

# Nutrition, Eating & Drinking

## GUIDELINES FOR

## Children with disabilities

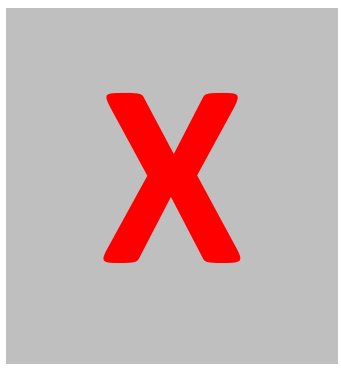
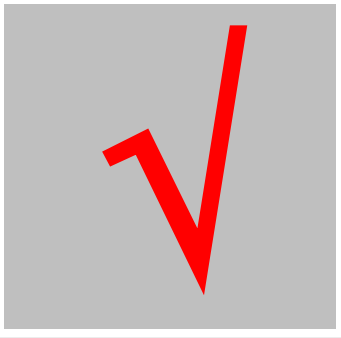


By

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**MAITS**

MULTI-AGENCY INTERNATIONAL  
TRAINING AND SUPPORT



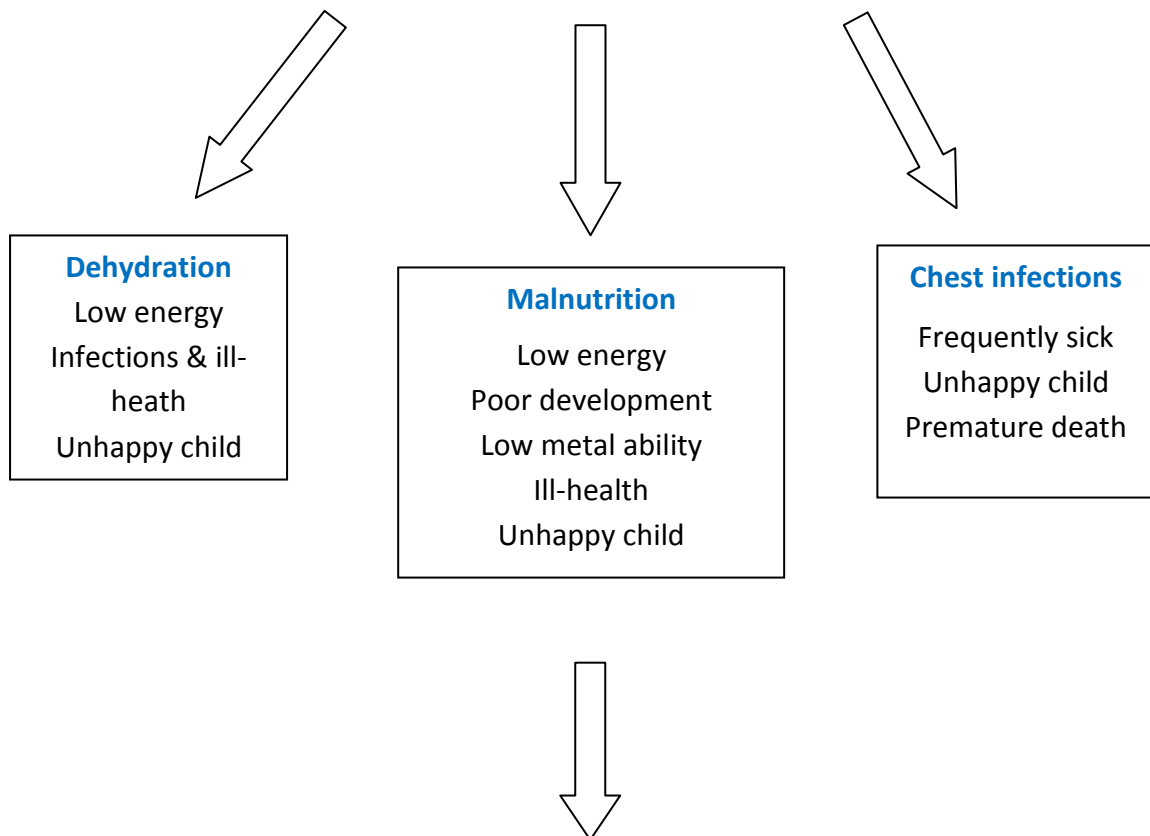
## SUMMARY OF GUIDELINES

- **As with ALL children, follow good hygiene practices for food preparation and feeding**
- **Give smaller meals more often (eg. 3 main meals and 2-3 snacks)**  
(meals should not last for more than 30 minutes or else the child will get too tired and not be able to chew or swallow)
- **Make sure the diet is balanced, and extra high in nutrients (for health) and calories (for strength)**
- **Make sure the food is of a smooth texture and with no bits in it**
- **Give the child 1 litre (5 cups) of water per day**
- **Use the correct utensils (small plastic cup & small plastic spoon)**
- **Position: support the child in upright position with the chin slightly down (use a special seat if possible)**
- **Communicate with the child in a positive manner**
- **Feed sensitively: small mouthfuls, slowly, watching & pausing.  
NEVER FORCE**

Following these guidelines will reduce the child's risk of serious ill-health and help him/her to be strong, more able and happier.

## Typical problems & consequences

Text	
Chewing	Food spillage / child gets tired / limited range of foods / can't eat enough
Swallowing	Food goes wrong way onto lungs > see signs of pain in facial expression / coughing / choking
Communication	Can't indicate when hungry, thirsty, full, want more etc.
Self-feeding	Can't feed self at all / food spills on way to the mouth / too much put in the mouth at once / eats too quickly > problems swallowing
Vomiting/ regurgitation (‘reflux’)	Pain during eating > refusal to eat > eats less
‘Fussy’ eater	Eats less
Problems with digestion	constipation > pain & loss of appetite > refusal to eat > eats less



**Additional burden of care, costs and distress for parents**

## Identifying children who need help

- Underweight
- Frequent illness / chest infections
- Frequent vomiting/regurgitation
- Unhappy mealtimes

## Ways to manage the problem

### General

- Monitor growth (weight-for-height) > seek help from nutritionist
- Monitor health (especially chest health) > seek help from doctor
- Observe children feeding and watch for difficulties > help during meals
- Observe for signs of reflux > seek medical help

### Each mealtime - consider

- Diet: Nutrient content & consistency AND fluids
- Communication
- Hygiene
- Positioning
- Utensils
- Feeding method

## Diet & food texture



All children need a **balanced diet** for development, growth and health. A balanced diet should be prepared from locally available food groups such cereals, legumes, meat and meat products, fruits and vegetables as well as oils and nuts. These foods provide the child with energy, protein, vitamins and minerals which are essential for growth, health and child development.

For those children with **neuromuscular disabilities**, they find it difficult to eat enough food at each mealtime, so they are often undernourished. They need **smaller meals** which contain **extra nutrients and calories**. They need snacks between meals.

**Example of food groups providing high energy, proteins and vitamins and minerals:**

Energy foods	Protein foods	Vitamin and mineral foods
<ul style="list-style-type: none"> <li>▪ Rice, pumpkin, potatoes,</li> <li>▪ Vegetable cooking oils, ghee</li> <li>▪ Nuts, sugary food products</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fish and meat</li> <li>▪ Eggs</li> <li>▪ Legumes (lentils, beans, soya beans)</li> <li>▪ Milk, doi</li> </ul>	<ul style="list-style-type: none"> <li>▪ vegetables eg. Spinach, pumpkin leaves, eggplant, carrots</li> <li>▪ Fruits eg. Banana, papaya, mango</li> </ul>

**Example recipes and supplements to enrich the nutrient value and increase the caloric content of meals for children with neurological disabilities (developed by ICDDR,B, [www.icddrb.org](http://www.icddrb.org))**

**Khichuri**

Ingredient	Amount	Energy (kcal)	Protein (g)
Rice	4 ounces (120 g)	415	8
Lentils ( <i>mashur dal</i> ) Soybean oil	2 ounces (60 g)	206	15.6
Potatoes	2 ounces (70 mL)	630	-
Pumpkin	4 ounces (100 g)	97	1.6
Leafy vegetable ( <i>shak</i> ) Onions (2 medium size)	4 ounces (100 g)	25	1.4
	3 ounces (80 g)	22	2
	2 ounces (50 g)	25	-
Spices (ginger, garlic, turmeric, coriander powder) to taste	50 g	22	1
Water	2 pints (1,000 mL)	-	-
Total weight of <i>khichuri</i>	1,000 g - -		
Total energy and protein per kg		1,442	9.6
100 g of <i>khichuri</i> contains about 145 kcal energy and 3 g protein. One cup (130 g) of <i>khichuri</i> contains 190 kcal energy and 4 g protein.			
<b>Preparation:</b>			
<ul style="list-style-type: none"> <li>Place the rice, <i>dal</i>, oil, spices, and water in a pot and boil.</li> <li>After about 20 minutes, add the potatoes, pumpkin (cut into pieces), and spices.</li> <li>Just 5 minutes before the rice is cooked, add the cleaned and chopped leafy vegetable.</li> <li>Keep the pot covered during cooking. It takes about 50 minutes to cook <i>khichuri</i>.</li> </ul>			
<i>Khichuri</i> and <i>halwa</i> can be kept at room temperature for 6-8 hours.			

**Halwa**

Ingredient	Amount	Energy (kcal)	Protein (g)
Wheat flour ( <i>atta</i> )	7 ounces (200 g)	682	24
Lentils ( <i>mashur dal</i> )	4 ounces (100 g)	343	26
Soybean oil	3 ounces (100 mL)	900	-
Molasses (brown sugar or <i>gur</i> )	4 ounces (125 g)	479	0.5
Water (to make a thick paste)	600 mL	-	-
Total weight of <i>halwa</i>	1,000 g		
Total energy and protein per kg		2,404	50.5
100 g of cooked <i>halwa</i> contains 240 kcal energy and 5 g protein. One cup (130 g) of cooked <i>halwa</i> contains 312 kcal energy and 6.5 g protein.			
<b>Preparation:</b>			
Soak <i>dal</i> in water for 30 minutes and then mash. Fry <i>atta</i> in a hot pan for a few minutes. Mix <i>atta</i> , mashed <i>dal</i> , and oil with water. Melt <i>gur</i> and add to the mixture to make a thick <i>halwa</i>			

Note: *Khichuri* and *halwa* can be kept at room temperature for 6-8 hours.

### **Milk Suji**

<b>Ingredients</b>	
Whole milk powder	40 g
Rice powder	40 g
Sugar	25 mg
Soybean oil	25 g
<i>Optional:</i>	
Magnesium chloride	0.5 g
Potassium chloride	1.0 g
Calcium lactate	2.0 g
Total cooked volume 1.0 L	
Total energy 67 kcal/100 mL	
Total protein 1.4 g/100 mL	
<b>Preparation:</b> Place all ingredients in a clean, dry saucepan, and mix thoroughly.	

### **Food to add to recipes to 'fortify'**

Flour made from Small dried fish	Rich in protein and minerals	<b>Preparation</b> -Take small dried fish -Sort and remove all the foreign materials -Wash dried fish to remove all dusts and stones -Place cleaned small fish and let it dry again -Roast dried small fish and then grind them to get flour -Store small fish flour into a clean and dry container with lids -Add small fish flour into salty cooked food for the child.
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For children with **autism** or who are **hyperactive**, it may help to minimise the number of additives they eat (eg. artificial colours, flavours, preservatives, and/or sweeteners). The most favoured diet of some parents is to reduce wheat and sugar. Maize and other cereals can be used to replace wheat, and honey can be used to replace sugar.

In terms of **food consistency/texture**, it is important to give children with **neuromuscular disabilities** food which is of a **smooth** consistency and does not have 'bits' in it. This can be achieved by avoiding foods such as normally cooked rice (cook rice until soft like khichuri or replace with mashed potato). Also avoid chewy or crispy items (biscuits, potato chips, chapatti, bread). Mash food where necessary.

To help a child improve their chewing skills, gradually increase the density of the consistency/texture eg. Start with suji and doi-type textures, move onto khichuri or soft stiff suji-type texture, then move onto giving small pieces of soft fruit (papaya/ mango / sweet banana) and chopped boiled vegetables (boiled pumpkin, boiled potato, boiled carrots). Remember that more runny food has fewer nutrients so it is good for a child to learn to chew if possible, as he/she will be able to eat more solid food.

**Fluids** should be drunk in **small amounts throughout** the day. This helps to prevent dehydration and constipation. Fill a **1-litre** bottle for each child and make sure it is finished by the end of the day.

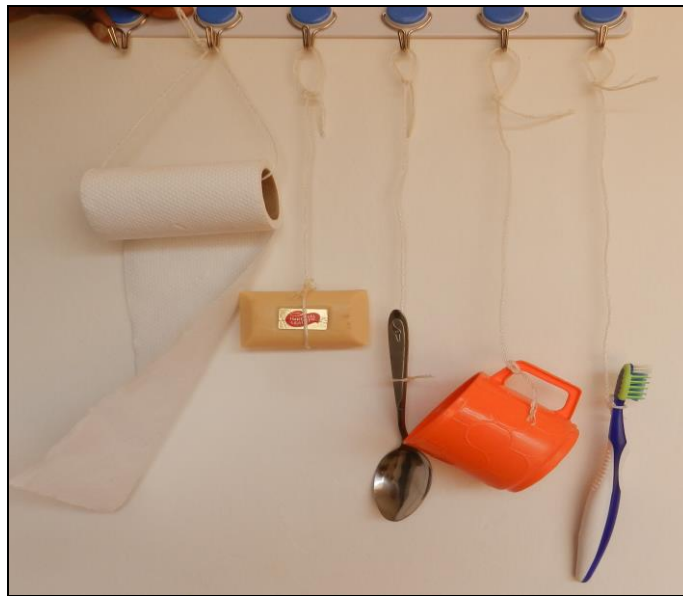


## Communication

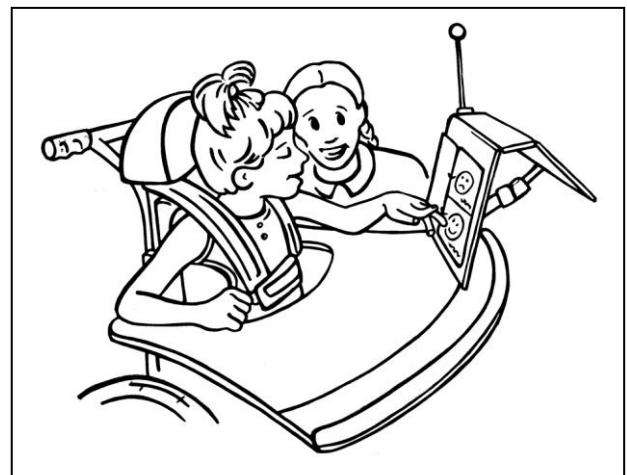
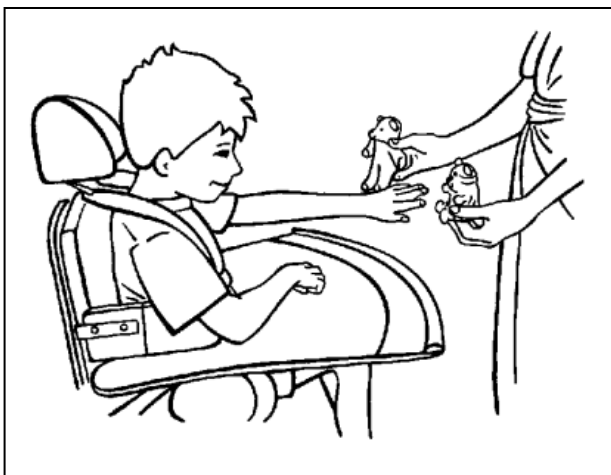
Use all forms of communication with children who have problems understanding or speaking.

Use objects, gestures, pictures, symbols, signs, depending on what the child can manage.

Start with objects. You can hang these from a series of hooks to show the sequence of activities. Point to the object at the same time as telling the child what is happening next and gesturing the activity. You can also encourage the child to touch or point to the object to show you what they want.



Offering choices is also a very good way to encourage communication. Hold out 2 objects and see which one the child looks at. Give them that one. Gradually encourage them to touch the object they want...then point to it. You can then move onto pictures etc.



## Hygiene

### 1. Hand-washing (feeder and child)

Use uncontaminated water from a flowing source (eg. normal tap or jug) with soap or ash.

Air dry hands clean by shaking them – avoid sharing towels.



### 2. Face-washing

Wash child's face before eating as well as after, to avoid dirt going into food is scooped back in.

### 3. Teeth-cleaning

Clean the teeth of children who have swallowing difficulties and are prone to chest infections, before meals to avoid microbes from the mouth going onto the lungs during eating or drinking. Clean all children's teeth twice a day.

### 4. Utensils

After washing, always rinse in uncontaminated water.

Place on drying rack in the sun to dry.

### 5. Table tops

Use a clean cloth to clean table tops before each meal.

## Positioning

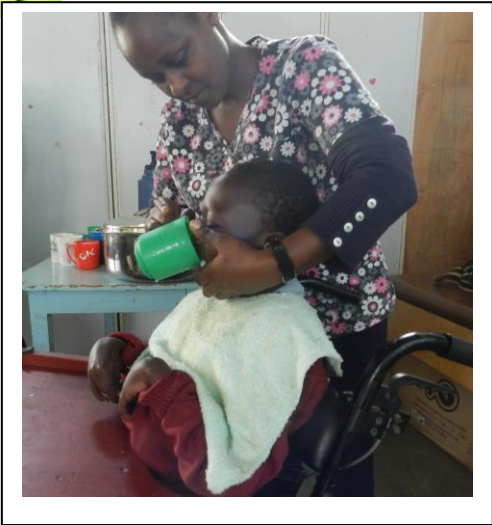
Children should always eat and drink in an upright sitting position with their head facing forwards and *never* tilted back. This helps chewing and swallowing and to prevent food and drink from going on to the lungs.



Children who have difficulties sitting upright by themselves should be supported – either using a chair and table of the correct height, supported by another person, or using a supportive ('special') seat.



Children who have poor head and jaw control can be supported by their feeder from the side or front.



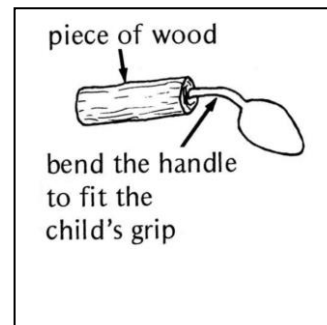
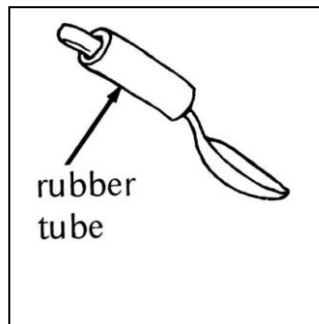
## Utensils

Avoid large spoons – they encourage large mouthfuls that the child cannot swallow.

If a child has a 'bite reflex', make sure the spoon is made of melamine (strong plastic).

If the child is eating Chiponde, it may find it easiest to take it directly from the packet. The mother has to be very careful to only give small amounts per mouthful.

If a child is ready to try a spoon-feed itself, you can wrap rubber or wood around the spoon handle which makes it easier for children with disabilities to hold.



Avoid tall cups – they encourage the child to tip their head backwards which makes swallowing very difficult and 'dangerous'.

You can cut part of the cup away to make space for the nose, which helps to avoid head-tipping.

Cups with 2 handles can be helpful for encouraging independence. DON'T use the tops on spouted beakers, as they make it difficult for the child to control the flow of liquid into the mouth. They also store germs in the spout.



## Feeding methods

- Always *talk* to the child and encourage them to eat.
- Give *small* mouthfuls – of food AND drink. Remind children who are feeding themselves to take smaller mouthfuls if needed. Give a verbal and gentle physical prompt.
- Feed at the right *speed*. Remind children who are feeding themselves to slow down if needed. Give a verbal and gentle physical prompt.
- *Watch* for signs of discomfort/distress...and *wait*. Give the child the *time* they need.
- Provide *jaw support* where necessary (see section on positioning)
- *Support them to learn to self-feed* (if they can) with their hand first, then a spoon (hand-over-hand) – use modified spoons to help.
- Be *patient* with *fussy eaters*. Allow them to explore food. Find out how they like their food to be presented (colour, texture, temperature, together or separate etc.)
- Provide *positive feedback* when the child *does well* (give praise, give a favourite toy). Discourage negative behaviour (by withdrawing something they like).
- NEVER force-feed a child – this is cruel and dangerous. The consequences of this can be:
  - The child will refuse to eat
  - Food and drink go onto the lungs causing chest infections
  - The child can choke, causing breathing to stop and possible death
- Meals should never take longer than 30 minutes, as the child will get tired. Remember that these children need small, nutritious meals, more often.

