

# Weaning Food for infants

*Ms. Anuja Agarwal*

*Dietitian,*

*Pediatrics Dept.,*

*AIIMS*

# **ABOUT EARLY CHILDHOOD CARE**

- **Healthy habits are taught to the child right from birth. In fact, health of the baby is decided even before his birth - Healthy child is born to the mother who kept to healthy food habits during her pregnancy.**
- **Children often take the attitudes and habits formed during their initial years, into adulthood. Learning healthy eating behavior at an early age is very important to lay a good foundation for the future health of the child.**

# BREAST FEEDING

- Exclusive till 6 months of age
- Species specific - suitable, natural, warm, free of bacteria and readily available.
- Colostrum - rich in antibodies. Baby develops immunity of the lifetime
- Contains easily digestible proteins, CHO and fats.
- Very rich in vitamins compared to cow's milk
- Stimulates development of personality and behaviour ( brain dev./ cognitive dev.)

# Composition of milk (per 100 ml)

<b>Nutrients (gm)</b>	<b>Human</b>	<b>Cow</b>	<b>Buffalo</b>
<b>CHO</b>	<b>6.8</b>	<b>5.0</b>	<b>4.5</b>
<b>Protein</b>	<b>1.5</b>	<b>3.5</b>	<b>4.3</b>
<b>Fat</b>	<b>4.0</b>	<b>3.5</b>	<b>7.5</b>
<b>Energy</b>	<b>68</b>	<b>66</b>	<b>103</b>

# WEANING

- Process of introducing semi-liquid to semi-solid foods other than breast milk.
- The transition of food pattern has to keep pace with the child's growth who triples his birth weight and 1 ½ times his birth length by the end of one year - Time of introduction of food type.
- Consistency, frequency of food, calorie density and nutrient density need to be monitored closely.
- Hygiene

# When to start weaning

- At 6 months of age WHO reco.

**Complementary feeding initiated and Supplementary to breast milk started.**

Breast milk output 600-700 ml/d (healthy mother)

- Less milk output (malnourished mother)-----  
underweight child----- initiate weaning early (at 5 months of age).
- Continue breast feeding (frequency and amount reduced)

# Why start weaning at 6 months

- Breast milk sufficient for the growth of the baby only till 6 months of age.
- Breast milk output starts to decline thereafter but baby's physical + mental development continues at a very fast pace till the end of 2 years.
- Weaning latest by 6 months - failing which will lead to malnutrition.

# Why start weaning at 6 months

- The rate of increase in length and weight declines but still the child is growing in size. Other activities like learning to turn, crawl, standing with support, walking, running / vocabulary/ teething/ learning to eat by himself/ grasp etc etc.
- Food contain complex form of nutrients. Child is ready to digest these complex CHO, Protein and fats by 6 months of age. Enzymes to digest complex nutrients are fully activated now.

**Critical/ crucial period** - each month is different till one year of age.

- Weaning at proper time
- Transition from liquid to solids - gradual
- Frequency from 10 feeds per day (breast feeding) to 6-7 feeds per day - gradual
- Amount of food to be offered at a time eg; when the child is small---- can manage small amount of feeds each time ----- frequency is high

**Once the critical stage of learning a particular behavior is over, it is difficult to teach that behavior at a later stage.**

# How to initiate weaning and progress

- **Consistency:** Introduction of right consistency of food at the right age is important to develop good food behaviors.  
Essentially follow the sequence :
- **Breast feeds (0-6 months)**
- **Semi-liquid (after 5-6 months)** Easy to digest, smooth and gentle on baby's stomach.
- **Semi-solid (after 8-9 months)** Baby now needs food with taste and texture.
- **Semi solid (after 10 months)** Baby now needs food that satisfy his urge to chew-complex taste and texture
- **Solid diet including variety of food items (1-1.2 yrs).**

# How to initiate weaning and progress

## Frequency:

- **Energy requirement on a per kg basis, is 3 times more than the adults in infants and 2 times more than the adults in case of children till 2 years of age.**
- **Children have to be fed frequently since they can eat small amount at a time due to their little capacity.**

**Till 5-6 months** - child is given breast feeds on demand i.e. 9-10 times over 24 hours.

**From 6- 8 months** - As the child grows, his requirements increase and he starts to accept larger volume and thicker consistency at a time - feed him 7-8 times/d

**From 9- 12 months** - child normally eats 6-7 times per day and each time.

**By 12 - 15 months** - child eats at least 6 times per day.

**By 18 months** - **child's eating schedule of 5-6 times /day gets fixed**

3 regular meals – Breakfast, Lunch and dinner and

3 in-between healthy snacks – midmorning (recess time), evening at 4:30 – 5 PM bedtime.

# How to initiate weaning and progress

## Volume:

Children have little capacity due to their smaller surface area. Initially accepts small amount but as he increases in size, accepts larger volume.

Till 5-6 months - Few spoons to 30ml at a time

From 6- 7 months - 50-75 ml/g at a time

From 7-8 months - 75 - 100 ml/g at a time

From 9- 12 months - 100 - 150 ml/g at a time

# How to initiate weaning and progress

- Calorie density & nutrient density:

(1) As the consistency thickens, frequency reduced and volume per feed increases.

(2) Babies cannot consume large bulky foods - to provide enough calories in less volume, increase calorie density by adding fat - usually true in case of malnourished children

# What to feed?

- Liquid supplements - Supplement breast milk with undiluted cow's milk, buffalo's milk, DMS milk, mother dairy milk or whichever is easily available.
- Semi liquid to semisolid supplements - Powdered rice (murmura/ rice flakes), mashed banana, boiled & mashed potato, suji, daliya, sabutdana, boiled & mashed vegetables, washed dals, khichri etc.

# From 6-7 months

## Introduce (along with BF)

Fresh milk	200-250ml/day
mashed banana/ custard	1/4 - 1/2
Powdered murmura/ riceflakes in milk+sugar+fat	1/4- 1/2 katori
Khichri (Liquid consistency) Washed moong dal + rice + fat	1/4 - 1/2 katori
biscuit/ bread/Suji in milk +sugar+fat	1/4 - 1/2 cup
Boiled mashed potato/ halwa	

# From 8-9 months

Continue breast feeds

Fresh milk (includes curd) 250-400 ml/day

Banana OR any other  
seasonal fruit 3/4 - 1

Suji/sago/Dalia in milk  
+sugar+fat 1/2 - 1 katori

Khichri (semisolid consistency)  
(dal + rice + fat) OR rice-dal 1/2 - 1 katori

Biscuit/ bread in milk  
+sugar+fat 1/2 - 1cup

Potato+ vegetable 1/2 - 1 cup

# From 10 - 12 months

Continue breast feeds

Fresh milk (includes curd)

400 - 500 ml/day

Banana OR any other  
seasonal fruit

1 or more

Suji/sago/Dalia/sevian in milk  
+sugar+fat (Thick)

1 katori or more

Khichri (semisolid consistency)  
(dal + rice + fat) OR rice-dal

1katori or more

Biscuit/ bread/chapati/ paratha  
(by 1 year)

1 cup or more

Potato + any other vegetable

as desired

Curd/ paneer/ groundnut/Egg

# Things to remember

## *Nutrition Plan*

- **Develop the baby's taste buds gradually.**
- Easy to digest & viscostable - consistency
- Well-balanced diet
- Convenient: Easy to prepare & affordable
- Hygienic - use katori-spoon
- Patience to feed
- Availability of food items - nothing is hard and fast

# Things to remember

## *Nutrition Plan*

- Likes and dislikes of the child - nothing is a must. Allow your child to dislike certain foods.
- No restriction on the volume - nothing is too much for the child
- Introduce one food at a time
- Food fads - hot and cold foods/ light and heavy foods
- Food fads - fats and sweets - not to be restricted
- Artificial milk formulas/ commercial formulas - not recommended

# Faulty feeding and malnutrition

- Feeding on artificial milk formulas - reconstituting wrongly.
- Feeding on diluted fresh milk
- Breast feeding for a long time
- Delayed weaning
- Feeding via dirty feeding bottles
- working mothers/ non-working mothers

## *Preparation of feed*



- Wash hands before preparing baby's feed.



- Boil drinking water for 5 minutes or milk. Leave it till its lukewarm.

## *Preparation of feed*



- Pour 60ml lukewarm water/ milk into a bowl. Stir in 3 level scoops of powdered murmura until pap is smooth.



- Feed baby with a clean spoon

# *Preparation of feed*

## **Important Precautions:**

- Use only clean utensils
- Use prepared feed within half an hour
- Discard unused feed

After the initial phase of hard work by the mother, there will be no need of forcing, coaxing, fussing or running after the child to eat food. It will be very natural for him to eat at all meal times and adequately.

# THANK YOU

If your child see you enjoying nutritious foods, they will be more likely to give them a try.

Be a good role model for your children.

Lead your child to a healthy future.