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### Complementary feeding and weight, height of infants (6 months -24 months)

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#### Abstract

This was aimed to find the weight and height of babies and complementary feeding type. Complementary foods are those that are offered along with breast milk. When supplementing foods are introduced, the infant's nutritional needs are met as well as a gradual introduction to the family eating schedule. At six months old, when supplemental meals are first provided, rates of childhood malnutrition rise considerably in the majority of developing nations. Complementary feeding practices that are problematic are linked to carers' limited understanding, ignorance, and adherence to conventional views. After six months from the birth, the weight of a healthy child increases and it becomes double as compared to his birth weight. The mean height of a normal baby is about 50 to 55 cm for boys and average height for girls is about 49.9 cm. When child's age becomes one year old, the height increases by 50 percent of the actual birth height i.e., about 23 to 25 cm. For the data collection, randomly 300 mothers were selected from Hazaribagh district of state Jharkhand, India. Well cooked food like cereals, pulses, fruits and vegetables is good to include in complementary feeding.

**Keywords:** Complementary feeding, babies, weight, height, supplementary foods, weaning

#### Introduction

The process of weaning involves progressively introducing meals other than breast milk into the child's eating routine. Complementary foods are those that are offered along with breast milk. When supplementing foods are introduced, the infant's nutritional needs are met as well as a gradual introduction to the family eating schedule. The weaning meals should have a nutritional density of 0.25 to 0.4 kcal/g. Foods high in calories should thus be provided. At least 10% of the calories in weaning diet should come from protein. Cow's milk, fruit juices, soft-cooked rice, dhal, and vegetables are among the common examples of these. Weaning should be done gradually and based on the baby's pace of development and abilities. Weaning food should be carefully selected to meet an infant's nutritional needs, encourage nutrient intake that is suitable, and support growth. At six months old, when supplemental meals are first provided, rates of childhood malnutrition rise considerably in the majority of developing nations. The primary causes which lead malnutrition in early infants have been recognized as inappropriate supplemental feeding practices, such as providing inadequate quantities and foods of poor quality as complementary meals. Complementary feeding practices that are problematic are linked to carers' limited understanding, ignorance, and adherence to conventional views.

The ideal feeding method for developing toddlers and babies older than six months is weaning. The growth and development of children depends on receiving enough nourishment during infancy and the early years of life. The primary causes of malnutrition during the life's first two years are poor for new-born babies and early child feeding practices and high prevalence of infectious illnesses. A new-born baby is most susceptible in the second half of their first year, when supplemental feeding should begin because breast milk is no longer enough to satisfy their needs. During this time, a lot of kids have undernutrition and development problems, which have long-lasting effects. From the age of six months, children require supplemental meals with the addition of breast milk. Infants and young children might have a higher probability of surviving if they are fed properly. Additionally, it can encourage healthy growth and development, particularly throughout the crucial period from birth to two years of age.

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Infants should ideally be breastfed within an hour of delivery, exclusively throughout the first six months of life, and for at least another two years after that. Breastfeeding and safe, age-appropriate solid, semisolid, and soft food feeding should coexist beginning at six months.

A baby who is not exclusively breastfed may be far more likely than one who is to pass away from pneumonia or diarrhoea. Additionally, nursing strengthens a baby's immune system and may shield them against lifelong diseases like diabetes and obesity. Additionally, nursing shields moms from various cancers and other illnesses. From six months on, adequate eating can help avoid undernutrition and lower the risk of infectious disorders including pneumonia and diarrhoea. However, despite all the potential advantages, only approximately two fifths of infants aged 0 to 5 months globally receive solely breast milk, and only about two thirds are promptly introduced to solid meals <sup>[1]</sup>.

**Weight:** The first year of a baby is the most important time because at this age their growth is increasing very fast. The mean weight which is recommended by WHO is about 3.2 kilogram for most of the new born babies and they are considered as healthy. After six months from the birth, the weight of a healthy child increases and it becomes double as compared to his birth weight. When the child's age becomes one year old, the weight of the child increases three times from his actual weight at the time of birth. The weight of the child increases four times of his actual birth weight, when he becomes two years old.

**Height:** The mean height of a normal baby is about 50 to 55 cm for boys and average height for girls is about 49.9 cm. When child's age becomes one year old, the height increases by 50 percent of the actual birth height i.e., about 23 to 25 cm. The proportions of the body also change as the height of baby increases.

#### Solid supplementary foods mashed well before feeding

Beginning about the seventh or eighth month of life, mashed meals are introduced in the infant's diet. The infant is already being fed cow milk, fruit juice, vegetable soup, and fish liver

oil at this point.

**Cereal and starchy gruels:** Well-cooked mashed cereals including rice, rice flour, rice flakes, and ragi flour combined with milk and sugar can be provided to fulfil the rising demands for calories and protein.

**Vegetables:** To add vitamins, minerals, and colours to the diet, cook and mash vegetables such potatoes, carrots, and green leafy vegetables.

**Fruits:** For a baby that is one year old, all fruits must be stewed and sieved, with the exception of banana, which is mashed. After that, it is served simply stewed with a dash of lime juice and sugar is added for flavour.

**Non – vegetarian foods:** If the baby tolerates, only a tiny portion of hard-boiled yolk of an egg will be provided to begin with, and the amount may be progressively raised to a whole yolk of an egg.

**Pulses:** It is possible to provide well-cooked pulses and grains in the form of kichadi or Pongal or to make porridge out of them. Meat recipes and pulses might be served on different days <sup>[2]</sup>.

**Aim:** To find the weight and height of babies and complementary feeding type.

#### Methods and Materials

Pre structured schedule was used for the data collection, randomly 300 mothers were selected from Hazaribagh district of state Jharkhand, India. Data was collected regarding complementary feeding from 300 mothers, weight and height was recorded from their infants and age from 6 month to 24 months. Study was done during the period of June 2021 to March 2022. Percentage, frequency, standard deviation, Mean weight and height of babies were calculated.

#### Result and Discussion

**Table 1:** Girl's weight and Height

Age of Child	Female Weight						Female Height					
	N	Mean	Standard wt.	Min.	Max.	S.D.	Mean	Standard ht.	Min.	Max.	S.D.	
6 – 12 months	76	5.57	7.2 – 9.5	3.93	7	0.766	67.880	66.6 – 74.5	58	76	4.126	
12 – 18 months	37	6.28	9.5 – 10.8	5	8.10	0.990	72.621	74.5 – 80.9	64	85	5.335	
18 – 24 months	39	10	10.8 – 11.8	64	84	1.022	77	81 – 84.5	64	84	16.271	

Above table shows weight and height of baby girl age group of 6 months to 24 months, total of 152 were baby girls out of 300 children and three categories were distributed for baby girl age groups i.e. 6 – 12 months, 12 – 18 months and 18 months – 24 months. Mean weight from age group of 6

months – 12 months was 5.57 kg, 12 months – 18 months was 6.28 kg and 18 months – 24 months was 10 kg. Mean height from age group of 6 months – 12 months was 67.88 cm, 12 months – 18 months was 72.62 cm and 18 months – 24 months was 77 cm.

**Table 2:** Boy's weight and Height

Age of Child	Male Weight						Male Height					
	N	Mean	Standard wt.	S.D.	Min.	Max.	Mean Ht.	Standard ht.	S.D.	Min.	Max.	
6 – 12 months	63	6.104	7.8 – 10.2	1.305	3.88	9	67.952	67.8 – 76.1	4.330	58	76	
12 – 18 months	70	7.482	10.2 – 11.5	1.257	5	11	74.187	76.1 – 82.4	5.500	63	84	
18 – 24 months	15	8.573	11.5 – 12.3	1.425	5.50	11	78.400	82.4 – 85.6	3.246	71	84	

Above table shows weight and height of baby boy's age group of 6 months to 24 months, total of 148 were baby boys out of 300 children and three categories were distributed for baby

boys age groups i.e. 6 months – 12 months, 12 months – 18 months and 18 months – 24 months. Mean weight from age group of 6 months – 12 months was 6.104 kg, 12 months – 18

months was 7.482 kg and 18 months – 24 months was 8.573 kg. Mean height from age group of 6 months – 12 months was 67.952 cm, 12 months – 18 months was 74.187 cm and 18 months – 24 months was 78.400 cm.

### **Complementary feeding type Complementary feeding given**

Maximum infants were given Complementary feeding out of 300 total 295 (98.33 %) and to 1.67 percent babies were not given complementary feeding.

### **Type of complementary food included**

Maximum babies (160) were given all foods like cereals, pulses, commercial foods, fruits and vegetables that was 53.33 percent, cereals (105) 35 %, pluses (68) 22.67 percent, frequency for fruits and vegetables was given to only 5 babies (1.67%).

### **Serving of complementary food**

Maximum (248) babies were getting complementary food more than two times in a day (82.67%) and rest (52) 17.33 percent babies were getting complementary food only two times.

### **Conclusion**

Complementary feeding given to 98.33% babies where as 1.67 % babies were not received complementary feeding. complementary foods given to the babies included was cereals, pulses, commercial foods, fruits and vegetables (53.33%), only cereals was given to 35% babies, pluses was given to 22.67 % babies, fruits and vegetables was given to 1.67 % babies.

Weight and height were compared with standard weight and height and founded less as compared to standard weight and height, only for 6 months – 12 months baby girl and boy in both it was seen normal height.

### **Suggestions**

Mothers should be educated for the knowledge of variety added in complementary foods. Well cooked food like cereals, pulses, fruits and vegetables is good to include in complementary feeding.

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