



THE
FED IS BEST
FOUNDATION

FED IS BEST GUIDE TO SAFE INFANT FEEDING



FEEDING PLAN

Updated August 2018



I do not want my baby
to lose greater than 7%
of their birth weight.*

Birth weight _____kg

7% wt. loss _____kg

$(BW \times 0.93)$

ex. 3 kg = 6 lbs 10 oz

([conversion calculator](#))

3 kg x 0.93 = 2.79 kg

*Recommendation of the [AAP SECTION ON BREASTFEEDING Guidelines: Breastfeeding and the Use of Human Milk \(2012\)](#).

Patient: _____
DOB: _____



FEEDING PLAN FOR MY BABY

Name of baby: _____ DOB: _____

I wish to get assistance from my nurses, doctors and lactation consultants to achieve my feeding goals without risking my child's health. I am aware that the most common reason an exclusively breastfed (EBF) newborn is rehospitalized is due to problems with insufficient feeding. I am aware that [22%](#) or 1 in 5 mothers and up to [44%](#) of first-time mothers, have been found to have delayed onset of copious milk production (lactogenesis II, DLII), which puts her child at 7-fold increased risk of excessive weight loss. I wish to feed my child to optimize my feeding success and minimize the risks of feeding complications. Outlined below are my feeding goals and what I would like to do if problems arise during the course of my child's feeding.

INFORMED CONSENT REGARDING RISKS OF INSUFFICIENT FEEDING

I understand the risks of exclusive breastfeeding before onset of copious milk production is caused by insufficient breast milk intake due to insufficient breast milk supply and/or insufficient transfer of milk. The complications include increased incidence and severity of the following complications:

- excessive jaundice (yellow skin, hyperbilirubinemia occurs to [10-25%](#) of EBF newborns)
- excessive weight loss (>7% weight loss according to the [AAP 2012 Breastfeeding Guidelines](#))
- dehydration (>7% weight loss occurs to [>50% of EBF newborns](#))
- hypernatremia (high blood sodium >145 mEq/L occurs to [36% of EBF newborns](#))
- low blood sugar (hypoglycemia, glucose < 40 mg/dL occurs to [10% of EBF newborns](#))
 - Note: ≥ 47 mg/dL is the only prospectively validated glucose level that has been shown to protect newborns from long-term developmental delay. The Pediatric Endocrine Society recommends maintaining glucose above 50 mg/dL in the first 48 hours and above 60 mg/dL thereafter) initial _____

I understand the above-mentioned complications from insufficient feeding can result in the need for hospitalization in order to protect my child's health. initial _____

I understand the above-mentioned complications from insufficient feeding can result in brain injury, which can subsequently result in developmental delays, disabilities, lower cognitive development, lower academic achievement, problems with vision, hearing, motor, sensory, language and behavioral development and higher rates of seizure disorder, cerebral palsy and rarely, death. initial _____

I understand that **timely and adequate supplementation** with properly handled and/or properly prepared certified banked donor milk and/or formula, depending on my child's unique nutritional requirements, can prevent nearly all the above complications. initial _____

I understand the risks of supplementation include insufficient breast milk supply if my child is supplemented *without continuing the frequent breastfeeding* (or self expression or bilateral breast pumping, if indicated) needed to stimulate milk production. initial _____

Patient: _____ DOB: _____



MY CURRENT RISK FACTORS FOR FEEDING COMPLICATIONS, PATHOLOGICAL JAUNDICE AND/OR REHOSPITALIZATION ARE THE FOLLOWING:

<p><u>Risk Factors for Feeding Complications:</u></p> <ul style="list-style-type: none"><input type="checkbox"/> First-time mother (44% DLII)<input type="checkbox"/> Exclusive breastfeeding<input type="checkbox"/> Cesarean section<input type="checkbox"/> Complicated/prolonged labor > 12 hrs<input type="checkbox"/> Prolonged “pushing” stage of labor > 1 hr<input type="checkbox"/> History of low milk supply, delayed (>72 hours) or failed lactogenesis II<input type="checkbox"/> Pre-term baby (< 37 weeks gestation)<input type="checkbox"/> Small-for-Gestational-Age baby/IUGR<input type="checkbox"/> Large-for-Gestational Age baby<input type="checkbox"/> Medical complications with baby<input type="checkbox"/> Diabetes<input type="checkbox"/> Hypertension<input type="checkbox"/> Pre-pregnancy BMI > 27<input type="checkbox"/> Smoking<input type="checkbox"/> Hypothyroidism<input type="checkbox"/> Hypopituitarism<input type="checkbox"/> Advanced Maternal Age (≥ 30 years old)<input type="checkbox"/> Polycystic ovarian syndrome<input type="checkbox"/> Prior breast surgery/injury/piercings<input type="checkbox"/> Minimal growth of breast tissue during pregnancy (breast hypoplasia), tubular or asymmetric breasts, flat/inverted nipples<input type="checkbox"/> Infertility history<input type="checkbox"/> Excessive blood loss during delivery (> 500 mL blood, need for transfusion)<input type="checkbox"/> Sickle cell disease<input type="checkbox"/> Autoimmune diseases: Multiple sclerosis, Crohn’s, Ulcerative Colitis, Lupus, Rheumatoid Arthritis<input type="checkbox"/> Psychosocial challenges: Addiction, PTSD, sexual trauma, depression, anxiety<input type="checkbox"/> Retained placenta	<p><u>Risk Factors for Pathological Jaundice or Hyperbilirubinemia:</u></p> <ul style="list-style-type: none"><input type="checkbox"/> First-time mother<input type="checkbox"/> Exclusive breastfeeding<input type="checkbox"/> History of low milk supply, delayed or failed lactogenesis II<input type="checkbox"/> Rapid or excessive weight loss > 7%<input type="checkbox"/> Prior history of jaundiced newborn<input type="checkbox"/> Male gender<input type="checkbox"/> Maternal age ≥ 25<input type="checkbox"/> Asian race<input type="checkbox"/> Jaundice within the first 24 hours<input type="checkbox"/> Jaundice before discharge<input type="checkbox"/> Pre-term baby < 37 weeks<input type="checkbox"/> Gestation 37-38 weeks<input type="checkbox"/> Large-for-Gestational Age baby<input type="checkbox"/> Small-for-Gestational Age baby<input type="checkbox"/> Blood type incompatibility, G6PD deficiency, other hemolytic disease<input type="checkbox"/> Cephalohematoma or bruising and swelling on the scalp from birth<input type="checkbox"/> Vacuum-delivery<input type="checkbox"/> Discharge at 48 hours or less
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Patient: _____
DOB: _____



1. My feeding goals are: (choose one)

- Breastfeed while supplementing until my milk comes in, then exclusively breastfeed thereafter
- Exclusively breastfeed from birth
- Extended mixed-feeding with breast milk and formula (combo-feeding)
- Formula-feed exclusively

2. I want to know the birth weight in kilograms at birth and all subsequent weights and percent loss thereafter. 7% is the maximum weight loss recommended by the AAP.[5]

Birth weight _____ kg
7% weight loss _____ kg (BW x 0.93)

(No weight loss threshold protects a newborn from [hypoglycemia](#) and its negative effects on the brain. Only glucose checks and providing sufficient calories protects against hypoglycemia. Newer data suggests that even early, transitional hypoglycemia within [6 hours](#) of birth, even without symptoms, can result in long-term impaired brain development.)

3. I wish for my child to be weighed by the following schedule:

- Twice daily to closely monitor weight loss (*recommended for exclusively breastfed babies*)
- Once daily (*may be sufficient for combo-fed and formula-fed babies*)

4. I wish for my child to not lose greater than (select all that apply):

- 7% of birth weight at any time
- >75thile of the [Newborn Weight Loss](#) nomogram
- I wish for my child to be supplemented to their satisfaction and lose as little weight as possible (supplementation must occur only after nursing to stimulate milk production)

5. I would like assistance with learning how to feed my child on the first day.

- Manual expression of breasts **before every feeding** to check for presence of milk (Video tutorial <http://newborns.stanford.edu/Breastfeeding/HandExpression.html>)
- Assistance with [latch](#) and [position](#)
- Assistance with hearing swallows to ensure intake of milk
- Assistance with learning how to pump my milk, especially if baby is sleepy at breast and is not actively breastfeeding every 2- 3 hours on both breasts for at least 10-15 minutes.
- A pre- and post-breastfeeding weight or "weighted feed" to measure the amount my child is gaining in a feeding session after my milk comes in
- I would like education on formula-feeding
- I would like education on combo-feeding

Patient: _____
DOB: _____



6. In the event that my child reaches 7% weight loss at any time, I would like to:

- Express colostrum/transitional milk and feed it to my child by syringe / spoon
- If little to no milk is present, I would like to offer screened and pasteurized donor milk if available and if my child has medical indication for it (prematurity)
- If little to no milk is present, I would like to supplement my child with formula
- I would like a "weighted feed" to be done
- I would like an immediate glucose check

(Note: > 7% weight loss has been associated with increased rates of hyperbilirubinemia and hypernatremia)

7. If I am exclusively breastfeeding, to protect my baby from complications due to insufficient milk intake, I would like my child to be monitored:

- Once daily transcutaneous bilirubin checks (or serum bilirubin test if necessary)
- Glucose monitoring per hospital protocol for high-risk babies ([hypoglycemia in healthy, full-term, exclusively breastfed babies](#) has been shown to occur in 1 in 10 babies overall and 1 in 4 first-born babies in the first 48 hours)
- High blood sodium screening ([hypernatremia \$\geq 145\$ mEq/L](#) has been recently shown to occur to as many as 36% of breastfed newborns and can occur by 4.77% weight loss).

8. If my child appears hungry and unsatisfied at the breast:

- I would like to supplement until my child is satisfied and no longer crying or lethargic (15 mL at a time, repeated until satisfied)
- I would like to supplement with my own pumped breast milk first
- I would like to supplement with screened and pasteurized donor milk if available to my child
- I would like to supplement with formula
- I would like to supplement after nursing sessions to continue stimulation of milk production.
- I would like assistance with manual expression to evaluate for presence of milk
- If my newborn is sleepy and/or not breastfeeding well, I would like to supplement to provide energy to improve breastfeeding.

***The size of the newborn stomach at birth has been found to be [20 mL or larger](#), much larger than what has been previously taught.**

9. If I am supplementing, I would like to supplement by:

- Cup
- Spoon
- Supplemental nursing system
- Bottle (slow-flow, nursing-friendly preferred if breastfeeding)

Patient: _____
DOB: _____



10. If I am supplementing, I would like to supplement with:

- Banked, screened and pasteurized donor milk if available to my child
- Elemental formula
- Hydrolyzed formula
- Standard formula

11. Other preferences:

- No pacifiers
- I want a pacifier for my baby
- Rooming-in with my baby
- Option to sleep during the day / night by sending my child to the nursery so I may recover from delivery for the safety of my baby
- I do not want to be left alone while breastfeeding or doing skin-to-skin while recovering to avoid accidental suffocation and falls (falling asleep, immobility, pain medication effect).

I wish to reach my personal feeding goals while safely and adequately feeding my baby.

I have additional concerns and requests:

Respectfully,

Signature

Mother's name

Disclaimer: This document does not replace in-person physician evaluation and treatment. This document is meant to inform parents of the most recent data regarding infant feeding and to increase their knowledge on how to protect their newborns from hyperbilirubinemia, dehydration, hypernatremia, hypoglycemia and extended or repeat hospitalizations due to complications from underfeeding. Earlier supplementation may be needed for babies who are premature or have medical conditions. It is recommended that a parent seeks evaluation by a physician trained in newborn care for any concerns regarding the health and safety of her baby if they arise.

initial _____

Patient: _____ DOB: _____



TRACKING BABY TO ENSURE SAFE FEEDING

Hours/ Time	Birth	12 hrs	24 hrs	36 hrs	48 hrs	60 hrs	72 hrs
Weights# (kg)/% loss							
Bilirubin* (see chart)							
Glucose (Normal > 50 mg/dl)							

*To calculate the bilirubin risk category, please go to <http://bilitool.org> or the see last page.

#To calculate the percent weight loss, go to <https://www.newbornweight.org>.

Percent weight loss = (Birth weight - current weight)/birth weight) x 100%

Note: Many errors can be made when using pounds and ounces for weight. Convert pounds and ounces to kilograms with the following: (Weight in lbs + ounces/16) divided by 2.2 = weight in kilograms.)

Please note that wet and dirty diaper counts are not tracked on this feeding plan because they have not been shown to have any correlation with actual breast milk intake or prevention of excessive weight loss.[14] It is important to track eliminations on the hospital records to be sure your baby is eliminating normally.



Where do these volumes come from?

5-7ml

- A study in 1988 *Am J Clin Nutr 1988;48:1375
- The commonly taught size of **5-7ml** were obtained from the colostrum production of TWELVE breastfeeding mothers, divided by 10 feeds
- They did NOT measure the size of the newborn stomach.
- Assumed all mothers produce this average amount of colostrum

20ml

- Nils J Bergman <http://onlinelibrary.wiley.com/doi/10.1111/apa.12291/abstract>
- A literature search was conducted for studies reporting volumes or dimensions of stomach capacity before or after birth. Six articles were found, suggesting a stomach capacity of **20 mL** at birth.
- Stomach sizes were measured with ultrasound and autopsy.

Patient: _____
DOB: _____

Recent data trends show a concerning rise in hospitalizations of exclusively breastfed newborns. This is due to feeding complications from insufficient breast milk intake, including jaundice, hypoglycemia, and dehydration, which can impair a newborn's future brain development.

Know the signs to look for when your newborn baby is HUNGRY, in the first days of life and watch your baby for:

H	Hypoglycemia (low blood sugar) jittery hands, low body temperature, inconsolable and high-pitched crying, turning blue and seizures
U	Unsatisfied nursing, lasting longer than 30 minutes and occurring more frequently than every 2 hours, crying despite prolonged breastfeeding
N	Not waking for feeding every 3 hours, difficult to arouse and very sleepy, not maintaining latch, limpness, lethargy
G	Growth or weight loss exceeding 7% at any time, which increases risk of high sodium levels (hypernatremia) and excessive jaundice
R	Reduced wet and dirty diaper counts (no wet diapers in 6 hours), Red brick dust on diapers, dry lips and mouth, crying without tears
Y	Yellowing of the skin or eyes, especially below the face, known as hyperbilirubinemia or excessive jaundice

If you see the signs that your baby is HUNGRY, seek medical assistance from your pediatrician immediately. Supplementation may be needed if evaluation is not immediately available.

For more resources about how to safely breastfeed your newborn baby, click on parent resources at: <https://fedisbest.org/resources-for-parents/feeding-plan/>

The Fed is Best Foundation is a registered 501(c)3 tax-exempt non-profit organization of health professionals and parents who study the science of infant feeding and work to identify dangerous gaps in current breastfeeding protocols, guidelines, and education programs in order to provide families and health professionals the most up-to-date evidence-based resources to practice safe infant feeding with breast milk, formula, or a combination of both.



SAFE
BREAST
FEEDING

STEP BY STEP GUIDE FOR SUPPLEMENTING

Supplementing does not ruin your chances at breastfeeding!

Early limited supplementation has been shown to encourage breastfeeding duration and recent research shows that nipple confusion is a myth.

1 in 5 mothers can experience delayed milk onset which may lead to serious complications of jaundice, hypoglycemia and dehydration from underfeeding during the first days of life.

These complications are the leading causes of newborn hospitalization in the world.

You can supplement from birth, when indicated, while protecting your baby from exclusive breastfeeding complications, while also protecting your milk supply.



1 KNOW YOUR RISKS FOR DELAYED MILK PRODUCTION AND HOW TO MANUALLY SELF EXPRESS TO CHECK FOR COLOSTRUM

Knowing your risks will help guide you for timely supplementation if indicated. Manual self expression before every breastfeeding session will check for the presence of colostrum.



2 BREASTFEED YOUR BABY

Breastfeed your baby for 15-20 minutes on both breasts, every 2-3 hours. Effective latch confirmed and transfer of colostrum verified with swallowing.



3 HUNGER SIGNS AND CUES

If your baby still exhibits hunger cues after breastfeeding, begin supplementing with 15 ml at a time, or until content. Supplement with donor milk from a milk bank or ready to feed formula.



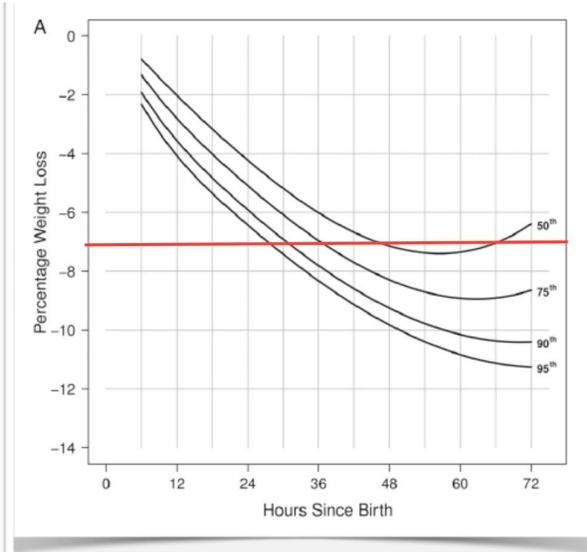
THERE ARE DIFFERENT WAYS TO SUPPLEMENT YOUR BABY

- SNS Tube feeding
- Cup Feeding
- Bottle Feeding
- Syringe and Spoon Feeding

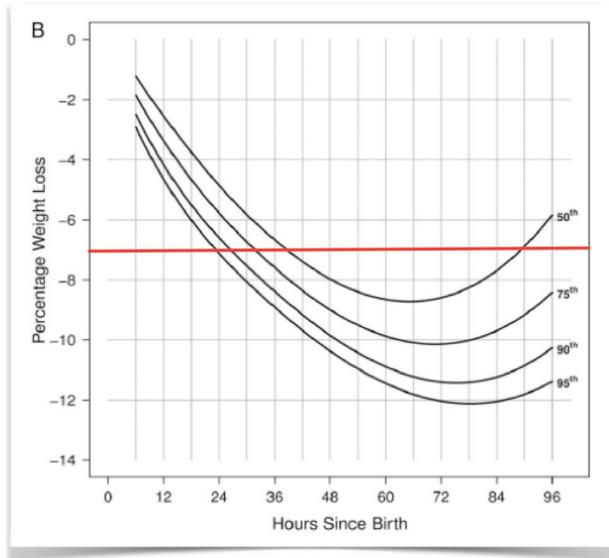


WEIGHT LOSS NOMOGRAM FOR EXCLUSIVELY BREASTFED NEWBORNS

(Red line indicates 7% threshold)



Weight loss of vaginally-delivered exclusively breastfed newborns



Weight loss for cesarean-delivered exclusively breastfed newborns

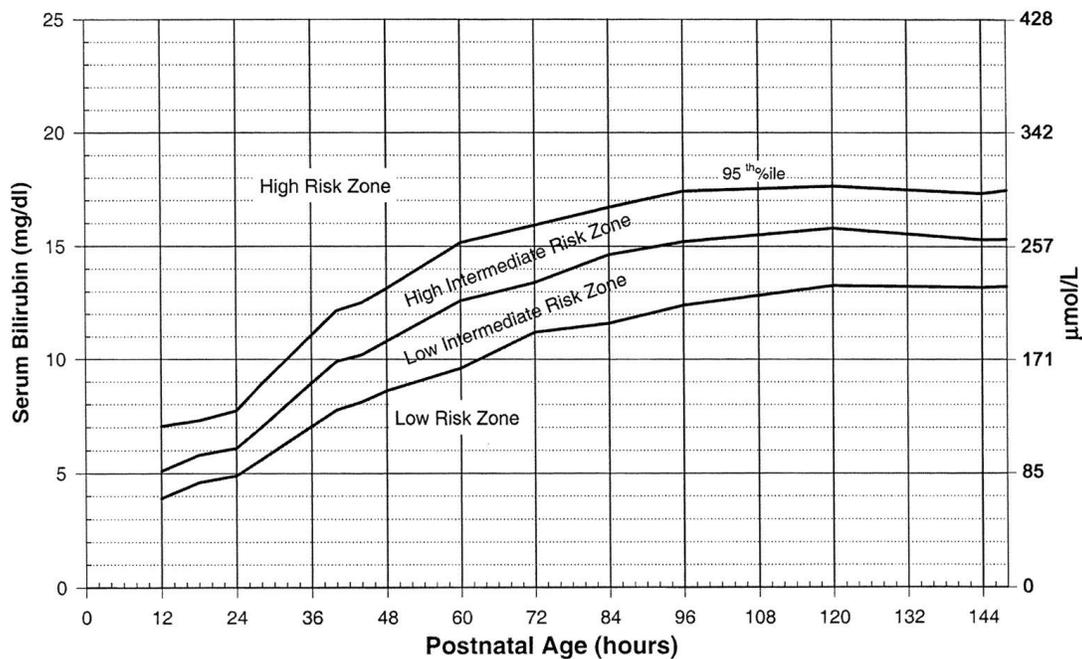
To calculate the newborn weight loss percent, go to <https://www.newbornweight.org>

Note: This weight loss nomogram has not been tied to clinical outcomes. Therefore, a child at the 50th percentile can still experience complications. Every child has their own tolerance for weight loss. A child that is crying inconsolably and displaying signs of distress may in fact require supplementation sooner than 7%.

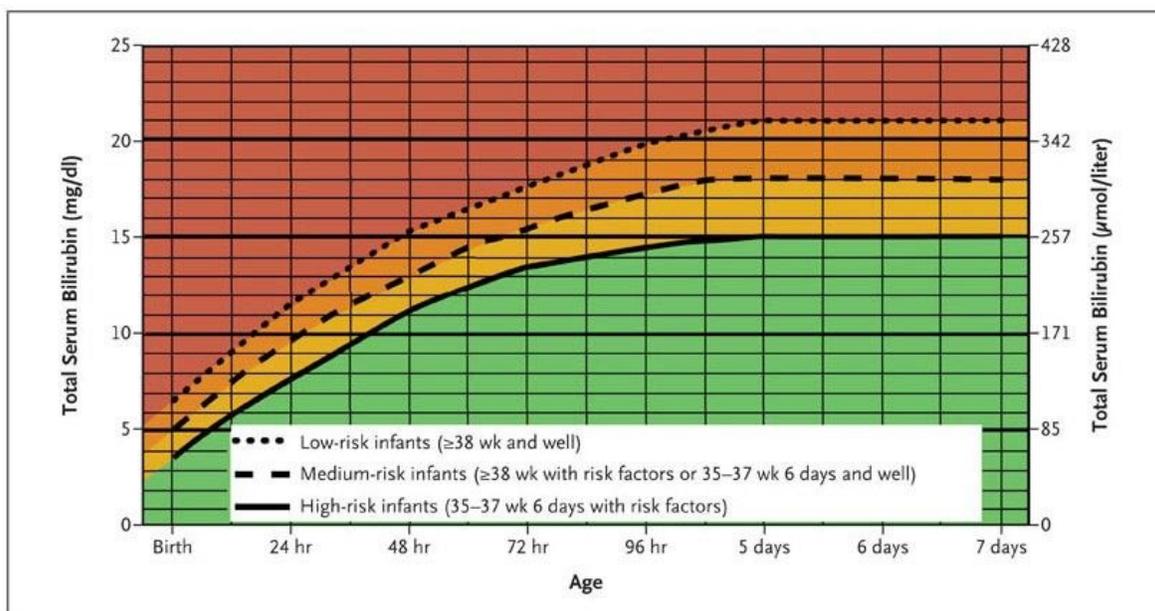
Patient: _____
DOB: _____



SERUM BILIRUBIN NOMOGRAM BY HOUR



Guidelines for phototherapy in hospitalized infants of 35 or more weeks' gestation.



*To calculate the bilirubin risk category on the Bhutani nomogram, please go to <http://bilitool.org>

Patient: _____
 DOB: _____