

SESSION 22

The Composition of Breast milk and the Importance of Breastfeeding

Time required: 2 hours 30 minutes

Purpose

The purpose of this session is to familiarize participants with the composition of breast milk and the importance of breastfeeding.

Objectives

At the end of this session MM's will:

1. Know the composition of breast milk.
2. Understand the importance of breastfeeding.
3. Understand the risks of not breastfeeding.

Materials

1. Slides 22/1; 22/2; 22/3; 22/4

Preparation

Make sure the slides are in the correct order. Study the notes for the session so that you understand the content of the session and are clear about what to do. Familiarise yourself with the words that will be used in this session and make sure that you understand their meaning.

Training Methods

Using the content of this session as a guide, open a discussion which addresses each area outlined in this session. You may ask trainees what they know about a certain area before filling in the gaps and explaining the remainder of the information to them. This will involve them in the discussion and make the session more interactive.

Go through the key messages below and the objectives above (10 mins)

Key message 5:

Exclusive breastfeeding means feeding the baby only breast milk for the first 6 months of life – nothing else – no water / no glucose water / no teas / no porridge / no fruit / no vegetables / no traditional medicines by mouth / no over-the-counter medicine by mouth. However exclusively breastfed babies are allowed to receive medicine and vitamins that have been prescribed by a doctor or nurse. They are also allowed to receive sugar salt solution for 2 days or less if they have diarrhoea.

Key message 6:

Breast milk alone has all that a baby needs to grow during the first 6 months of life.

Key message 7:

Breast milk protects a baby against infection.

Key message 8:

Exclusive breastfeeding has many more benefits than mixed feeding or formula feeding for HIV negative women, HIV positive women who do not meet the AFASS criteria and women of unknown HIV status.

22.1 Introduction

Spend the next 20 mins going through the introduction and activity 8.

Tell participants that they will hear many new words in this section. These are listed in the table below, for trainees to refer back to. You may want to spend time going through each word – spell it out; get participants to take turns to write each word on a flip chart, and discuss what each word means.

Important terms that you will see in this section:	
Lactose	The name of a special sugar found in breast milk. It provides energy
Casein	A type of protein found in breast milk
Whey	A type of protein found in breast milk
Anti-infective	Protects against infection
Essential fatty acids	These are the building blocks needed to make sure a baby grows
Faeces	Stools – commonly called number 2
Colostrum	The special breast milk that women produce in the first few days after delivery. It is thick and yellowish or clear in colour
Foremilk	Bluish milk that is produced early in a feed
Hindmilk	White milk that is produced towards the end of a feed

Activity 8:

Ask participants to discuss the following question:

Why is breastfeeding important?

As facilitator write down participant's responses and add onto any previous list that has been developed.

Spend the next 1 hour going through each of the following sections until the section on dangers of not breastfeeding. Additional information is in italics - this information is not compulsory.

22.2 The importance of breastfeeding

Slide22/1:

2/2

Advantages of breastfeeding

Breast milk

- Perfect nutrients
- Easily digested; efficiently used
- Protects against infection



Breastfeeding

- Helps bonding and development
- Helps delay a new pregnancy
- Protects mothers' health

• Costs less than artificial feeding

There are several advantages to breastfeeding. These are listed below:

- Breast milk provides ideal nutrition for the baby.
- Breastfeeding protects against many infections.
- Breastfeeding delays the return of mothers' fertility helping to space the next pregnancy.
- Breastfeeding provides closeness and contact between the mother and her baby that helps psychological development.
- The woman may see disadvantages or risks to not breastfeeding:
 - Her child is likely to get sick more often.
 - Preparing and giving alternatives to breastfeeding takes more time and is less convenient than breastfeeding.
 - To feed a baby in another way is expensive. The family has to buy breast milk substitutes, fuel and water. This makes it more difficult to buy enough food for other members of the family and pay for health care, which may result in poorer health for the whole family

Feeding a baby with other fluids, including water and traditional medicines, and foods during the first 6 months of life lessens the benefits of breastfeeding.

For the first 6 months of life babies need nothing else but breast milk to grow and develop – It's an all in one package!!

22.3 The composition of breast milk:

Breast milk has all that a baby needs to grow and develop during the first 6 months of life:

Before understanding the composition of breast milk you need to understand that formula milks are made from a variety of products, including animal milks such as cows milk, soybean, and vegetable oils. They are less perfect for babies.

Human Breast milk contains fat – which provides energy for growth.

FAT

Human Breast milk contains protein – which are building blocks for growth

PROTEIN

Additional information:

Other animal milks contain more protein than human breast milk. Protein is important for growth. You might think that more protein must be better. However, animals grow faster than humans, so they need milk with more protein. Human babies have difficulty digesting and processing large amounts of protein.

The type of protein also differs between human breast milk and other milks: Much of the protein in cow's milk is casein. This forms thick, indigestible curds in a baby's stomach. There is less casein in human milk. Thus human breast milk forms softer curds, which are easier to digest.

In human breast milk, much of the whey protein consists of anti-infective proteins, which help to protect a baby against infection. Animal milks do not contain the kinds of anti-infective protein, which protect babies.

Human Breast milk contains a special milk sugar called lactose – which also provides energy for growth.

MILK SUGAR CALLED LACTOSE

Human Breast milk contains essential fatty acids that are not present in cow's milk or formula. These essential fatty acids are needed for a baby's growing brain and eyes, and for healthy blood vessels.

ESSENTIAL FATTY ACIDS

Human Breast milk also contains an enzyme lipase, which helps to digest fat. (This enzyme is not present in animal milks or formula)

ENZYME CALLED LIPASE

So the fat in breast milk is more completely digested and more efficiently used by a baby's body than the fat in cow's milk or formula)

The faeces (stools) of an artificially fed baby are different from those of a breastfed baby. This is partly because an artificially fed baby's faeces contain more unused food.

VITAMINS

Cow's milk contains plenty of the B vitamins. But it does not contain as much vitamin A and vitamin C as human milk.

Breast milk contains plenty of vitamin A, if the mother has enough in her food. Breast milk can supply much of the vitamin A that a child needs even in the second year of life.

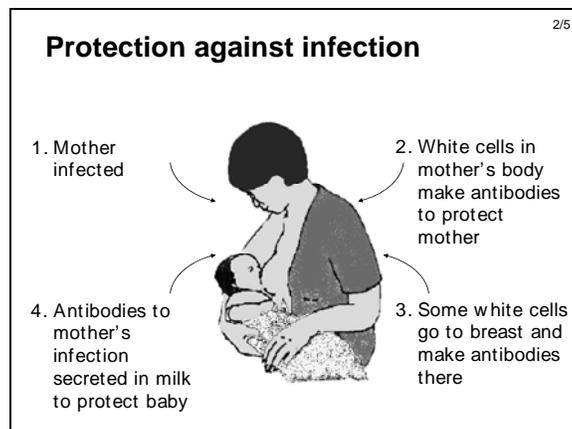
IRON

Breast milk contains iron. Iron makes the blood 'strong'. Only about 10% of the iron in cow's milk is absorbed, but about 50% of the iron from breast milk is absorbed.

Babies fed cow's milk may not get enough iron, and they often become anaemic. Exclusively breastfed babies do get enough iron, and they are protected against iron deficient anaemia until at least 6 months of age, and often longer.

22.4 Breast milk protects babies against infections:

Slide 22/2:



Breast milk is not just a food for babies. It is a living fluid. It protects babies against infections.

Additional information:

For the first year or so of life, a baby's immune system is not fully developed, and cannot fight infections as well as an older child's or adult's. So a baby needs to be protected by his mother.

Breast milk contains white blood cells, and a number of anti-infective factors, which help to protect a baby against infection. Breast milk also contains antibodies against infections, which the mother has had in the past.

When a mother becomes infected white cells in her body become active, and make antibodies against the infection to protect her. Some of these white cells go to her breasts and make antibodies which are secreted in her breast milk to protect her baby.

Research has shown that breast milk protects against diarrhoea, ear infections, meningitis and against chest infections. Exclusive breastfeeding protects the most. The protective effect of exclusive breastfeeding is decreased when other fluids / feeds are added to the baby's diet.

Artificial feeds like formula milk contain no living white cells or antibodies, and few other anti-infective factors, so they provide much less protection against infection.

What does this mean? A baby should not be separated from his mother when she has an infection or when the baby is sick, because her breast milk protects him against the infection.

22.5 The composition of breast milk

The composition of breast milk is not always the same. It varies according to the age of the baby, and from the beginning to the end of a feed. It also varies between feeds, and may be different at different times of the day.

Colostrum is the special breast milk that women produce in the first few days after delivery. It is thick and yellowish or clear in colour
Colostrum contains more protein than later milk.

Present participants with the following 3 statements about colostrum. Ask participants their responses to these statements: Allow 5 minutes for discussion

Statements for participants to discuss:

1. Colostrum is the best part of the mother's milk
2. Colostrum is not good for the baby and should be discarded

3. Colostrum is the same as milk that comes later on.

Once participants have discussed these statements, show slide 13.3 and make the following points:

Slide22/3:

Colostrum	
Property	Importance
• Antibody rich	- protects against allergy & infection
• Many white cells	- protects against infection
• Purgative	- clears meconium - helps to prevent jaundice
• Growth factors	- helps intestine to mature - prevents allergy, intolerance
• Rich in Vitamin A	- reduces severity of infection

Colostrum is very good for the baby. It should not be discarded.

Colostrum serves as the baby's first immunization

Colostrum contains more antibodies and other anti-infective proteins than mature milk. This is part of the reason why colostrum contains more protein than mature milk.

Colostrum has a mild purgative (cleansing) effect. It helps to clear the baby's gut of meconium (the first rather dark stools). This helps to prevent jaundice (yellowness).

Colostrum contains substances called growth factors, which help a baby's immature intestine to develop after birth. This helps to prevent the baby from developing allergies and intolerance to other foods.

Colostrum is richer than mature milk in some vitamins - especially vitamin A. Vitamin A helps to reduce the severity of any infections the baby might have.

So it is very important for babies to have colostrum for their first few feeds.

Colostrum is ready in the breasts when a baby is born. It is all that most babies need before the mature milk comes in.

Babies should not be given any drinks or foods before they start breastfeeding. Artificial feeds given before a baby has colostrum are especially dangerous.

After a few days, colostrum changes into mature milk. There is a larger amount of milk, and the breasts feel full, hard and heavy. Some people call this the milk 'coming in'.

Additional information:

Colostrum contains more white blood cells than mature milk. These anti-infective proteins and white cells provide the first immunization against the diseases that a baby meets after delivery. Colostrum helps to prevent the bacterial infections that are a danger to newborn babies. The antibodies probably also help to prevent a baby from developing allergies.

Mature milk:

There are two types of mature milk: (1) foremilk and (2) hindmilk

Foremilk is the bluish milk that is produced early in a feed. Foremilk is produced in larger amounts, and it provides plenty of protein, lactose, and other nutrients. Because a baby gets large amounts of foremilk, he gets all the water that he needs from it. Babies do not need other drinks of water before they are 6 months old, even in a hot climate. If they satisfy their thirst on water supplements, they may take less breast milk.

Hindmilk is the whiter milk that is produced later in a feed. Hindmilk contains more fat than foremilk. The extra fat in hindmilk makes it look whiter than foremilk. This fat provides much of the energy of a breastfeed and makes the baby full. This is why it is important not to take a baby off a breast too quickly. He should be allowed to continue until he has had all that he wants, so that he gets plenty of fat-rich hindmilk.

Mothers sometimes worry that their milk is 'too thin'. This is because foremilk is clear or bluish in colour. It is important for a baby to have both foremilk and hindmilk to get a complete 'meal', and all the water that he needs.

Activity 9:

In a large group ask participants to discuss whether EBF is common in your community? Also discuss what are the common beliefs about colostrum?

After this discussion make the point and emphasise that that mothers who breastfeed need special care so that they exclusively breastfeed.

Mothers and babies who breastfeed need special care so that they exclusively breastfeed

22.6 There are several dangers associated with not breastfeeding: *Take 1 hour to go through this section.*

Slide 22/4:

2/10

Disadvantages of artificial feeding

- Interferes with bonding
- More diarrhoea and persistent diarrhoea
- More frequent respiratory infections
- Malnutrition; Vitamin A deficiency
- More allergy and milk intolerance
- Increased risk of some chronic diseases
- Obesity
- Lower scores on intelligence tests
- Mother may become pregnant sooner
- Increased risk of anaemia, ovarian cancer, and breast cancer in mother

A baby who does not receive any breast milk at all is in danger of becoming ill with diarrhoea, respiratory, ear, and other infections. Diarrhoea may become persistent.

He may get too little milk and may become malnourished, because he gets too few feeds, or because they are too dilute. He is more likely to suffer from vitamin A deficiency.

He is also more likely to develop allergic conditions such as eczema and possibly asthma. He may become intolerant of animal milk, so that the milk causes diarrhoea, rashes and other symptoms.

The risk of some chronic diseases in the child, such as diabetes, is also increased.

A baby receiving formula milk (no breast milk at all) is more likely to die from infections and malnutrition than a breastfed baby.

There are also disadvantages for the mother: A mother who does not breastfeed is more likely to become fertile again and can become pregnant more quickly. She is more likely to become anaemic after childbirth. She is more likely later on to develop cancer of the ovary and possibly of the breast.

Thus babies who receive no breast milk need special care.

Mothers and babies who DO NOT breastfeed need special care as they are at risk of ill health

DANGERS OF ARTIFICIAL FEEDING

■ Interferes with bonding

■ More diarrhoea and respiratory infections

■ Persistent diarrhoea

■ Malnutrition
Vitamin A deficiency

■ More likely to die



Mother

■ More allergy and milk intolerance

■ Increased risk of some chronic diseases

■ Overweight

■ Lower scores on intelligence tests

■ May become pregnant sooner

■ Increased risk of anaemia, ovarian and breast cancer

SESSION 23

How Milk is Produced and Released by the Breast

Time required: 30 minutes

Purpose

To familiarize participants with how breast milk is produced and released by the breast.

Objectives

At the end of this session MM's will understand how milk is produced and released.

Materials

None

Preparation

Study the notes for the session so that you understand the content of the session and are clear about what to do. Familiarise yourself with the words that will be used in this session and make sure that you understand their meaning. For the role play (activity 11) you will need to decide how to divide participants into groups of 4-5, and make sure that you understand what instructions they should receive.

Training methods

Using the content of this session as a guide, open a discussion which addresses each area outlined in this session. You may ask trainees what they know about a certain area before filling in the gaps and explaining the remainder of the information to them. This will involve them in the discussion and making the session more interactive. You, the facilitator, will need to use the pictures to illustrate the information in the text.

Go through the key message and the objectives above (5 mins).

Key message 9:

The more a baby suckles the more milk is produced. The baby and the feelings of the mother control milk production and release.

Activity 11: 25 mins

Tell participants:

In small groups of 4-5 put on a role play. One person should be the mother and the other person should be the Mentor Mother. The mother believes that she does not have enough milk. She feels like she should give her baby glucose water and weak porridge in a bottle. Her baby is 6 weeks old.

The Mentor Mother has been trained using this course. She needs to address the mothers concerns and encourage her to exclusively breastfeed.

The other 2 or 3 members of the group should observe the role play and provide constructive criticism about the way the Mentor Mother speaks to the mother: In particular check whether the Mentor Mother uses the listening and learning skills and confidence building skills: You may want to put on the role play a few times so that more than one person gets a chance to be the Mentor Mother.

Remember the listening and learning skills. They are listed below to remind you.

At the end of the role play suggest ways in which the Mentor Mother can improve the way she speaks to the mother. Remember there is no correct answer. This activity is about us helping each other to become better communicators with mothers.

LISTENING AND LEARNING SKILLS are listed below to remind participants:

- Helpful non-verbal communication:
- Keep your head level
- Use appropriate eye contact
- Pay attention
- Remove barriers (e.g. a table between you and the mother)
- Take time
- Touch appropriately

Ask open questions

Use responses and gestures, which show interest (e.g. nod, smile, say "Aha" or "Mmm")

Reflect back what the mother says

Empathise – show that you understand how she feels

Avoid judging words



Confidence Building skills

Remember key message 4:

A mother will only exclusively breastfeed if she has the confidence to do so and if she believes that this is the right thing to do.

It is also important that you build the mother's confidence and give her support when you counsel her.

Go through the CONFIDENCE BUILDING skills listed below discuss them in a group. Do they make sense? Are any important skills missing?

BUILD CONFIDENCE AND GIVE SUPPORT

- **Accept** what a mother thinks and feels
- **Recognise and praise** what a mother and baby are doing right
- Give **practical help**
- Give a little, **relevant** information
- Use **simple** language
- Make one or two **suggestions**, not commands

SESSION 24

Helping a Mother Position Herself before she puts the Baby to the Breast

Time required: 55 minutes

Purpose

The purpose of this session is to give participants the skills so that they can help a mother position herself before she puts the baby to the breast.

Objectives

At the end of this session MM's should be able to:

1. Help a mother position herself as she puts the baby to the breast.

Materials

1. MM manual

Preparation

Study the notes for the session so that you understand the content of the session and are clear about what to do

Training Methods

Go through the key message below, the objectives above and the introduction (10 mins).

Key message 10:

Good positioning ensures that the mother is comfortable. Only when a mother is comfortable will she be able to breastfeed her baby well.

24.1 Introduction

In this session you will learn how to help a mother position and attach her baby at the breast, so that he is well attached and can suckle effectively.

Always observe a mother breastfeeding before you try to help her position and attach her baby.

Take time to see what she does so that you can understand her situation clearly. Do not rush to make her do something.

Give help to a mother only if she has difficulties.

If the baby is suckling effectively and the mother is comfortable, there is no need to try changing the baby's position. Some mothers and babies are comfortable in positions that would make breastfeeding difficult. This is true with babies more than two months old.

Let the mother do as much as possible herself.

Be careful not to 'take over' from her.

Let mother understand what you do so that she can do it herself. Explain what you want to do.

If possible, demonstrate on your own body to show her what you mean.

Help mother to position her own baby. It does not help if you can get a baby to suckle if the mother will not be able to do it herself.

24.2 How to help a mother to position a baby (10 mins)

HOW TO HELP A MOTHER TO POSITION HER BABY

- Greet the mother and ask how breastfeeding is going.
- Assess a breastfeed.
- Explain what might help, and ask if she would like you to show her.
- Make sure that she is comfortable and relaxed.
- Sit down yourself in a comfortable, convenient position.
- Explain how to position her baby, and show her if necessary.
- The four key points of positioning are to hold the baby:
 - a. with his head and body straight; facing the mother's breast,
 - b. With his nose opposite her nipple;
 - c. with his body close to her body;
 - d. with his whole body supported, not just his neck and shoulders.

OFFERING THE BREAST TO THE BABY

- Show her how to support her breast:
 - a. with her fingers against her chest wall below her breast;
 - b. with her first finger supporting the breast;
 - c. with her thumb above.
- Her fingers should not be too near the nipple.
- Explain or show her how to help the baby to attach: touch her baby's lips with her nipple; wait until her baby's mouth is opening wide; move her baby quickly onto her breast, aiming his lower lip below the nipple.
- Notice how she responds and ask her how her baby's suckling feels.
- Look for signs of good attachment.
- If the attachment is not good, try again.

24.3 Different positions that can be used for breastfeeding (10 mins)

There are many different positions that the mother can use when breastfeeding. In any position, the important thing is for the baby to take enough breast tissue into his mouth so that he can suckle effectively.

Look at the pictures below so that you learn about some of these positions. Help the mother to hold her baby in the underarm position.

(a) A mother holding her baby in the **underarm position** (also called the Football hold)

(b) A mother holding her baby with the **arm opposite the breast**



(a)



(b)

Position a is useful:

- for twins;
- if she is having difficulty attaching her baby;
- to treat a blocked duct (see session on breast conditions);
- if mother prefers it.

Position b is useful:

- for very small babies;
- for sick and disabled babies;
- if mother prefers it.

(c) The lying down position

(c) : A mother breastfeeding baby lying down.



Position c is useful:

- when mother wants to sleep, take care not to suffocate the baby.
- soon after caesarian section, when lying on her back or side may help her to breastfeed her baby more comfortably.

Other positions include:

- Mother standing up;
- Mother lying on her front, propped on her elbows with the baby underneath her. This position is useful if a baby has difficulty attaching to the breast
- Mother lying on her back with the baby on top of her. This position is useful if she has an oversupply of milk, (and the baby gets too much milk too fast).

Activity 12: 15 mins

As a large group as participants to discuss the following:

Have you seen women breastfeeding using the football position? The opposite arm position? Lying down? Standing up? With the baby beneath her? With the baby on top of her? In each of these circumstances did the mother look comfortable?

What would the mother or mother-in-law say about these positions? About football position – is it acceptable? About the opposite arm position? About lying down position? About standing up position? About baby beneath mother position? About baby on top of mother position? Are all these positions acceptable? Are some more acceptable than others?

24.4 Common mistakes that arise when mothers position themselves to breastfeed (10 mins)

There are a few common mistakes that women make. These include:

- Holding the baby incorrectly:
 - o too high (for example sitting with knees too high), or
 - o too low (for example , with the baby unsupported, so mother has to lean forward) or
 - o too far to one side (for example, putting a small baby too far out in the 'crook' of the arm, instead of the forearm)

- Offering the breast incorrectly:
 - o holding the breast with fingers and thumb too close to the areola;
 - o pinching up the nipple or areola between your thumb and fingers, and trying to push the nipple into the baby's mouth;
 - o holding the breast in the 'scissors' or 'cigarette' hold.

- Holding the breast back from the baby's nose with a finger.
 - o This is not necessary, and can pull the nipple out of the baby's mouth. A baby can breathe quite well without the breast being held back.
 - o If the mother is worried that the baby is too close to the breast, she can push the baby's buttocks towards her to free the nose.