

UNIT 8
Prevention of Diarrhoea

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**Learning
Objectives**

At the end of Unit 8, the students will be able to:

1. Describe practices that families should do to help prevent diarrhoea.
2. Describe ways that doctors can help to prevent diarrhoea.
3. Communicate effectively with a mother about practices that help to prevent diarrhoea.

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List of
Activities

Activity A is essential. Select from among the other activities according to time available and the amount of emphasis you want to give to the prevention of diarrhoea.

- A. **Reading: Unit 8 - Prevention of Diarrhoea** (1 hour for students to read and study)

This unit describes seven practices that are practical and effective for preventing diarrhoea in young children. It explains specifically what families should do and what doctors can do to help achieve changes in behaviour that diminish the risk of diarrhoea.

- B. **Written exercise: Summary of preventive practices** (50 minutes for individual work in the classroom setting and group discussion)

Students are asked to list from memory the seven prevention practices. Then the instructor gives them a worksheet to complete to help them recall the main points about prevention of diarrhoea.

- C. **Case studies: Promotion of breast-feeding or other preventive interventions appropriate for a particular child** (45 minutes individual work; 45 minutes for group discussion)

Students read case descriptions and write answers to questions concerning the advice to be given to caregivers about prevention of diarrhoea. The instructor checks each student's answers individually. The range of cases includes: a young pregnant woman who is planning to bottle-feed; an infant who is 9 months old, eats diluted cereal mixture, and has frequent episodes of diarrhoea; a hospital where neonates are given supplemental feeds; a mother who

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has an infected breast; families that draw drinking water from a small pond where they also bathe.

D. Role play: Teaching a mother about a specific preventive practice (1-2 hours)

In the role play a health worker teaches a mother about a preventive practice (selected by the instructor), such as why she should breast-feed or when and how to wean her child. Students benefit from reviewing the points to teach a mother and from seeing a demonstration of techniques for good communication.

E. Discussion: The role of doctors in diarrhoea prevention (40 minutes-1 hour for group discussion)

In a group discussion, students develop a list of actions doctors should take to help prevent diarrhoea.

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A. Reading

Assign Unit 8 as homework. Ask students to read and study the material and do the exercises. They should also note any points that are unclear and ask you about them the next day. You should set aside 10-15 minutes the next day for answering questions, especially if Activity B will not be used.

B. Written Exercise

1. Locate the student worksheet for the written exercise for Unit 8, "Summary of Preventive Practices," in the Annex. Make enough copies for each student. If copies cannot be made, plan to read the questions to the students or write them on a chalkboard. Also make copies of the answer sheet for the exercise, which follows these guidelines.
2. Begin by asking the students to list from memory the seven interventions for preventing diarrhoea.

ANSWER:

- * Breast-feeding
 - * Improved weaning practices
 - * Proper use of water for hygiene and drinking
 - * Handwashing
 - * Use of latrines
 - * Safe disposal of the stools of young children
 - * Measles immunization
3. Distribute the student worksheet. Ask students to work individually to fill out the summary sheet. Allow about 30 minutes to complete the worksheet, as much as they can, answering from memory.
 4. Then assign pairs or groups of three to work together to complete the summary sheet and improve their answers, also working from memory.

After about 10 minutes, distribute the answer sheets and ask students to compare their answers with those suggested. They may also refer to *Readings on Diarrhoea* to check their answers.

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5. Summarize the exercise by answering any questions the students may have and making the following points:
 - It is important for doctors to know which interventions can effectively prevent diarrhoea.
 - It is also important to know and be able to explain exactly what family members should do to help prevent diarrhoea in their children.

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SUMMARY OF PREVENTIVE PRACTICES: POSSIBLE ANSWERS

BREAST-FEEDING

For the first 4-6 months of life, infants should be exclusively breast-fed.

"Exclusively breast-fed" means that a healthy baby who is growing normally receives only breast milk and no other fluids or foods, such as water, tea, juices, or formula.

An infant who is exclusively breast-fed will have less diarrhoea than a partially breast-fed or bottle-fed infant because:

- 1) Breast-feeding is clean; it does not require the use of bottles, nipples, water or formula which are easily contaminated with bacteria that may cause diarrhoea
- 2) Breast milk has immunological properties (especially antibodies) that protect the infant from infection, and especially from diarrhoea; these are not present in animal milk or formula

To breast-feed successfully and give the greatest benefit of breast-feeding to her baby, a mother should

- 1) Start breast-feeding as soon as possible after delivery
- 2) Breast-feed the baby exclusively, if possible, for the first 4-6 months, and continue breast-feeding for at least two years
- 3) Breast-feed on demand; more frequent sucking causes the milk supply to increase
- 4) If it is not possible to take the baby to work, breast-feed before leaving home, on returning home, at night, and at any other time when the mother is with the baby
- 5) Express milk manually to avoid engorgement during periods of separation from the baby
- 6) Continue breast-feeding during and after any illness of the baby, especially diarrhoea

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WEANING

When should weaning begin? at 4-6 months of age

What foods should be given? Cereals and starchy roots should be given as a thick pap or porridge; increase the energy content by mixing one or two teaspoonfuls of vegetable oil into each serving; between the ages of 6 months and one year, add pulses, fruit, green vegetables, meat, fish and milk products to the diet

Weaning foods should be prepared with care. A mother can minimize the risk of bacterial contamination of weaning foods by:

- 1) washing her hands before preparing the food and before feeding the baby
- 2) preparing the food in a clean place
- 3) cooking or boiling the food well
- 4) if possible, preparing the food immediately before it will be eaten
- 5) covering food that is being kept; keeping food in a cool place; refrigerating it if possible
- 6) if cooked food was prepared more than 2 hours before it is used, reheat it until it is thoroughly hot before giving it to the baby
- 7) feeding the baby with a clean spoon, from a cup, or with a special feeding spoon; feeding bottles should never be used
- 8) washing uncooked food in clean water before feeding it to the baby; an exception is food that is peeled before it is eaten, such as a banana

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PROPER USE OF WATER FOR HYGIENE AND DRINKING

To assure that drinking water is as safe as possible, families should:

- 1) collect drinking water from the cleanest available source
- 2) protect water sources by keeping animals away, locating latrines more than 10 metres away and downhill, and digging drainage ditches to divert storm water
- 3) collect and store water in clean containers
- 4) keep storage containers covered and not let children or animals drink from storage containers
- 5) obtain water from the storage container with long-handled dipper; no one should put hands into the container
- 6) empty and rinse out the container every day

HANDWASHING

Good handwashing requires the use of soap, plenty of water and careful cleaning of all parts of the hands

The important times to wash one's hands are

- 1) after cleaning a child who has defecated, or after disposing of a child's stool
- 2) after defecating
- 3) before preparing food
- 4) before eating
- 5) before feeding a child

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USE OF LATRINES

Every family should have a latrine and all family members old enough to do so should use it. Where there is no latrine or pit, people should defecate away from the path, and at least 10 metres away from any home or source of water.

SAFE DISPOSAL OF THE STOOLS OF YOUNG CHILDREN

Key points about safely disposing of the stools of babies or young children are:

- 1) quickly collect the stool of a young child or baby, wrap it in a leaf or newspaper, and put it in a latrine, or bury it
- 2) help older children defecate into a potty; empty the stool immediately into a latrine and wash out the potty; alternatively, have the child defecate on a newspaper or large leaf, wrap up the stool, and put it in the latrine or bury it
- 3) promptly clean a child who has defecated and then wash your own and the child's hands

MEASLES IMMUNIZATION

Children should be immunized against measles at the recommended age because children who have measles, or have had measles in the previous 4 weeks, have a substantially increased risk of developing severe or fatal diarrhoea or dysentery. Measles immunization is a very cost-effective measure for reducing diarrhoea morbidity and deaths.

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C. Case Studies

1. Locate the case studies for Unit 8 in the Annex. Make enough copies for each student. If copies cannot be made, plan to read the case studies aloud to the students or write them on a chalkboard. Answer sheets for these case studies follow the guidelines for this activity.
2. Introduce the exercise by telling the students that:
 - Case studies allow them to practice making clinical decisions. The cases in this unit will provide additional practice giving advice to mothers about prevention of diarrhoea.
 - When they have read the cases and responded to the questions on the exercise sheet, you or a teaching assistant will review their answers. This should be done individually, if possible.
3. Distribute the case studies to the students. Ask them to study each case and write answers to the questions. (You may assign this as either homework or classwork.)
4. Check and discuss each student's answers, clarifying any misunderstandings as necessary. Then discuss any common difficulties or interesting points with the entire group if you feel that would be worthwhile. If individual feedback is not possible, individual students could volunteer to state their answers, and these could be discussed as a group.

UNIT 8: Answers to Case Studies

1. Mrs. Lo delivered her first baby in an MCH clinic. She was very tired after the delivery so the nurse offered to take the baby while Mrs. Lo rested. When the baby began crying, the nurse offered him some water in a bottle. She took the baby to the other end of the clinic so that Mrs. Lo could sleep undisturbed.

That evening after Mrs. Lo breast-fed the baby, he began crying again. Because her mother-in-law had told her that the "good milk" would not come for several days, Mrs. Lo thought the baby must be hungry. She asked the nurse to give him a bottle of milk.

In the space below, write what was done wrong, or what should have been done differently.

Mrs. Lo should have been encouraged to breast-feed as soon as possible after the delivery. The baby should have been left with her to breast-feed on demand. The water and the milk should not have been given to the baby. The bottles, the water, and the milk are all likely sources of contamination.

Note: It is true that the mother's first milk, colostrum, is secreted in only a small amount, but this is plenty for the baby. A normal baby is born with a store of water that keeps him hydrated until his mother's milk comes in, so no additional fluids are needed. The colostrum gives the baby important protection against infections.

2. A breast-feeding mother comes to the clinic with a fever and a swollen breast with a reddened area. What should you do for her?

Give the mother an antibiotic (penicillin). Give aspirin for pain and fever. Show her how to relieve the pain with a warm, wet cloth. Encourage continued feeding from the infected breast. If the mother does not want to feed the baby from that breast, show her how to express milk from it and continue feeding from the other breast.

3. A young woman who is 6 months pregnant has come for a prenatal visit. She is planning to bottle-feed her child because she works outside the home 5 days each week. List at least 3 points you will tell this woman:

- *During the first 4 - 6 months of life, babies should be breast-fed exclusively. Then they should be partially breast-fed until they are at least two years old.*

UNIT 8: Answers to Case Studies

- *Breast milk, including mother's first milk, gives important protection against infection, including diarrhoea.*
- *Mothers who work outside the home can breast-feed before leaving home in the morning, on returning, during the night, and at any other time when with the baby.*
- *Mothers can express milk manually to avoid engorgement during periods of separation from the baby.*
- *Any amount of breast-feeding that the mother can manage will be helpful to her child.*
- *If milk formula is to be used at times, it is better to give it with a cup and spoon than with a bottle. This will lessen the chances of contamination and will not interfere with the baby's desire to breast-feed when the mother is home.*

4. Akim, age 10 months, weighs 6.5 kg, appears thin and has frequent episodes of diarrhoea. While treating his current episode, you ask his mother about his diet. She says he takes only breast milk and sorghum gruel. Akim breast-feeds about 6 times a day and is given gruel 3 times. The gruel is prepared each morning and then used through the day without being reheated. It is liquid and can be taken with a spoon or from a cup. Sometimes it is diluted with water and given in a feeding bottle. Akim's family, including the older children, eat 3 meals a day with cassava, green vegetables, pulses and sometimes meat or eggs.

- a. Give 2 important reasons why Akim is thin and underweight.
 - (i) *His diet is not adequate; it does not provide enough energy and protein.*
 - (ii) *He has frequent episodes of diarrhoea, which cause weight loss.*
- b. List 2 feeding practices that may help explain Akim's frequent episodes of diarrhoea.
 - (i) *Feeding gruel that has been at room temperature for several hours after it was prepared.*
 - (ii) *Giving diluted gruel in a feeding bottle.*

Both of these practices increase the risk of contamination of Akim's food by faecal bacteria that cause diarrhoea.

UNIT 8: Answers to Case Studies

- c. List 4 points you would make in advising Akim's mother about improving his diet.
- (i) Akim should be fed more frequently, at least 4 times a day.*
 - (ii) Akim's cereal gruel should be thick, so that it contains more energy.*
 - (iii) One or 2 teaspoonfuls of vegetable oil should be mixed into each serving of gruel, to increase its content of energy.*
 - (iv) Akim should be given some of the other foods eaten by the family, especially vegetables, pulses and meat or egg. These should be well cooked and mashed.*
 - (v) The mother should continue to breast-feed Akim.*
5. You are participating in a community meeting about steps that can be taken to prevent diarrhoea. During a discussion of the importance of using clean water, a father explains that his family uses a nearby pond for bathing, washing clothes and obtaining water for household use, including drinking. Water is collected from the pond and stored in a single uncovered container for use in the house. He is concerned that the pond may become contaminated with human faeces from a nearby latrine during the rainy season. He says the nearest tube well is 30 minutes away by foot.

List 4 points you could make in advising the father about how to prevent diarrhoea by improving the use of water by his family.

- (i) Use collected rain water or water from the tube well for drinking and preparing food.*
- (ii) Use pond water for personal and domestic hygiene, but store it separately from water used for drinking or preparing food.*
- (iii) Bring to a boil water that will be used for drinking or preparing food, especially for young children.*
- (iv) Store water for drinking or preparing food in a covered container that is cleaned every day. Use a long handled dipper to take out water, so that no one's hand touches the water.*
- (v) Locate the latrine at least 10 metres from the pond and downhill, if possible. Dig ditches to divert storm water away from the latrine.*

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D. Role Play

The purpose of this role play is for students to practice teaching parents about prevention of diarrhoea. Role plays allow students to practice a skill and receive feedback about how well they are performing the skill. A role play is especially useful for teaching and practicing communication skills. During the role play, students act different parts as if they were in a play. But instead of parts and actions, they are given only the outline of a situation.

These guidelines describe how to coordinate a role play. The suggested role play situation concerns how to teach mothers about preventing diarrhoea; the guidelines, however, can be adapted to any role play situation.

If adequate supervision *and* space are available, divide the students into smaller groups of 5 to 6 students so that more students will have an opportunity to practice teaching mothers about home treatment. For example, two groups can participate in role plays simultaneously, if two different instructors or teaching assistants and two different rooms are available.

Preparing for the role play:

1. Review the suggested role play situations that follow these guidelines.
2. Gather the following supplies for the role play:

For role play about breast-feeding:

- No supplies are needed; however, a breast pump might be useful if readily available. (The pump could be shown to the mother if she will need to express breast milk while at work.)

For role play about weaning foods:

- A doll to be the child (This may be improvised by rolling up a towel to serve as a "baby.")
- Pictures of good weaning foods, or samples of the foods

For role play about handwashing and disposal of stools of young children:

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- A doll to be the child
 - A basin with soap and water
3. Select two students to play the mother (or father) in each role play. Select a different pair of students for each play.
 4. Explain the role each will play and give each student a copy of the role play situation. If possible, do this several hours before the role play. Encourage the students who will be parents to act like normal, concerned parents. Suggest that they could appear doubtful or become confused by some of the health worker's instructions.

Conduct the Role Play:

1. Explain that the purpose of the role play is to demonstrate how a health worker interacts with a mother. The students in the role play and the ones observing should focus on how the health worker interacts with the mother and on what the health worker teaches her. Remind students that when health workers are fully trained, they should be able to communicate effectively with mothers *and* be accurate and complete in what they say.
2. The students should observe the role play closely so they can comment on what aspects of teaching were done well and which could be improved.
3. Introduce the health worker and mother to the audience. Summarize the situation, and then ask the students to begin the role play.
4. Watch the role play without interrupting. Stop the role play when the mother is ready to leave the health centre.

When each role play is over:

1. Ask the observers to comment:
 - What did the health worker do well?

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- Did the health worker leave out anything important?
 - How did the health worker make certain the parent understood the instructions?
 - Was the health worker convincing about the benefits of the prevention intervention being discussed?
 - Was the health worker supportive to the parent?
2. Ask the parent to comment:
- Did the parent understand what the health worker was saying?
 - Did the health worker answer questions adequately and deal with the parent's concerns?
3. Gather the entire group for a brief discussion. Ask the "health workers" what they found most difficult when giving advice about the prevention interventions. Then ask them for ideas about how they can manage these difficulties when talking to parents.

Ask the observers whether they think the "parents" *learned* all of the points or *just heard* them. How can they tell? What can health workers do to help parents understand? For example, can the health worker provide examples of the intervention (such as posters or demonstrations of the intervention). What checking questions can he ask to be sure the parent remembers?

UNIT 8: SUGGESTED ROLE PLAY SITUATION BREAST-FEEDING

This role play situation is about a prenatal visit in which the health worker discusses breast-feeding with a young woman who is about to have her first child. You may play one of the roles or observe other members of your group as they play the roles. This will allow you to practice or observe teaching and communication skills. Your instructor will tell you what role you will play. After the role play, there will be a group discussion.

Role Play About Breast-Feeding:

Mrs. Thaman has come to the health clinic for a prenatal visit. She is due to deliver her first child in 2 weeks. The health worker asks Mrs. Thaman if she is planning to breast-feed. She replies that she plans to bottle-feed the baby.

One student will play the role of Mrs. Thaman, and one will play the role of the health worker. (Mrs. Thaman should have in mind several reasons why she plans to bottle-feed.) Observe the role play to see what the health worker communicates effectively and what could be done better. The instructor will ask you to comment at the end.

UNIT 8: SUGGESTED ROLE PLAY SITUATION WEANING FOODS

This role play situation is about teaching a parent to prepare weaning foods. You may play one of the roles, or observe other members of your group as they play the roles. This will allow you to practice or observe both teaching and communication skills. Your instructor will tell you what role you will play. After the role play, there will be a group discussion.

Role Play About Weaning Foods:

Mrs. (or Mr.) Selina has brought a 5-month-old daughter Antonia for her third DPT immunization. The health worker asks about Antonia's diet, and the parent replies that she takes only breast milk. The health worker then teaches the parent how to start weaning her child.

One student will play the role of the health worker and one will play the role of the parent. The health worker should describe weaning foods that are suitable and easily available in the community. The parent should ask questions, appearing confused, if appropriate. Observe the role play to see what the health worker teaches well and what could be done better. The instructor will ask you to comment at the end.

UNIT 8: SUGGESTED ROLE PLAY SITUATION

HANDWASHING AND DISPOSAL OF STOOLS OF YOUNG CHILDREN

This role play situation is about a health worker teaching a mother about handwashing and disposal of stools of young children. You may play one of the roles, or observe other members of your group as they play the roles. This will allow you to practice or observe both teaching and communication skills. Your instructor will tell you what role you will play. After the role play, there will be a group discussion.

Role Play About Handwashing and Disposal of Stools of Young Children:

Mrs. Habiba is about to leave the health clinic with her newborn son Haji. She has two young children at home already; these children are 2 and 3 years old. Mrs. Habiba is experienced at breast-feeding and plans to breast-feed Haji. Since there are other young children at home, the health worker decides to discuss handwashing and disposal of young children's stools as important ways to help prevent diarrhoea.

One student will play the role of the health worker, and one will play Mrs. Habiba. Observe the role play to see what the health worker teaches well and what could be done better. When the role play is over, the instructor will ask you to comment.

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E. Discussion: The Role of Doctors in Diarrhoea Prevention

Ask students to state actions that doctors can take to help prevent diarrhoea. Write their answers on a flipchart or chalkboard. Ask questions as needed to obtain a list similar to the one below.

Sample List of Actions Doctors Can Take to Help Prevent Diarrhoea

- Use good counselling techniques to teach about prevention (e.g., use simple words; use information, examples, and practice; ask checking questions).
- Learn about community beliefs and common practices, and consider them when teaching mothers about preventive measures.
- Find opportunities to discuss with mothers how they can help to prevent diarrhoea in their children (e.g., at immunization or well-baby clinics; during prenatal visits).
- Set a good example (e.g., wash hands frequently; breast-feed their own children, or encourage their wives to do so).
- For mothers with newborn babies:
 - ▶ teach the mother about the benefits of breast-feeding her child
 - ▶ allow newborns to start breast-feeding immediately after birth
 - ▶ keep babies close to their mothers in the same room
 - ▶ give no fluids to newborns except breast milk
 - ▶ do not distribute (or allow sales representatives or nurses to distribute) samples of milk formula or feeding bottles
 - ▶ show the mother how to breast-feed and how to avoid problems with breast-feeding
- Encourage or set hospital policies to ensure the above practices.

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- Take care not to prescribe certain drugs (e.g., oral contraceptives, chloramphenicol, tetracycline) to breast-feeding mothers.
- Encourage and advise or treat mothers having difficulty with breast-feeding.
- Refer mothers to breast-feeding support groups; if possible, provide a place for such groups to meet.
- Make the assessment of weaning diets and weaning education a routine part of well-baby programmes.
- Include screening and referral for immunization, including measles immunization, as a routine in well-baby visits.
- Check the immunization status of every child, and make sure that those who need it are immunized during the visit.
- Teach the mother when to come back for the next immunizations. Emphasize that she should bring the child's immunization card with her.
- Display promotional material about ways to prevent diarrhoea.
- Ensure appropriate in-service training of health facility staff about prevention interventions.
- Take part in community-oriented activities to promote preventive interventions (e.g., give talks; participate in community meetings).
- Learn about and use government resources (e.g., educational materials, guidelines).

Ask relevant questions about these actions to ensure students understand why they are important.

