

Early Intervention in Inclusive Education in Mumbai

The '*Why*' and the '*How*'

Manual 14

How to Work on Improving Health and Nutrition



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Foreword

The '*How to Series of Inclusive Education*' is a set of manuals that have emerged from a study undertaken by The Spastics Society Of India, Mumbai in collaboration with UNICEF and supported by the Canadian International Development Agency (CIDA).

The title of the project is *Inclusive Education Practice in Early Childhood*. It is an action research project involving both intervention and research on a large scale covering 6000 families based in the impoverished areas of the Mumbai slums. Six hundred children, both disabled and non disabled, were placed in Demonstration Learning Centres within the community where an enrichment programme and a need based intervention was given over a two year period. The intervention strategies were carefully documented and the progress of the children tracked by external researchers not connected with the intervention team. The aim was to study the mechanism or *intervention* strategies needed to put *children with disabilities* into existing programmes being run by Government and non-Governmental agencies and the barriers that came in the way to accessibility and participation.

From this evidence based research emerged a series of instructional resource material: the '*How to Series of Inclusive Education*.' These manuals are relevant for any organisation, or agency, working to address the crucial need of bringing *children with any disability* into inclusive settings. They recommend *a whole community approach to inclusive education*, and although the research was carried out in India it can be used anywhere in the world.

Health And Nutrition

Why is it important for a child to be healthy and have a nutritious diet ?

- ✓ The word 'healthy means being well and physically fit.
- ✓ If a child is healthy and happy then it is possible for him/her to attend school.
A healthy child is able to play, learn and interact with other children effectively.
- ✓ Health and education go hand in hand.
- ✓ Nutrition is one of the important factors as far as a child's health is concerned.
- ✓ Even though a child comes from lower socioeconomic background, he/she can still get a nutritious diet. If a child does not get the appropriate nourishment at the right age, then she/he can be malnourished.



Health is wealth

What are the important constituents of nutritious food ?

The following constituents provide the child with energy and nourishment that enhances

their development,

- Proteins
- Vitamins
- Starch
- Carbohydrates
- Fats
- Minerals
- Water
- Roughage



Feeding nutrition in the Anganwadi

What types of food provide the children with the appropriate quantities of nutrients ?

- ✓ Rice, wheat, bajra, jowar, potatoes, etc. contain carbohydrates, which provide children with energy
- ✓ Sprouted pulses like moong, chana, chowli, rajma, matki, etc. provide children with proteins, which are necessary to repair the wear and tear of the body.
- ✓ Eggs and Meat also have a high quantity of proteins.
- ✓ Ghee, butter, etc. have fats and give energy. Groundnuts, sesame also have a high fat content.
- ✓ Milk, nachani, barley, green leafy vegetables, eggs, meat, etc. are rich in minerals like calcium, phosphorus, sodium, and iron. They are necessary for strong and healthy teeth and bones.
- ✓ Vitamins can be found in various fruits like bananas, oranges, grapes, guava, amla, chikoo, papaya, etc. They can also be found in vegetables like pumpkin, carrots, cucumber, cabbage, cauliflower, spinach, radish, methi, tomatoes, etc.



Nutritious food

What is a well balanced diet ?

A well balanced diet includes:

- Clean food.
- Not very expensive food.
- Foods, which can be cooked at home
- Food which gives strength
- The Child's growth should be kept in Mind i.e. growth of body and bones.



Balanced diet

What should a child's tiffin contain ?

- ✓ The tiffin should contain food, which is cooked at home and provides the child with all the nutrients necessary for the body so that child can be healthy.
- ✓ Parents should stop giving money to the children to buy roadside food, which can be harmful as it is displayed in the open and attracts flies. Flies spread diseases.
- ✓ Food items like poha, upma, idli, dosa, puri, paratha, roti, biscuits, etc. can be given in the tiffin.
- ✓ This table will give you an idea of food available for a rupee.

Calories and proteins we get for Re. 1

Sr. No	Types of food	Gram	Giving calories	Proteins
1.	Soyabean	100	420	42
2.	Chhole	50	260	11
3.	Chana	67	250	15
4.	Rice	150	450	10
5.	Milk	100 ml.	067	04

- ✓ This table provides you with an idea on the average expected height and weight of a boy or a girl at a particular age. e.g. a one year old girl should weigh about 10 kilograms and should be about 78 centimeters in height.

Expected Height and Weight as per child's Age

Boys		Age (Years)	Girls	
Height (cm)	Weight (kg)		Height (cm)	Weight(Kg)
80.07	10.54	1	78.09	9.98
90.01	12.51	2	87.93	11.67
98.36	14.78	3	96.21	13.79
104.70	16.12	4	104.19	15.85
113.51	19.33	5	112.24	18.67

Boys		Age	Girls	
Height {cm}	Weight {kg}	{Years}	Height {cm}	Weight {kg}
118.90	22.14	6	117.73	21.56
123.32	24.46	7	122.65	24.45
127.86	26.42	8	127.22	25.97
133.63	30.00	9	133.08	29.82
138.45	32.29	10	138.90	33.58
143.35	35.26	11	145.00	37.17
148.91	38.78	12	150.98	42.97
154.94	42.88	13	153.44	44.54
161.70	48.26	14	155.94	46.70
165.33	52.15	15	155.98	48.75
168.40	55.54	16	156.00	49.75

- ✓ This table gives you an idea of the number of calories a child should consume daily at different ages,

Child's Age	Calories	Protein (Gram)
Birth to 6 months	600	11
6 months to 1 years	800	15
1 to 3 years	1200	18
4 to 6 years	1500	22
7 to 9 years	1800	33
10 to 12 years	2100	41

How do you identify a malnourished child and what do you do ?

- ✓ A chart of measurement of a child's body parts and his height/weight as per his age can be used to detect malnutrition.
 - Less height
 - Less weight

- Thin hands and legs
 - Wrinkled skin
 - Malnourished child has a bigger head than the body.
- ✓ If the child does not get the expected calories as per the age, this child can get malnourished. Hence a properly planned diet should be given to these children and information about the constituents of a diet should be explained to parents in an Anganwadi.

How is malnutrition related to disability ?

- ✓ Malnutrition usually occurs in poverty stricken areas where access to food, health services, sanitation, proper care and feeding of children is affected. In addition when a pregnant mother is not provided with appropriate nutrition then the baby is at risk of experiencing disability.
- ✓ Deficiencies of vitamins like vitamin A deficiency can lead to night blindness, vitamin B deficiency will lead to beriberi, and vitamin D deficiency will lead to rickets.
- ✓ Sometimes a child might experience problems in feeding, and hence the child is neglected and is not provided with the appropriate amount of nutrition. It is important to give food in a mashed form. Foods like soft cooked rice, boiled and mashed potatoes and other vegetables; half boiled eggs, etc. can be nourishing as well as easy to swallow.
- ✓ Besides, malnutrition, various diseases can also be considered as a cause of disability, especially when an infant or a mother is exposed to them.
- ✓ There are certain conditions, which are present in a child from birth like cerebral palsy, Down's syndrome, cleft lip, etc which could occur as a result of the mother being malnourished.
- ✓ Infections like poliomyelitis, tuberculosis, cholera, malaria, etc can affect a child's development. The infections can be spread through air, water, touch or insects.



Malnourished

- ✓ Injury like injury to head, spinal cord or to any internal organs can result in some disease or other conditions.

How do we prevent these diseases ?

Diseases can be prevented by providing information to parents on the following areas,

- ✓ **Immunization:** The baby should be immunized and given vaccinations up to the age of 5 yrs. They are for the diseases like tuberculosis, diphtheria, whooping cough, tetanus, poliomyelitis, measles, mumps, German measles, etc. There are now vaccinations for jaundice and chicken pox as well.
- ✓ **Mother's health:** Mother's health during pregnancy is very important and should be taken care of. Proper diet, food supplements, vaccination should be taken care of to have a healthy baby. Mother's age, marriages within the family, family planning, etc. also affect the child's health.
- ✓ **Habits that are injurious to health:** The child or pregnant mother should not be exposed to radiation and smoke and the mother should not consume drugs, alcohol, tobacco, or certain medicines during pregnancy, as it is harmful for the baby.
- ✓ **Clean habits:** Hygienic habits such as having a bath and brushing teeth everyday should be taught to the children. Also cutting nails, wearing clean clothes, washing hands and feet after coming from outside, etc. are the habits that should be instilled in the children to prevent diseases from occurring.
- ✓ **Health and Hygiene:** Information on health and hygiene that includes keeping the house clean, keeping food covered, drinking clean water (boiled water is the best water), keeping the vessels and clothes clean, disposal of garbage, spraying insecticides on marshy land, and keeping the gutters clean should be imparted to the parents to prevent epidemics from spreading.

How did we implement health, hygiene and nutrition programme ?

Anganwadi Multipurpose Workers were given information about health and hygiene. They were asked to check each child's nails, hair, regular cleanliness habits like daily bath, combing hair, etc. Each child's hands were washed before giving them nutrition and the children were also told to continue the habit at home. The Anganwadi Multipurpose Workers also informed the parents to send homemade, healthy food in the tiffins if they wanted to give tiffin boxes to the children, and not send money with the children to buy roadside foodstuff.

The Anganwadi Multipurpose Workers were also informed about immunization camps in the community where parents were told to take the children for immunization.

Meetings were held with parents to inform them about cleanliness and hygiene. They were explained the importance of nutritious food and were also told to keep the food and water covered to avoid illnesses. The parents were also told about the nutrition that is provided to the children in the anganwadi.

Different types of food provided to the children in the Anganwadi:

No.	Day	Food item (nutrition)	Food Constituent
1	Monday	Boiled channas	Proteins
2	Tuesday	Sweet rajgira laddu	Iron
3	Wednesday	Banana (fruit)	Vitamins and minerals
4	Thursday	Farsan	Fats and proteins
5	Friday	Chapati and alu sabji	Carbohydrates

Feeding of child with disability

What do you need to know about feeding ?

Feeding is important for survival and good health. Feeding is affected in children with brain damage. Improvement in eating (sucking, biting, chewing and swallowing) improves clarity of speech.

Teachers feed the children during school hours hence it is important to know a few Intervention strategies related to feeding.



Closing the lips for feeding

What should be done to bring about an improvement in eating ?

The Posture / Position of a child should be focused on,

The child should be first supported at a 45-degree angle (semi lying position)

Then supported 90 degree angle (supported straight sitting positions)

Then should gradually move on to sitting Independently for most of the time.

Remind the child that he/she would get help whenever requested and encourage the child to sit straight

Textures of food should be focused on,

Help the child eat normal diet

Help him to learn to swallow the foods one after the other, as per his swallowing ability.

Clear liquids (milk, juice, tea, water)

Thick liquids (milk shake, thick soup etc)

Soft solid (mashed boiled potato ground good)

Solid (rice, chapatti, vegetables)

Hard (Chickie, chocolate, raw fruits, salads)

If swallowing is present at soft solid level then teach the child chewing simultaneously, and help him go one stage to another. That is: -

Soft solid (boiled, ground food)

Solid (regular food)

Hard food (raw fruits, chickie, chocolate)



AMW feeding a child

✓ **To improve drinking and sucking fluids,**

- Start giving liquids with a spoon/dropper at the back of the tongue
- If the child can close his lip-then encourage him to use a sipper, keeping the child in a semi-lying position, thus slowly making the child to sit up as per the ability of the child to control fluids in his mouth. Let the child use the water bottle with the pipe or a straw to drink water.
- If the child can seal his lips well then let the child use the glass, and encourage him to hold the glass by himself.



Drinking with sipper

To improve chewing,

- Pretend to chew and make your child imitate the same action.
- Give bigger pieces of fruit and put it between the teeth (towards the inner side).
- On command, let the children open and close their mouth. Initially let it be done slowly, then slowly increase the rate of giving commands.
- **To improve lip closure**
 - Singing songs like "old MacDonald". The lips usually pucker and stretch open alternatively while saying i a i a - o
 - Help the child hold a bigger object with his lips and increase the duration slowly. Also slowly decrease the thickness of the object.
 - Blowing exercises as given above.
 - Remind the child to keep lips closed.