

EXERCISE-2

Sh. Arvind Singh is a milkman in the remote border village of Bihar. A boy named Aamir was born in his family on 9 May, 2012. Smt. Gurpreet Kaur, w/o Sh. Arvind Singh delivered the child at local sub-centre and the weight of Aamir was 3.6kg at the time of birth. The weights of Aamir up to August, 2012 are as stated below:

9.5.2012	3.6 kg
10.6.2012	4.9 kg
9.7.2012	6.1 kg
8.8.2012	6.5 kg

2. In the third week of August, 2012, Smt. Gurpreet told her husband that she feels that enough breast milk is not being produced for Aamir and Gurpreet started giving animal milk to Aamir who was around three and half months. This resulted in slow weight gain and Aamir weighed 6.7kg on 10 September, 2012. The weights of Aamir from September, 2012 to April 2013 are as stated below:

10 September, 2012	6.7 kg
10 October, 2012	7.3 kg
11 November, 2012	7.6 kg
11 December, 2012	7.8 kg
9 January, 2013	8.1 kg
8 February, 2013	8.6 kg
8 March, 2013	8.5 kg
10 April, 2013	8.7 kg

3. Aamir was given only breast milk and animal milk. Complementary food were not introduced till one year of age. The growth monitoring of Aamir was done by local AWW and due to sudden weight loss of Aamir in May 2013 (weight 8 kg), AWW talked to Smt. Gurpreet and ascertained the reasons for weight loss. Smt. Gurpreet informed that Aamir does not take anything except breastmilk and animal milk. AWW explained Gurpreet about the need and importance of

complementary food after 6 months and types of food to be given to Aamir. She also advised Gurpreet to avail supplementary nutrition from AWC for Aamir. Gurpreet followed the advice of AWW and availed supplementary nutrition from AWC for Aamir as well as provided Aamir complementary feeding as advised by AWWs as per the guidelines mentioned in the Mother & Child Protection Card.

4. The weight of Aamir subsequently improved. The weight of Aamir from May, 2013 to March, 2014 are as stated below:

8 May, 2013	8 kg
10 June, 2013	9 kg
9 July, 2013	9.2 kg
9 Aug, 2013	9.3 kg
10 Sept., 2013	9.4 kg
11 Oct., 2013	9.6kg
12 Nov., 2013	9.8 kg
12 Dec., 2013	9.9 kg
10 Jan.,2014	10.1 kg
11 Feb.,2014	10.2 kg
10 Mar.,2014	10.4 kg

5. Prepare the growth chart for Aamir. What messages need to be reinforced in August/September, 2012. List down the key points discussed in the NHE session on exclusive breastfeeding versus animal milk. Describe the periods of Aamir's parents counselling by AWW and ANM.

Exercise 2

A-Growth Chart of Aamir is at Annexure-II

B-Messages need to be reinforced in August/September, 2012

Aamir was born with very good birth weight (3.6 Kg) and his weight gain up to July, 2012 was also very good due to normal breast feeding. He did not get adequate breast milk from August, 2012 when Aamir was around 3 and half months old because of the feeling of his mother that enough breast milk is not produced. Smt. Gurpreet only shared this with her husband and started giving Aamir animal milk. AWW could have been consulted on the issue by Smt. Gurpreet. At that stage if AWW would have talked to mother to identify the problem, keeping in view the fact that by nature every mother has adequate breast milk. However, the problem experienced by Smt. Gurpreet might have been triggered due to lot of factors. Some of the possible factors are as stated below:

- Lack of confidence
- Belief that breast milk is not sufficient
- History of previous breast surgery
- Breast engorgement, cracked and sore nipples
- Retractable nipples
- baby is either not suckling enough or not suckling effectively in a proper position

The major messages which need to be reinforced based on Gurpreet case are:

- **AWW should be consulted for any such problem** including problem related to pregnancy, delivery, breastfeeding, care of new born child, issues on immunisation, health and nutrition and early learning of children.
- Exclusive breastfeeding should be practiced from birth till six months. Human milk provides sufficient energy and protein to meet nutritional requirements of the infant during the first 6 months of life. Therefore, no other food or fluids should be given to the infant below six months of age unless medically indicated. Good **Breastfeeding Techniques**: For feeding, the mother should hold the baby in such a way that baby's bottom as well as head and shoulders are well supported and head should be facing the breast with his/her nose opposite to your nipple and his/her body close. Your nipple should touch the infant's mouth. Wait till his/her mouth opens wide, and offer the whole breast to your baby to get as much as he/she can into his mouth. Signs of good attachment are:
 - Chin touching breast
 - Mouth wide open
 - Lower lip turned outward
 - More areola visible above than below the mouth
 - There should be no pain.
- Feeding more helps in production of milk; the more the baby sucks, the more the milk is produced.
- The mother should be relaxed and comfortable, and she should maintain eye contact with the baby.

- Breast feeding should be 8-12 times daily.
- Exclusive breastfeeding should be followed till 6 months, post which introduction of food other than breast milk be introduced to the child.
- Since the stomach of the child is small, starting with small amounts with a gradual increase in the quantity as the child gets older should be done.
- Information about the amount, consistency and frequency should be given to the mother by AWW. For example, to begin with the child can be given liquids like juices, soups or drinks like coconut water. The staple cereal & pulse of the family should be used to make the first solid food. The cereal should be well cooked and mashed so that it is soft.
- The consistency should be thin in the beginning but as the child grows older soft food progressing to thick should be introduced. .
- **Continued breastfeeding** up to 2 years and beyond.
- The mother can make sure the baby gets enough breast milk by observing following signs:
 - Increase in baby's weight by about 500 gms in a month.
 - Passing urine more than 6 times a day
 - Milk generally comes out when expressing milk
- There are few indicators that may lead you to think that your baby is not getting enough:
 - Baby is not satisfied after a breastfeed
 - Baby cries often

- He wants frequent breast feeds
 - He takes very long to breastfeed
 - He refuses to breastfeed
 - He has hard, dry or green stools
 - Some maternal complaints like “No milk comes out on expression”.
- Contact ANM/ASHA/AWW for breastfeeding problems and treatment.

Note:

- Mothers need skilled help and confidence building during all health contacts and also at home through home visits by AWW, especially after the baby is 3 to 4 months old when a mother may begin to doubt her ability to fulfill the growing needs and demands of the baby.
- At every visit, the harms of artificial feeding and bottle feeding should be explained to the mothers.
- The AWW should help and motivate mother to try “re-lactation” as soon as possible.
- Observe breast feed and build the confidence of mother and ensure the correct attachment/positioning of child with the breast.
- Explain what all factors can influence breast milk production and flow.
- The AWW must demonstrate few recipes that can be prepared for child from locally homemade materials.

C-Key points to be discussed in the NHE session on exclusive breast feeding versus animal milk

Benefits of breast feeding

For child:

- Helps in Gastrointestinal development and function
- Helps in development of the immune system
- Helps in cognitive development of the infant
- Infants who are breastfed have reduced risk of infection compared to formula fed infants
- Breastfed infants have reduced risk of obesity later in life compared to formula fed infants
- Lower risk of infections e.g. lower respiratory tract infection, diarrhoeal diseases, allergies, eczema, meningitis and inflammatory bowel diseases
- Enhance early maternal – infant bond

For mothers:

- Aids involution of the uterus
- Long term breastfeeding helps in loss of the excess weight acquired during pregnancy
- Long term effects of breastfeeding include reduced risk of breast, ovarian and endometrial cancers in mothers.
- Convenient as it is easy to feed at any given time or place
- It delays next pregnancy for 6 months if the child is exclusively breast fed.

Disadvantages of artificial feeding/animal milk:

- Artificial milk is not ideally suited for the human baby and does not contain appropriate amounts of protein, fats, vitamins and minerals for the adequate growth of the baby.
- Artificial feeding exposes the infant to infections through contamination and does not give protection from various infections due to absence of antibodies.
- Babies fed on animal milk have a higher incidence of loose motions and respiratory infections.
- Artificial feeding may cause suckling difficulties as the child gets confused between mother's nipple and artificial nipple.
- It is time consuming, expensive and less nutritious.

Comparison of breast milk with animal milk

Nutrient	Human Milk	Cow's Milk	Goat's Milk	Buffalo Milk*
Calories	172	146	168	169
Protein (g)	2.5	7.9	8.7	8.9
Fat (g)	10.8	7.9	10.1	18.4
Carbohydrate (g)	17.0	11.0	10.9	10.4
Vitamin C (mg)	12.3	0	3.2	2.0
Iron (mg)	0.07	0.07	0.12	0.42
Calcium (mg)	79	276	327	457

(Source: U.S. Department of Agriculture, Agricultural Research Service. 2004. USDA National Nutrient Database for Standard Reference, Release 17. Nutrient Data Laboratory Home Page, <http://www.nal.usda.gov/fnic/foodcomp>)

*Gopalan et al, 1981. Nutritive value of Indian Foods. National Institute of Nutrition, Hyderabad-7 (A.P.), Indian Council of Medical Research. P.O. Box No. 4508. Assari Nagar, New Delhi-16. **Nestle Milkpack Limited 308 Upper Mall, Lahore 54000)

D- Describe the periods of Aamir's parents counselling by AWW and ANM

It appears from the exercise that counselling of Aamir's parents might have been done during delivery by ANM and AWW in May 2012. By observing weight loss of Aamir, AWW counseled Smt. Gurpreet in May 2013.