SESSION 6
HOW MILK GETS FROM BREAST TO BABY

Breastfeeding Promotion and Support

A Training Course for Health Professionals

Adapted from the Baby Friendly Hospital Initiative:
Revised, Updated and Expanded for Integrated Care (Section 3)
WHO/UNICEF 2009

Session Objectives:

At the end of this session, participants will be able to:

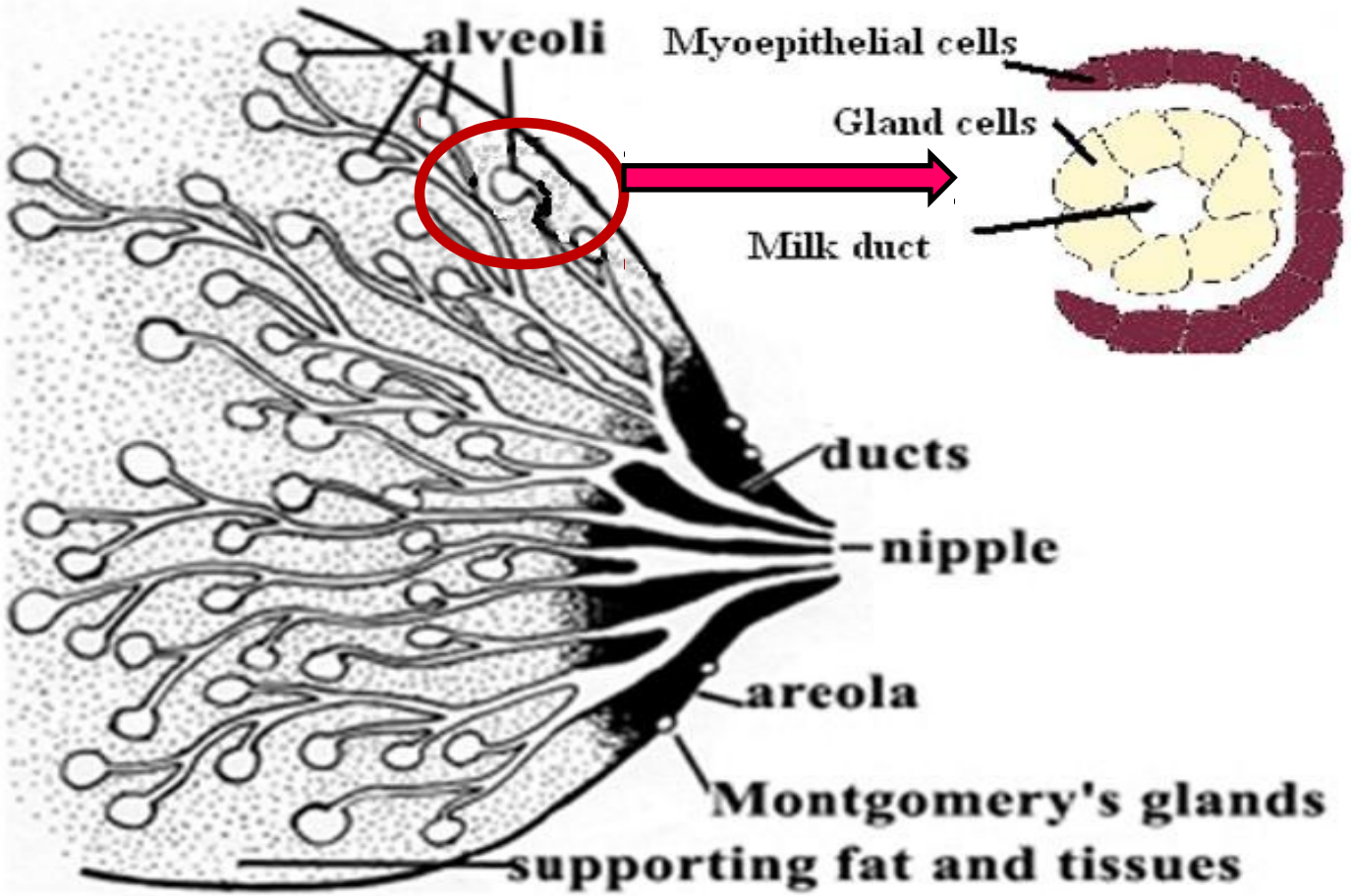
1. Identify the parts of the breast and describe the functions
2. Discuss how breast milk is produce and how production is regulated
3. Describe the baby's role in milk transfer

Introduction

- In normal breastfeeding, there are 2 elements necessary for getting milk from the breast to the baby :
  1. A ***breast*** that produces and releases milk
  2. A ***baby*** who is able to remove the milk from the breast with effective suckling

1. Parts of the Breast involved in Lactation

Breast Anatomy



Inside the Breast

- ***Fat and supporting tissue*** - give the breast its size and shape
- ***Nerves*** **-** transmit messages from the breast to the brain to trigger the release of lactation hormones
- ***Alveoli*** - produce milk
- **Milk ducts** - carry milk to the nipple.

2. Breast Milk Production and Regulation

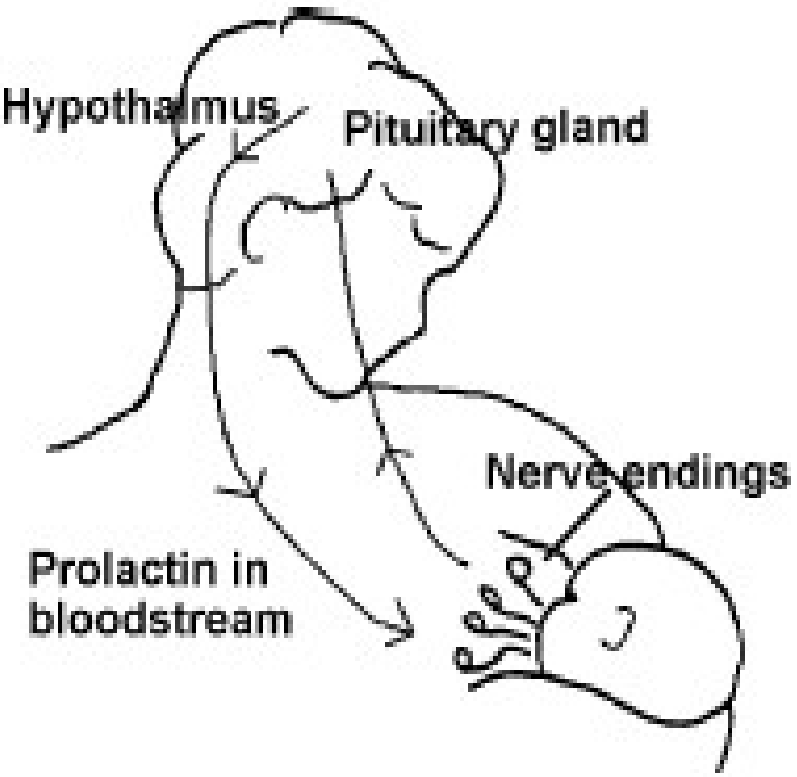
Milk Production

- 1st stages of milk production
  - Under control of hormones
- During pregnancy
  - Glandular tissue in breast makes colostrum
  - Pregnancy hormones prevent larger quantity of milk
- After delivery
  - Increased milk quantity in breast as hormones of pregnancy drop 30-40 hours after delivery
  - 2 hormones become important: Prolactin, Oxytocin

PROLACTIN

- Hormone that makes the alveoli produce milk.
- Works after a baby has taken a feed to make the milk for the next feed.
- can also make the mother feel sleepy and relaxed.
- Level is high in the first 2 hours after birth
- Highest level at night
  - breastfeeding at night allows for more prolactin secretion.

PROLACTIN RESPONSE



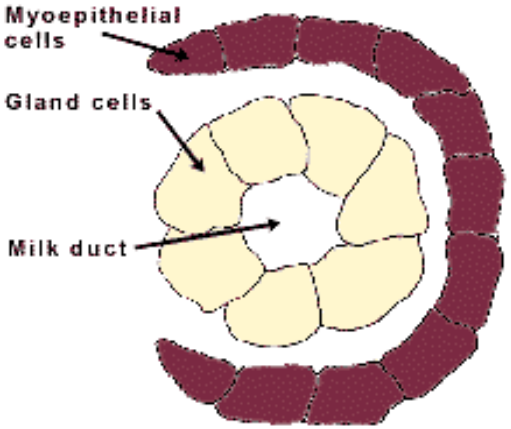
Milk Production.

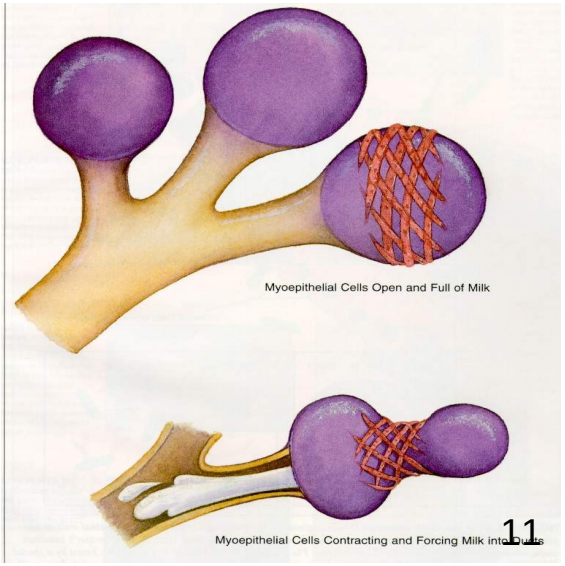
- **More Prolactin secreted at night**
- **Suppress ovulation**

OXYTOCIN

- causes the muscle cells around the alveoli to contract
  - and makes milk flow down the ducts.
  - This is essential to enable the baby to get the milk.

- This process is called the oxytocin reflex/ milk ejection reflex/ letdown.
  - It may happen several times during a feed.

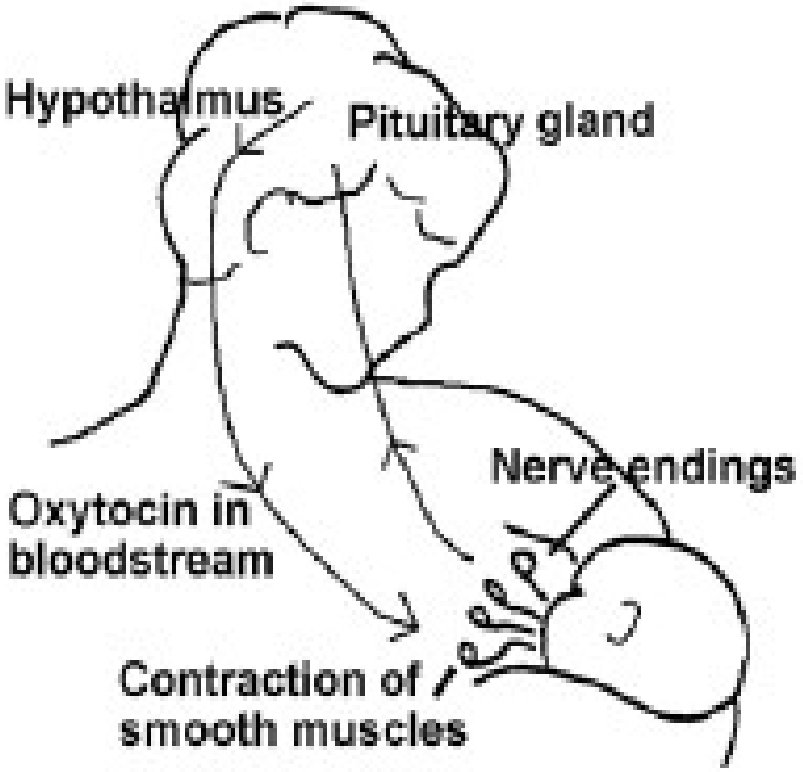




OXYTOCIN REFLEX

- **Works BEFORE or DURING feed to make milk flow**

- **May have certain signs of oxytocin reflex**



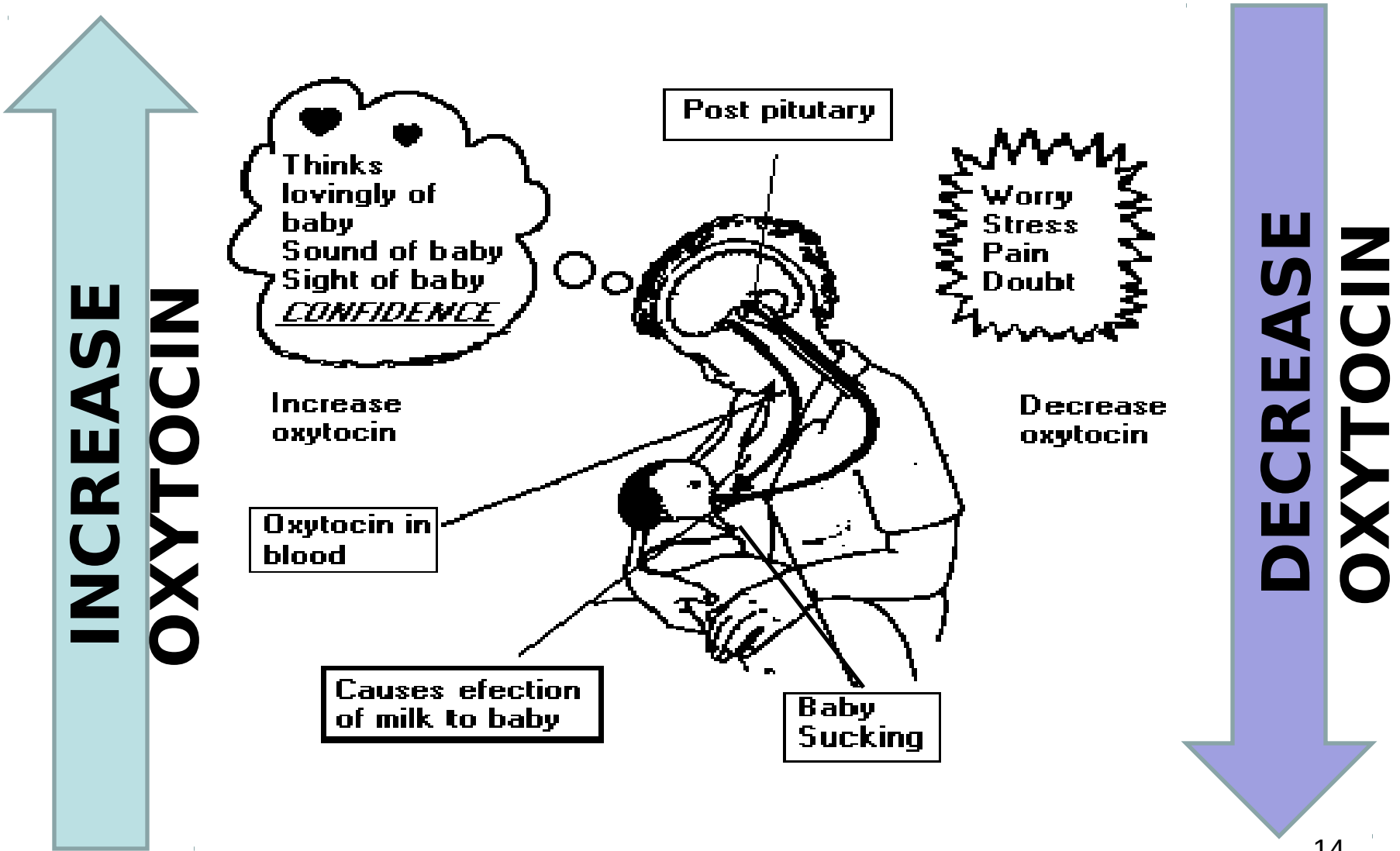
Milk Ejection Reflex.

Signs of Oxytocin Reflex

- Painful uterine contractions, sometimes with rush of blood
- Sudden thirst
- Milk spraying from breasts/ leaking from breasts
- Feeling squeezing sensation in breast

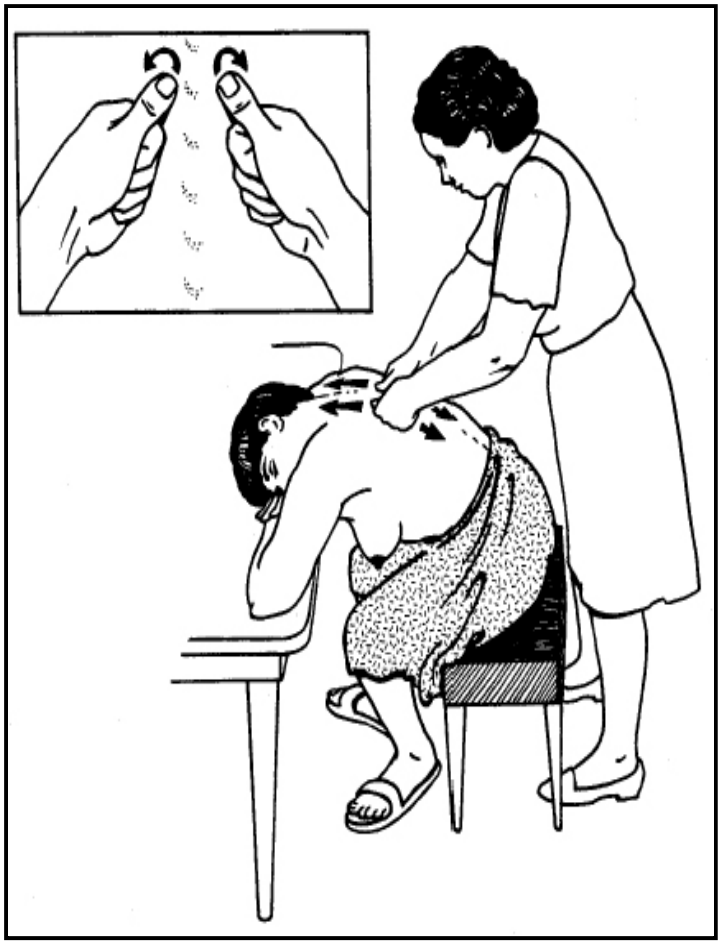
***** may NOT always feel physical sensation***

Oxytocin Reflex



How mother can assist Oxytocin to work

- Seeing, Hearing, Touching and Thinking lovingly about baby
- Feeling pleased about her baby and confident
- Relaxing and getting comfortable for feeds
- Expressing little milk and gently stimulating the nipple
- Keeping the baby near
- Massage upper back

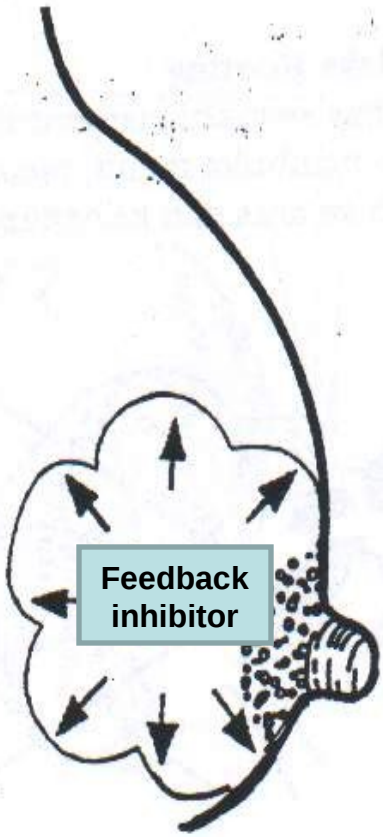


Feedback Inhibitor Of Lactation (FIL)

- Milk contains an **inhibitor that can reduce milk production.**
- The amount of milk that is produced depends on how much is removed.
  - If milk is not removed and the breast is full, this inhibitor decreases production of milk.
  - If milk is removed from the breast, then the inhibitor level falls and milk production increases.
- To ensure plentiful milk production, make sure that milk is removed from the breast efficiently.

How to prevent FIL from collecting and reducing milk production

- Make sure that the baby is well attached
- Encourage frequent breastfeeds
- Allow baby to feed for as long as she or he wants at each breast
- Let the baby finish the first breast before offering the second breast
- If baby does not suckle, express the milk



3. Baby’s Role in Milk transfer

Baby's Role

- Baby suckling controls:
  - Prolactin production
  - Oxytocin reflex
  - Removal of inhibitor within the breast

- For mother to produce milk for baby's needs
  - Baby must suckle often
  - Must suckle in the right way

Good Attachment

- Nipple and areola are stretched out to form a long “teat” in the baby’s mouth.
- The large ducts that lie beneath the areola are inside the baby’s mouth.
- The baby’s tongue reaches forward over the lower gum.
- When a baby takes the breast into his or her mouth in this way, the baby is well attached and can easily get the milk.
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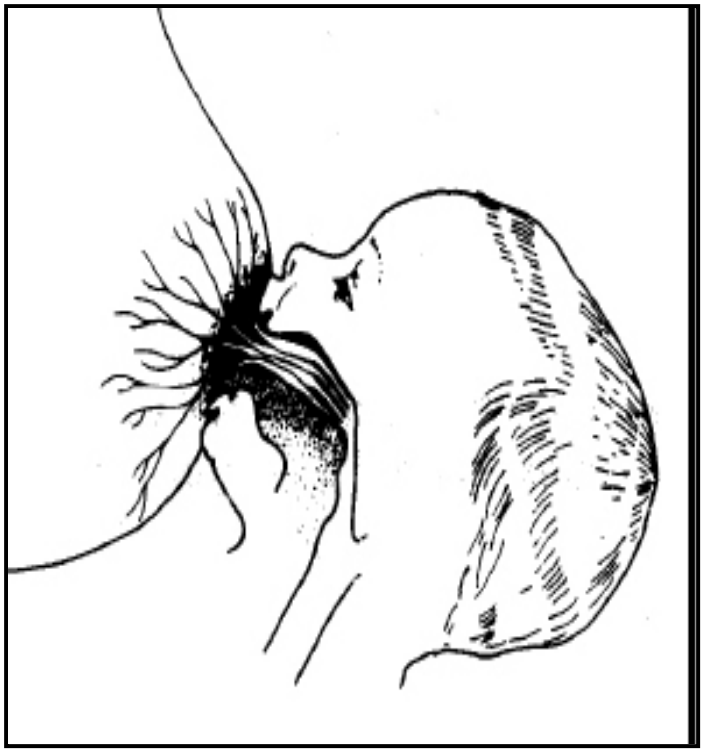
- *Internal view*



Poor Attachment

- Nipple and areola are not stretched out to form a long “teat” in the baby’s mouth.
- The milk ducts **are not** inside the baby’s mouth.
- baby’s tongue is back inside the mouth, cannot press out the milk
- **sucking only on the nipple**,
  - cannot suckle effectively or get the milk easily.

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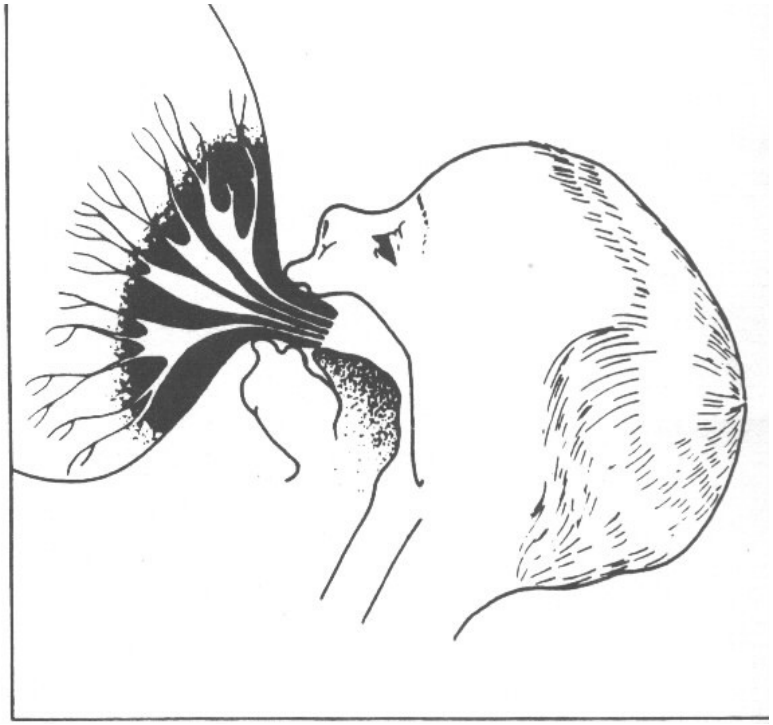
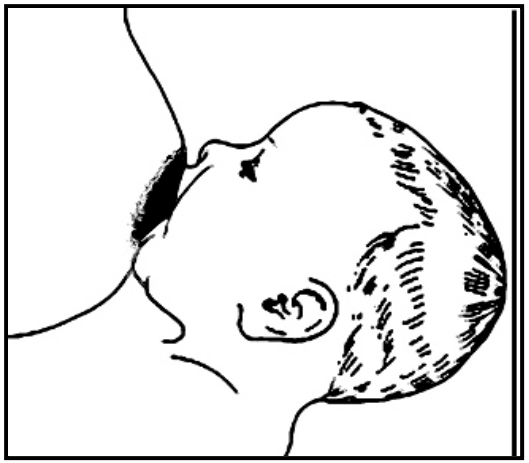
- *Internal view*



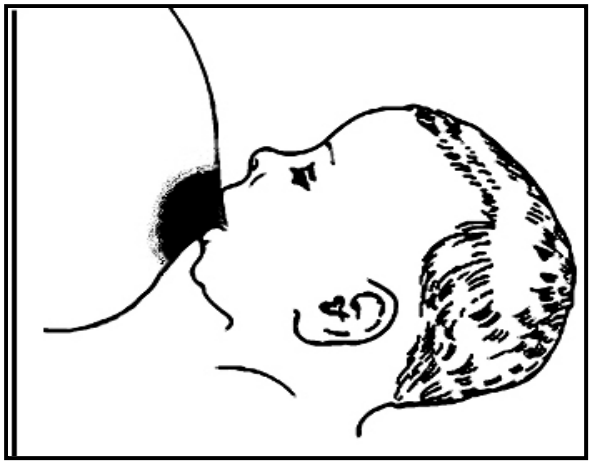
How to decide:
if baby is well/poorly attached

Good Attachment



- Baby's mouth wide open
- The lower lip is turned out
- chin is touching the breast (or nearly so).
- More areola is visible above the baby's mouth than below.

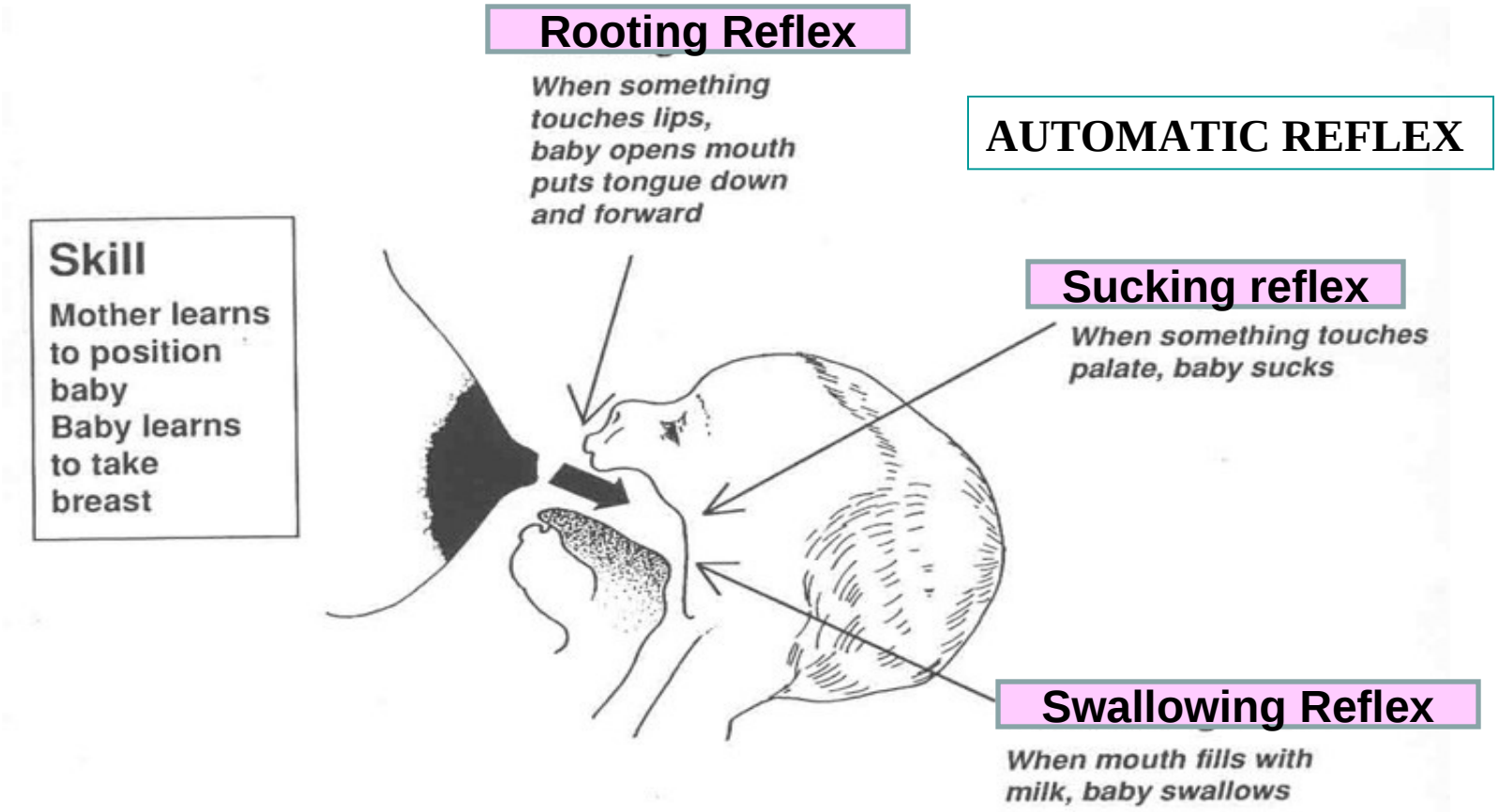
Poor attachment



- Mouth not wide open
- The lower lip is pointing forward.
- The chin is away from the breast.
- More areola is visible below the baby's mouth (or equal amount above and below)

Action of Suckling

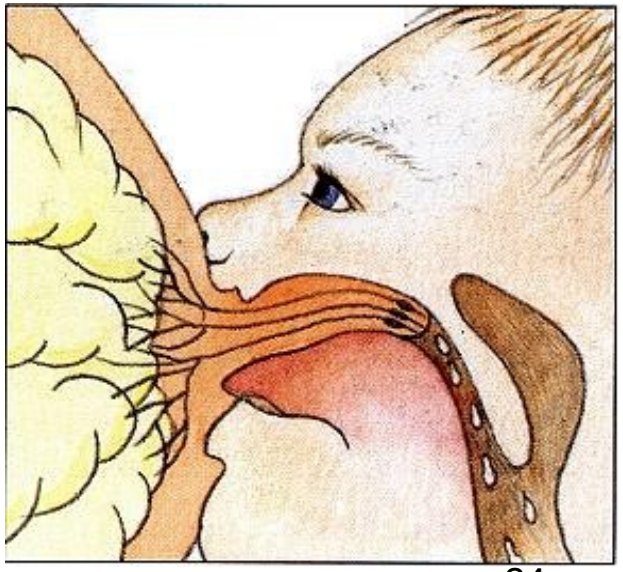
- There are 3 reflexes involved in suckling



Action of Suckling

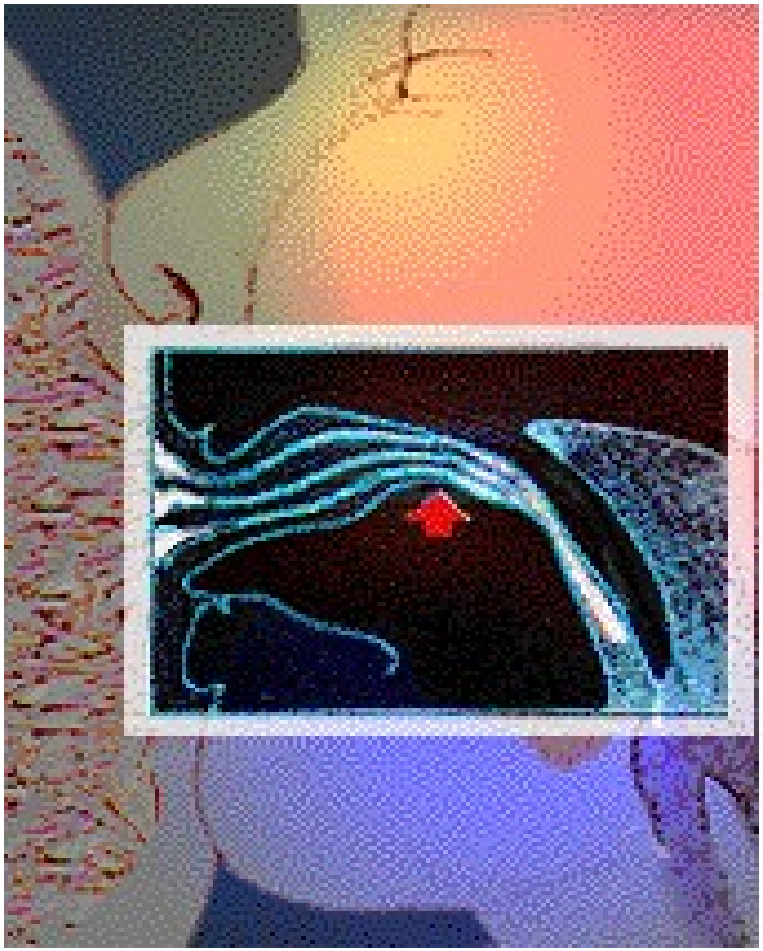
- When breast touches the baby's lips (or the baby smells the milk)
  - The baby put their head back slightly
  - opens their mouth wide
  - puts their tongue down and forward, to seek the breast. **(rooting reflex)**
- **When** baby close enough to the breast
  - takes a large enough mouthful
  - can bring the nipple back 3X normal touches the soft palate

    (sucking reflex)



Action of Suckling

- Muscles then move the tongue in a wave from the front to the back of the mouth, expressing the milk from the ducts beneath the areola into the baby's mouth.
- The baby swallows when the back of the mouth fills with milk **(swallowing reflex).**



Signs that a Baby is Suckling Effectively

- The baby takes **slow, deep sucks,** sometimes pausing for a short time
- You can see or hear the baby **swallowing**
- The baby's **cheeks are full** and not drawn inward during a feed
- The baby finishes the feed and **releases the breast by himself or herself** and looks contented

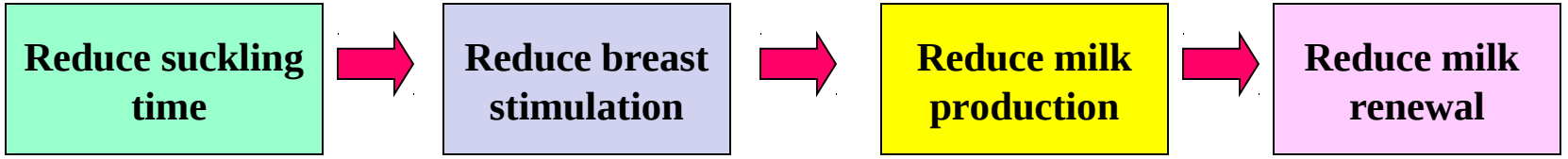
Signs that a Baby is NOT Suckling Effectively

- Makes rapid sucks
- makes smacking or clicking sounds
- cheeks drawn in
- fusses or appears unsettled at the breast
- comes on and off the breast.feeds very frequently
- feeds for a very long time - for more than an hour at EVERY feed (unless low birth weight)
- is not contented at the end of a feed

Artificial Teats and Suckling Difficulties

- Artificial teats and pacifiers may cause difficulties for the breastfeeding baby
  - difficulty suckling at the breast because of different mouth action
  - baby may prefer the artificial teat and find it difficult to breastfeed

- Artificial teats may…



What are the main ways to ensure a good milk supply?

Signs that a Baby is NOT Suckling Effectively

- Help the baby to breastfed soon after birth
- Make sure the baby is well attached at the breast
- No artificial dummies or teats
- Breastfeed exclusively
- Feed the baby as frequently as he or she wants, for as long as he or she wants at a feed.
- Feed the baby at night

Summary

1. Size and shape of the breasts are not related to ability to breastfeed.
2. Prolactin and Oxytocin are 2 important hormones in breast feeding.
3. Baby need to remove milk effectively from the breast to ensure continued and increase production.

THANK YOU