



# Lactational Amenorrhea Method

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## Objectives of presentation

- Define Lactational Amenorrhea Method (LAM)
- Understand the mechanism of action of LAM
- Know the efficacy of LAM
- Know and describe the 3 criteria for LAM
- Know the indication and contraindications for LAM
- Know the focus and timing of counselling for LAM
- List the advantages, disadvantages and health benefits of LAM
- Know the elements of programming necessary for the provision of quality LAM services



## Introduction

Breastfeeding delays the return of a woman's fertility in the first few months following childbirth. Women who breastfeed are less likely to ovulate in this period.

When compared with women who breastfeed partially or who do not breastfeed at all, women who breastfeed more intensively are less likely to have a normal ovulation before their first menstrual bleed postpartum (Berens et al., 2015).

In a consensus meeting in Bellagio, Italy in 1998, scientists proposed that women who breastfeed fully or nearly fully while they remain amenorrhoeic in the first 6 months postpartum experience up to 98% protection from pregnancy. This formed the basis for the Lactational Amenorrhea Method and has since then been tested and confirmed by other studies (Berens et al., 2015; Van der Wijden et al., 2003; WHO, 1999).



## Definition

The Lactational Amenorrhea Method (LAM) is a modern and temporary contraceptive method that is based on the natural infertility that results from breastfeeding.

**Lactational-** related to breastfeeding.

**Amenorrhea-** no monthly bleeding (ACCESS-FP, 2008; WHO and CCP, 2011).



## Mechanism of action of LAM

LAM works primarily by preventing ovulation.

Frequent breastfeeding temporarily prevents the release of the natural hormones that cause ovulation. It disrupts the GnRH (gonadotropin releasing hormone) rhythm to suppress the hypothalamic–pituitary–ovarian axis. This results in a reduction of the LH (luteinizing hormone) produced and anovulation (Black et al., 2015; WHO and CCP, 2011).

Ovulation can occur during LAM in the first 6 months postpartum, but it usually lacks the normal characteristics. Only 60% of ovulations occurring before the first menses have an adequate luteal phase to support conception (Berens et al., 2015).

Berens P, Labbok M, The Academy of Breastfeeding Medicine. ABM Clinical Protocol #13: Contraception During Breastfeeding, Revised 2015. Breastfeeding Medicine. 2015 Feb;10(1):3-12.

Black A, Guilbert E, Co-Authors, Costescu D, Dunn S, Fisher W, Kives S, Mirosh M, Norman WV, Pymar H, Reid R, Roy G, Varto H, Waddington A, Wagner M-S, Whelan AM, Special Contributors, Ferguson C, Fortin C, Kielly M, Mansouri S, Todd N. SOGC Clinical Practice Guideline- Canadian Contraception Consensus (Part 2 of 4). J Obstet Gynaecol Can. 2015 Nov;37(11):1033-9.

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## Criteria for LAM

The return of fertility postpartum can be predicted by 3 criteria, known as the criteria for LAM. The criteria are:

1. Lactation- the baby is fully or nearly fully breastfed frequently, day and night;
2. Amenorrhea- the woman's menstrual bleeding has not resumed; and
3. The age of the infant in months- the infant's age should be below six months (LINKAGES, 2004; Berens et al., 2015; WHO, 2015).

### **Important!**

Postpartum women who wish to use LAM must meet **ALL** of these criteria. Women who are using LAM should regularly review the LAM criteria. They should be informed about alternative contraceptive methods before their infants attain the age of 6 months or when LAM criteria are no longer applicable (LINKAGES, 2004; Berens et al., 2015).

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LINKAGES. LAM (Lactational Amenorrhea Method): A Modern Postpartum Contraceptive Method for Women who Breastfeed Training Module for Health and Family Planning Service Providers. Washington, DC: The LINKAGES Project Academy for Educational Development. 2004.

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# Criteria for LAM

## 1. Lactation

The pattern and intensity of breastfeeding affect the return to fertility (ACCESS-FP, 2008).

Women using LAM should fully or nearly fully breastfeed their infants frequently day and night and on demand (LINKAGES, 2004).

A fully breastfed infant is exclusively breastfed (receives no other liquid or food, including water, in addition to breastmilk) or is almost-exclusively breastfed (receives vitamins, water, juice, or other nutrients once in a while in addition to breast milk) (WHO and CCP, 2011).

A nearly fully breastfed infant receives some liquid or food in addition to breast milk, but most of the feeds (>3/4 of all feeds) are breast milk (WHO and CCP, 2011).

ACCESS-FP. The Lactational Amenorrhea Method (LAM): A Postpartum Contraceptive Choice for Women who Breastfeed. ACCESS-FP Program; 2008.

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# Criteria for LAM

## 1. Lactation cont'd.

### Ideal feeding patterns:

- Start breastfeeding immediately (within the first hour) or as soon as possible after childbirth.
- Exclusive breastfeeding is preferable
- Breastfeeding should ideally be “on demand”, that is, whenever the baby wants to be fed and at least 10 to 12 times a day in the first few weeks after childbirth and thereafter 8 to 10 times a day, including at least one feed at night in the first months.
- Daytime feedings should not be more than 4 hours apart, and night-time feedings should not be more than 6 hours apart.
- Mothers should gently encourage their babies who do not want to breastfeed up to the required day or night time frequency to do so more often.
- Supplementary foods or fluids given in addition to breastfeeding should not interfere with the frequency of breastfeeds. Ideally, they should not be given more than once or twice a week (Berens et al., 2015; LINKAGES, 2004; WHO and CCP, 2011).

Berens P, Labbok M, The Academy of Breastfeeding Medicine. ABM Clinical Protocol #13: Contraception During Breastfeeding, Revised 2015. Breastfeeding Medicine. 2015 Feb;10(1):3-12.

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# Criteria for LAM

## 2. Amenorrhea

Menstrual bleeding is regarded as any bleeding after 2 months postpartum. It excludes lochia in the first 2 months postpartum (ACCESS-FP, 2008).

The resumption of menstruation is marked by at least 2 days of consecutive bleeding or any bleeding occurring after 56 days postpartum and perceived by the woman as a return of her menstrual bleeding (Berens et al., 2015; LINKAGES, 2004).

It is highly probably that ovulation has resumed once the woman starts to menstruate after childbirth (LINKAGES, 2004)



## Criteria for LAM

### 3. Infant's age

For LAM to be effective, the baby must be less than 6 months old. This is because complementary feeding usually begins at 6 months. The introduction of complementary feeds can reduce the frequency of breastfeeding which then activates the hormonal mechanism that subsequently leads to the resumption of ovulation and menses (LINKAGES, 2004).

The chances of a woman having her ovulation before menses is higher after 6 months, increasing the probability of pregnancy (Pallone and Bergus, 2009).



## Effectiveness of LAM

LAM is highly effective as long as the 3 criteria for LAM are met.

When LAM is used correctly, less than 1 pregnancy per 100 women occur in the first 6 months after childbirth (WHO and CCP, 2011).

With common usage, the average 6 months pregnancy rate for women using LAM is 2%, that is, 2 pregnancies per 100 women.

Among working women, the average 6 months pregnancy rate increases to 5% even if they express their breastmilk 4 hourly. The suckling of the infant may play a significant part in the contraceptive effect of LAM. (Pallone and Bergus, 2009; WHO and CCP, 2011).

The effectiveness of LAM among women who give supplementary feedings daily or express milk (by hand or pump) rather than breastfeed is not well established and requires further research (Berens et al., 2015).



## Indications for LAM

- Need to avoid use of other contraceptive devices or drugs during the postpartum period
- Inability to afford other contraceptive methods
- Desire for a temporary method of contraception in the postpartum period
- Lack of ready access to other family planning methods
- Lack of interest in other methods
- Cultural or religious norms



## Contraindications for LAM

Absolute contraindication of LAM is rare. LAM cannot be used in the following conditions:

- When any of the 3 criteria for LAM is not met.
- Difficulties with breastfeeding that cannot be overcome with regular pumping.
- Medical conditions for which another pregnancy or a short interval between pregnancies is an unacceptable health risk for the woman, and thus a more effective method would be advisable.
- Contraindications to breastfeeding: maternal HIV (in resource rich settings with low infant and child mortality rates), untreated active tuberculosis, use of drugs contraindicated with breastfeeding (antimetabolites, bromocriptine, certain anticoagulants, corticosteroids in high doses, ciclosporin, ergotamine, lithium, mood-altering drugs, radioactive drugs and reserpine), and maternal drug abuse.
- Infant conditions that make it difficult to breastfeed: small-for-date or prematurity; intensive neonatal care; abnormalities of digestion; some metabolic disorders; deformities of the mouth, jaw, or palate. (Black et al., 2015, WHO and CCP, 2011).



## When to start LAM

LAM can be started at any time if:

- It is within 6 months after childbirth
- The woman has been fully or nearly fully breastfeeding her baby since birth
- The woman's monthly bleeding has not returned



## Counselling for LAM

Timing of counselling is essential. In general, women should be encouraged to report any concern they may have regarding their use of LAM to providers at any time.

Follow-up visits should be planned to counsel women:

1. During antenatal period,
2. During the immediate postpartum period, and
3. At the time of transition when the woman no longer satisfies all three LAM criteria or she wishes to transition to another family planning method. Counselling at this stage facilitates transition to another modern contraceptive method. (ACCESS-FP, 2008; WHO and CCP, 2011).



## Counselling for LAM

The following should be emphasized during counselling:

### **In the immediate postpartum period:**

- Find out if breastfeeding is well established.
- Discuss the importance of exclusive breastfeeding for six months.

### **At the time of transition to other modern contraceptive methods:**

- Counsel and provide appropriate family planning methods based on fertility intentions.
- Assist women to choose a new method **before** they need it.
- Reinforce the importance of exclusive breastfeeding for the first six months and continued breastfeeding for two years or more.
- Educate women on infant feeding when the baby is 6 months old. Breastmilk can no longer meet the full nutrition needs of the growing baby at this age (ACCESS-FP, 2008; WHO and CCP, 2011).





## Transition from LAM to other modern contraceptive methods

The **timely** transition from LAM to other family planning methods is critical to effective programming for LAM. Providers should ensure that all women using LAM can reach their reproductive goals for spacing or limiting.

Women should have a good understanding of each of the LAM criteria. This facilitates transition from LAM to other modern methods at six months (ACCESS-FP, 2008).

As long as the 3 LAM criteria are met, women can switch to a new method at any time, with no need for a pregnancy test, examinations, or evaluation (WHO and CCP, 2011).

Women **must** transition to other methods **without delay** when any of the 3 LAM criteria is no longer met or when they wish to switch to another appropriate contraceptive method of choice (LINKAGES, 2004; Pallone and Bergus, 2009).

Providers should counsel women to continue breastfeeding after switching to another method (ACCESS-FP, 2008).

ACCESS-FP. The Lactational Amenorrhea Method (LAM): A Postpartum Contraceptive Choice for Women who Breastfeed. ACCESS-FP Program; 2008.

LINKAGES. LAM (Lactational Amenorrhea Method): A Modern Postpartum Contraceptive Method for Women who Breastfeed Training Module for Health and Family Planning Service Providers. Washington, DC: The LINKAGES Project Academy for Educational Development. 2004.

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## Health benefits of LAM

### Maternal

- No documented negative effect on maternal health (WHO, 2015)
- Suckling stimulates uterine contractions in the immediate postpartum period
- Reduces loss of iron since there is no menstrual bleed
- Enhances mother–baby relationship (ACCESS-FP, 2008).

### Infant

- Provides the complete nutritional needs of the infant in the first 6 months
- Improves infant growth and development
- Boosts the infant’s immune system (fewer episodes of diarrhoea and acute respiratory infections)
- Source of Vitamin A, proteins, iron, minerals and essential fatty acids (ACCESS-FP, 2008).



## Advantages of LAM

- Natural family planning method
- No side effects
- Effectiveness rates of more than 98% is comparable with other user-directed methods of birth control (i.e., pills or barriers)
- Acceptable and easy to learn
- Simple to use and readily accessible
- Breastmilk is cheaper than formula milk and does not run out
- Provides family planning and infant feeding at no direct cost
- The woman provides and controls the use of the method
- Can be initiated in the immediate postpartum period, thus preventing pregnancy in the immediate and critical six months after birth (ACCESS-FP, 2008; Berens et al., 2015; WHO and CCP, 2011).



## Advantages of LAM cont'd.

- Supports and reinforces newborn and infant feeding recommendations for exclusive breastfeeding in the first six months of life
- Can serve as an introductory method to other contraceptive methods
- Encourages the use of modern contraceptive methods by previous non-users (up to 60-80% of women who use LAM ultimately transition to another modern method of family planning)
- Provides a smooth transition to another modern contraceptive by giving women time for decision making
- Builds on established cultural and religious practices
- Non-invasive as no gynecological examination is required
- No effect on breastmilk production (ACCESS-FP, 2008; Berens et al., 2015; WHO and CCP, 2011).



## Disadvantages of LAM

- Cultural factors
- Work related constraints
- Requires effective counselling and adequate knowledge about LAM criteria- women need to be well educated about signs of returning fertility
- Does not offer protection against sexually transmitted diseases (STIs) and HIV. (ACCESS-FP, 2008; Pallone and Bergus, 2009).

### **Important!**

Correct and consistent use of condoms should be advised in situations where there is a risk of STI/HIV (WHO, 2015).



## Use of LAM among working women

Women who work away from home can use LAM if they meet all 3 criteria for LAM and:

- their infants are with them or close by and they are able to breastfeed frequently;
- they are separated from their infants but are able to breastfeed at least 4 hourly; and
- they are separated from their infants but can express their breastmilk not less than every 4 hours.

Working women using LAM should be informed that they have a slightly higher pregnancy rate during the first 6 months postpartum (5 per 100 women) compared to women who use LAM typically (2 per 100 women).



## Use of LAM among women with HIV

There is a risk that women who are infected with HIV can transmit the virus to their infants through breastfeeding. However, provision of ARV therapy to the HIV-infected mother or her HIV-exposed infant can greatly reduce the risk of HIV transmission through breastfeeding.

Women who are infected with HIV or who have AIDS can use LAM.

HIV infected women who are using LAM should:

- be given the appropriate ARV intervention,
- breastfeed their infants exclusively for the first 6 months of live,
- introduce complementary foods as appropriate at 6 months while continuing breastfeeding for the first 12 months of life or for up to 24 months or longer,
- be encouraged to use condoms to prevent transmission of HIV and other STIs, and
- shift to a new method at 6 months or earlier (if she no longer meets the 3 LAM criteria) and continue to use condoms. (WHO, 2011; WHO, 2016a; WHO, 2017).

It may be more appropriate for women with HIV to avoid breastfeeding in certain resource rich countries where the infant and child survival rate is very high. Strategies that offer HIV exposed infants the best chance of HIV- free survival should be adopted (WHO, 2011; WHO, 2016b).



## Problems with breastfeeding

Problems with breastfeeding may affect the use of LAM. Common problems include:

- inadequate supply of milk for the baby
- sore breasts
- sore or cracked nipples

### What to do?

- Listen to the concerns of the women
- Provide reassurance and advice
- Treat, if necessary
- Offer and assist women to choose another method as desired, without delay or later or if the problem persists.





## Key programmatic elements for quality LAM services

- Provide counselling on the criteria for effective LAM use.
- Educate women about return to fertility.
- Discuss reproductive goals or fertility intentions for child spacing or limiting.
- Provide counselling about appropriate contraceptive methods.
- Assist women to transit from LAM to other contraceptive methods through provision of or linkage to family planning services.
- Encourage and support mothers to exclusively breastfeed their infants for the first six months.
- Include LAM in MNCH (Maternal, Newborn and Child Health) and FP (Family Planning) / RH (Reproductive Health) services.



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