breast milk. *Journal of the American Dietetic Association*. 2009. 109: 1371-40.
6. Tabata M, et al. Fortifier and Cream Improve Fat Delivery in Continuous Enteral Infant Feeding of Breast Milk. *Nutrients*. 11 February 2015. 7(2): 1174-1183. doi:10.3390/nu7021174.



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