

# Dietary Guidelines for Complementary Feeding in Preterm Infants



**fernandez**

Built for Birthing



# Nutritional Needs of Preterm Infants

The nutritional needs of preterm infants require special attention. After a certain period, breast milk alone is not sufficient to meet the baby's requirements. Solid feeds, i.e., complementary feeds must be gradually introduced into the infant's diet. Timely introduction of solid feeds is essential for the baby's growth and development. Do not delay the introduction of complementary feeds. The following guidelines are mainly for preterm infants born before 34 weeks of gestation.

## GENERAL INSTRUCTIONS

- Include adequate food supplements to the preterm infant's diet starting from 3–4 months of corrected age (as advised by doctor) in addition to continuing breastfeeding.

Corrected age for baby's prematurity is calculated by subtracting the number of weeks early that the baby is born (term pregnancy = 40 weeks). For example, if the baby was born at 32 weeks (i.e. 8 weeks premature) and current age is 6 months, then the corrected age is 4 months.

- Introduce only one food at a time.
- A single-ingredient food to be chosen and introduced at weekly intervals.
- Persist with the feed started till the baby starts accepting. The baby may spit the food initially and then start accepting the feed. It may take a week or 10 days for the baby to get used to and start accepting one complementary feed.
- Give very small amounts of any new food at the beginning. Begin with small quantities, gradually increasing the quantity.

- Use a very thin consistency when starting solid foods and gradually increase it to semi-solid (porridge) consistency and then move over to solids.



## First month of complementary feeding

Achieve a healthy weight gain within the recommended range.

|                              | 1 <sup>st</sup> Week                                      | 2 <sup>nd</sup> Week                                                                                               | 3 <sup>rd</sup> Week                                                                             | 4 <sup>th</sup> Week                                                                                    |
|------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Staple food</b>           | Day 1–4: Rice feed<br>Day 5–7: Uggu                       | Uggu                                                                                                               | Uggu, Porridge made from ragi malt, mixed with ghee                                              | Continue previous combinations<br>Add amylase Rich Flour (ARF) 1 tsp to cooked porridges, to every feed |
| <b>Add-on foods</b>          |                                                           | By the end of 2 <sup>nd</sup> week start with mashed or pureed fruit: soft fruits such as very ripe banana, sapota | Continue previous foods. Start mashed or pureed cooked vegetables (carrot, potato, sweet potato) | Continue previous foods                                                                                 |
| <b>Number of feeds / day</b> | Day 1: 1/day<br>Day 2–4: 2/day<br>Day 5–7: 2–3/day        | 3 feeds / day                                                                                                      | 3 feeds / day                                                                                    | 3 feeds / day                                                                                           |
| <b>Average amount / feed</b> | Day 1–2: 1–2 tbsp<br>Day 3–4: 2 tbsp<br>Day 5–7: 2–3 tbsp | 2–3 table-spoonfuls (1/4 cup)                                                                                      | 2–3 table-spoonfuls (1/4 cup)                                                                    | 2–3 table-spoonfuls (1/4 cup)                                                                           |

**Note:** There cannot be one schedule for all babies. Customise frequency and amount as per needs of the individual baby.



## Complementary foods based on the age of the infant

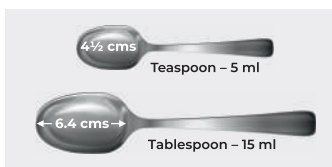
|                                          | 3–4 months corrected age onwards                                                                                                                        | 5–7 months corrected age                                                                                                                                                                                      | 8–10 months corrected age                                                                                                                | 11–12 months corrected age                                                     |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Staple food</b>                       | Rice feed<br>Uggu<br>Porridge made from ragi malt                                                                                                       | Continue previous foods.<br>Rice flakes, puffed rice, lentils.<br>Soft rice with dal or soft kichiri can be started by 7 <sup>th</sup> month. Idli, upma, suji halwa, chapati softened in dal                 | Continue previous foods.<br>Soft rice with dal, curd rice, dosa, chapati softened in toned milk                                          | Continue previous foods.<br>Normal family foods by 12 months corrected age     |
| <b>Add-on foods</b>                      | Fruit: very ripe banana, sapota, cooked mashed apple.<br>Vegetables: cooked and mashed potato, sweet potato. (Potato and sweet potato should be peeled) | Fruits: ripe banana, mango, chikoo, papaya, cooked and pureed dried fruits, (black raisins, dates) citrus fruits.<br>Vegetables: cooked green leafy vegetables, carrots, sweet potato, pumpkin.<br>Ghee / oil | Fruits: all (apple / apricot / pear only if stewed).<br>Vegetables: all cooked.<br>Curd and steamed paneer.<br>Egg yolk.<br>Finger foods | Continue previous foods.<br>Chicken soup.<br>Chicken, meat, fish, minced liver |
| <b>Number of feeds</b>                   | Start with 1 feed /day and progress to 2-3 feeds /day. Plus frequent breast feeds                                                                       | 4–5 feeds/day plus breastfeeds                                                                                                                                                                                | 3 meals + 1 –2 snacks plus breast feeds                                                                                                  | 3 meals + 3 snacks plus breastfeeds                                            |
| <b>Average amount of each feed/ meal</b> | 2-3 table – spoonfuls (1/4 cup)                                                                                                                         | ½ to ¾ cup of a 200 ml cup (cooked portion)                                                                                                                                                                   | ¾ cup to 1 cup of a 200 ml cup                                                                                                           | 1.25 cup to 1.5 cup of a 200 ml cup                                            |

| Consistency / Texture | Puree / semi-solid                                                                                                                               | Thick porridge / well mashed foods / soft lumps | Lumpy or granular foods / finely chopped | Normal home food |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------|------------------|
|                       | Progress to home diet by 1 year of corrected age. By this time most infants should accept what is cooked at home with some change in consistency |                                                 |                                          |                  |
|                       | Give additional sips of water (filtered, boiled and cooled) whenever required                                                                    |                                                 |                                          |                  |
|                       | If the baby is not breastfed, give in addition: 1-2 cups of milk per day, and 1-2 extra meals per day                                            |                                                 |                                          |                  |

Note: There cannot be one schedule for all babies. Customise frequency and amount as per needs of the individual baby.

## STANDARD MEASURING SPOONS / CUP

(Source: Dietary Guidelines for Indians, 2011, NIN, Hyd)



## Amylase Rich Flour (ARF) preparation

- Take 250g of wheat and add 2-3 volumes of water
- Soak for 8 hours and drain excess water
- Germinate wheat in dark for 24 to 48 hours
- Sun dry for 5 to 8 hours and roast in a pan to remove remaining water
- Grind, powder the grains, sieve the powder and store in airtight jar
- Add 1-2 teaspoons of amylase rich flour (ARF) to the cooked porridge after it cools a little. The porridge should be boiled again for a few minutes after adding ARF





## Preparation of Uggu

1. 3 cups of Rice + 1 cup of Dal (Moong dal/ Channa (putana) / Tur dal/masoor dal)
2. Soak in water for 1 hour
3. Dry, roast and powder it. Store Uggu in airtight containers
4. Freshly prepare before feeding to the infant
  - For every 1 tablespoon of Uggu, use 150 mL of water
  - When preparing the feed, add uggu powder to boiling water and stir till it thickens
  - Start with once a day and gradually increase the frequency / quantity



## Dos and don'ts in complementary feeding

| Dos                                                                                                                                                                | Don'ts                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Include sips of water.                                                                                                                                             | Avoid starting commercial feeds (Cerelac, Nestum) for the baby.                                                                                                |
| Include Amylase Rich Food (ARF).                                                                                                                                   | Avoid refined foods, tea + biscuits, sugary drinks, processed foods /tinned foods / packed juices / Junk and commercial foods (bakery products, pizza, burger) |
|                                                                                                                                                                    | Avoid dilution of buffalo / formula milk                                                                                                                       |
| Observe hygienic practices while preparing and giving the complementary feeds.                                                                                     | Avoid foods that can be broken into small pieces (eg. large apple slices) and small foods (eg. raisins, whole nuts) as they can cause choking                  |
| To provide more calories from smaller volumes, food must be thick in consistency (thick enough to stay on the spoon without running off, when the spoon is tilted) | Avoid semi-solid foods for extended period of time as it can cause feeding fussiness                                                                           |
| If baby is on formula milk, then follow the prescribed direction for preparation of feed.                                                                          | Avoid chocolates / sweets / chips / crisps / cool drinks / health drinks                                                                                       |

For a detailed nutrition counselling and prescription by our team of nutritionists, call **+91 40 4022 2397** for an appointment. For any queries, please e-mail us at **nutrition@fernandez.foundation**