



# Natural Contraceptive Methods

Kirsten M. Vogelsong, PhD

UNDP/UNFPA/WHO/World Bank  
Special Programme of Research  
Development and Research Training  
in Human Reproduction  
Training Course in Reproductive Health Research  
Geneva 2006



# Advantages of Natural Methods

- Knowledge of fertility
- Self-reliance
- Independence from medical services
- Freedom from drugs and devices
- Freedom from side-effects and risks
- Reduced or no costs
- Communication and intimacy with partner
- In line with religious and/or cultural norms



# Disadvantages of Natural Methods

- No protection from STIs/HIV (except abstinence)
- Requires training by qualified instructor
- Unforgiving of incorrect use
- Requires consent, co-operation of partner
- Less effective for women with irregular cycles
- Requires regular monitoring and recording



# Fertility Awareness

## *What is it?*

- Understanding basic information about fertility and reproduction
- Identifying signs and symptoms of fertility during the woman's fertile cycle
- Applying this information, discussing it with a partner and health providers



# Fertility Awareness

## *Why is it important?*

- Fundamental to understanding and making informed decisions about family planning choices and reproductive health
- Fundamental to understanding and using natural family planning, whether to avoid or plan a pregnancy
- Helps women and couples value and protect their fertility and reproductive health



# Natural Regulation of Fertility

- **Abstinence**
- **Withdrawal**
- **Periodic Abstinence/Rhythm**
- **Lactational Amenorrhea**



# Distribution of Contraceptive Use Prevalence

## World wide contraceptive use (Married Women of Reproductive age)

Contraceptive	No. of users (Millions)	Users (%)	First year failure rate (%) - Typical use
Total users	648	61.9	
Female sterilization	210	20.1	0.5
IUD	156	14.9	0.8
Oral contraceptives	82	7.8	5.0
Condom	53	5.1	14.0
Male sterilization	43	4.1	0.15
Injectables	27	2.6	0.3
Vaginal barriers	4.2	0.4	20.0
Withdrawal	32	3.1	19.0
Rhythm	27	2.6	25.0
Lactational Amenorrhea			0.2

UN Population Division, 2001



# Abstinence

- Refrain from all penetrative sexual activity
- Effective in preventing pregnancy and STIs/HIV
- Effective programs can be targeted to young people and unmarried adults in order to delay first sex and reduce the number of partners





# Withdrawal

- Has been in use for centuries
- Only male-initiated natural method
- Failure rates 4-17% (perfect-typical use)
- Prevalent and effective in several countries
- Reasons for use:
  - concerns about side-effects of other methods
  - partner preference
  - no cost



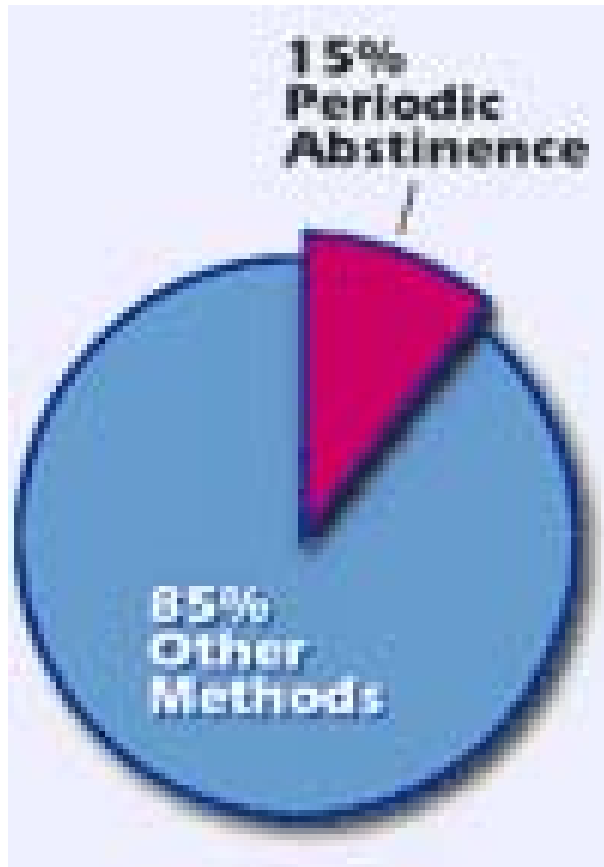
# Periodic Abstinence

**Periodic Abstinence refers to a variety of methods used to prevent pregnancy**

- Based on identifying the woman's fertile days
- Abstinence OR avoiding unprotected sex during the fertile days prevents pregnancy



# Use of Periodic Abstinence



- Of married women world wide using some form of family planning, approximately 15% claim to be using a form of periodic abstinence.



# Periodic abstinence

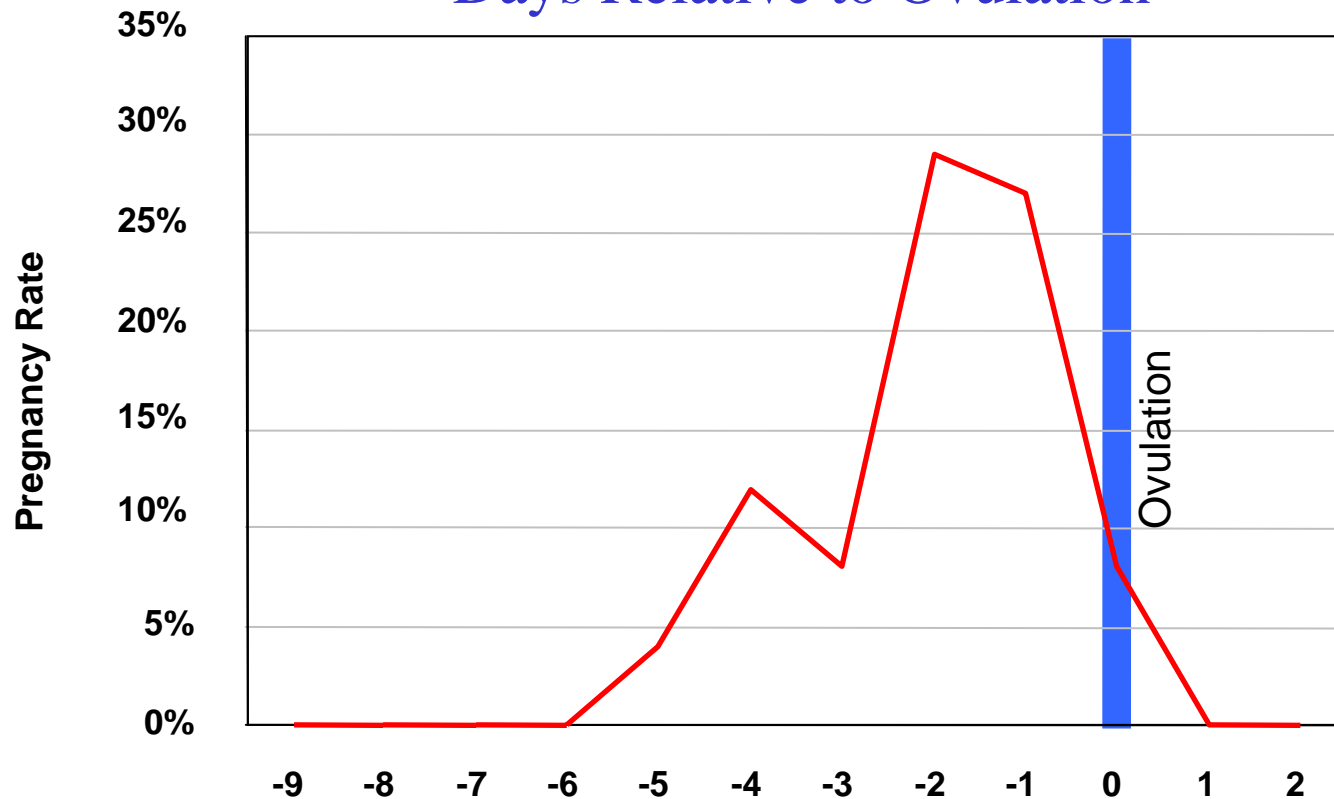
## Use is based on assumptions

- The oocyte (egg) lives for 1 day in the female reproductive tract
- The sperm can live for 4-5 days in the female reproductive tract
- ovulation occurs about 14 days before the next menses



# Periodic Abstinence

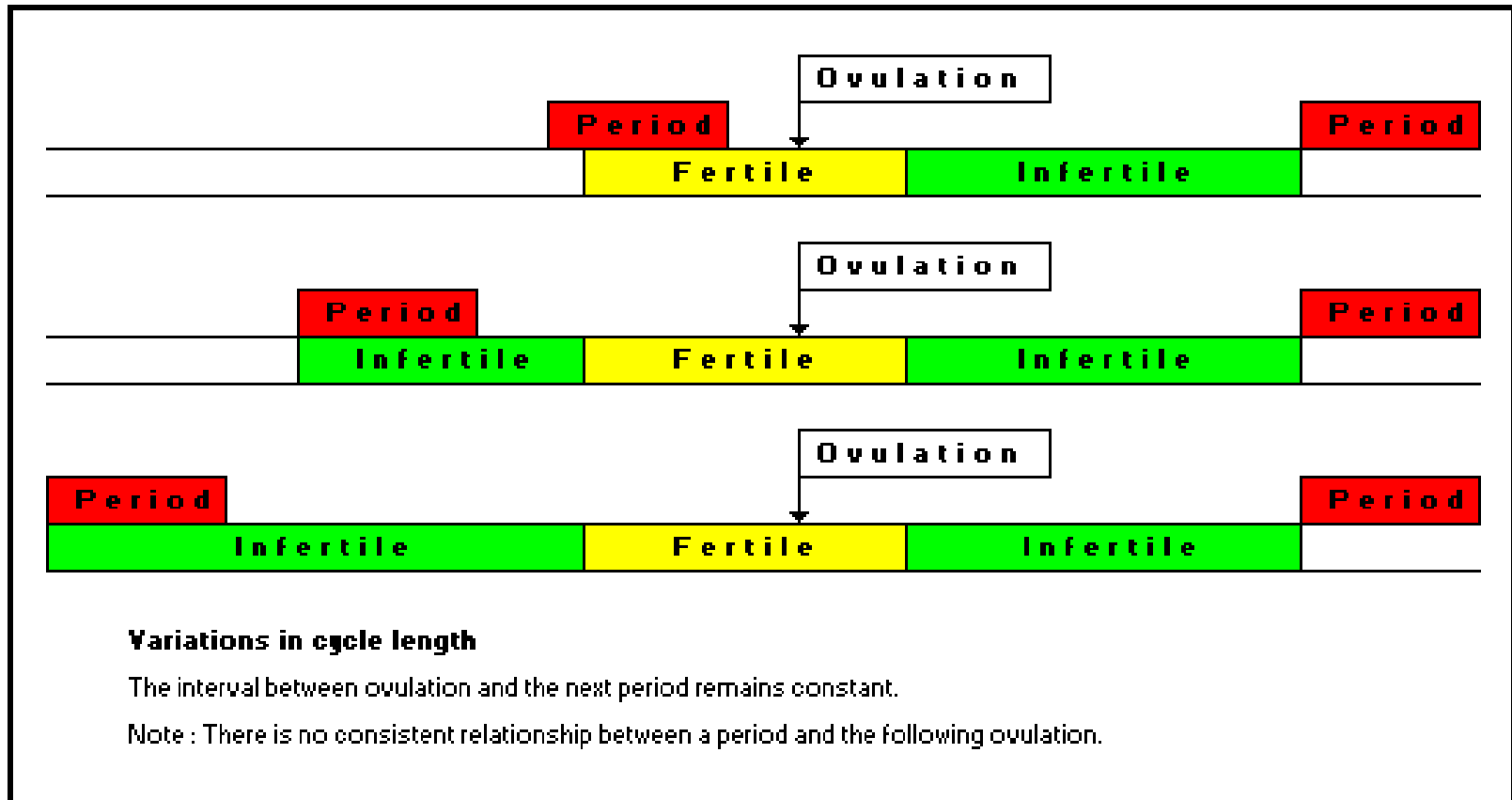
Probability of Pregnancy from Intercourse on Days Relative to Ovulation



Source: Wilcox et al. (1998)

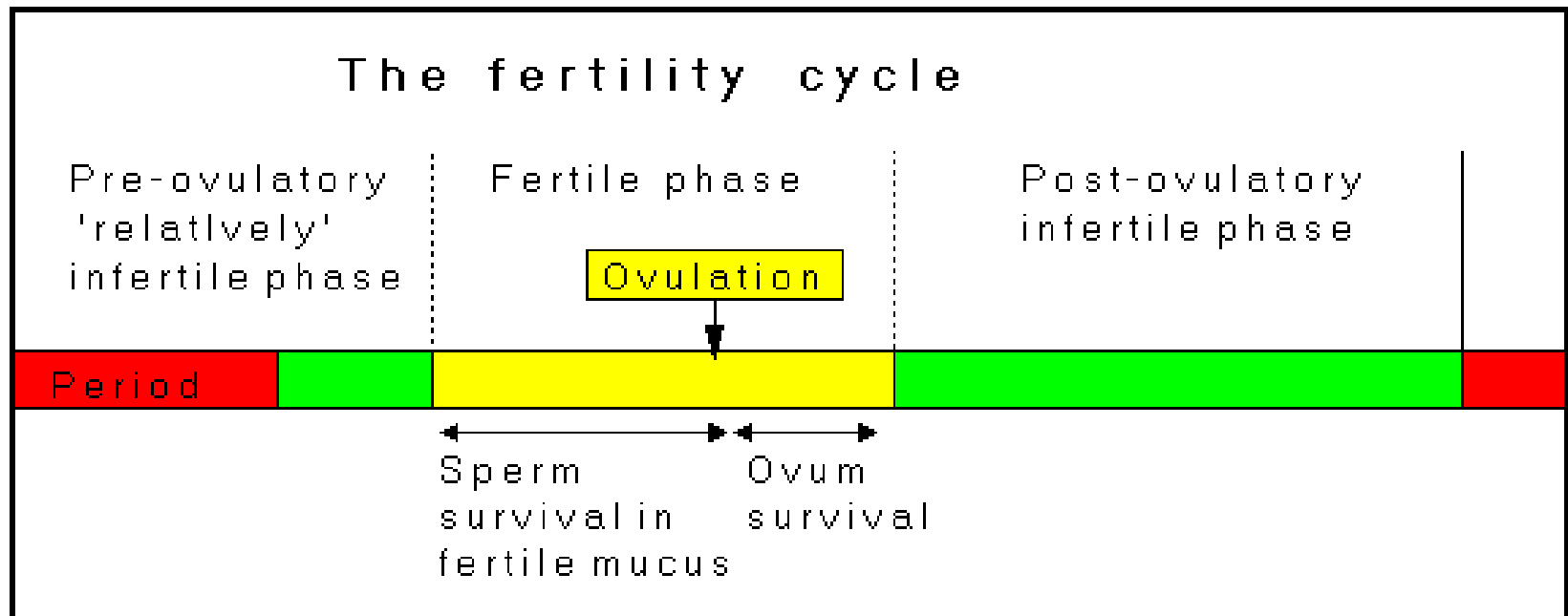


# Periodic Abstinence





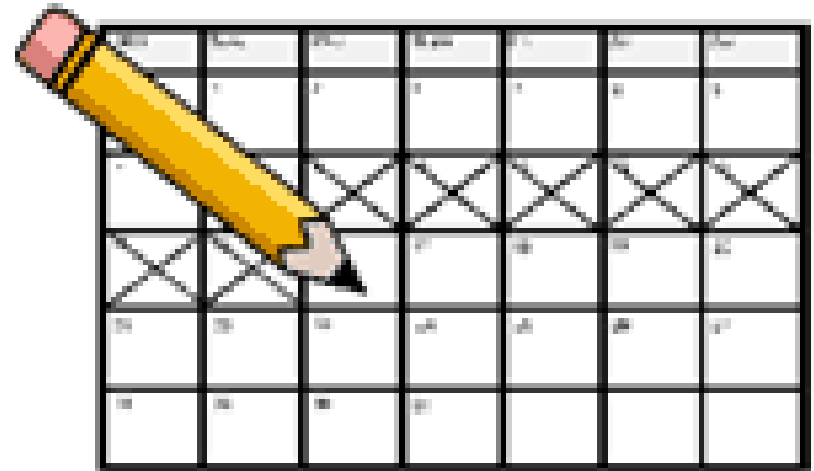
# Periodic Abstinence





# Periodic Abstinence Calendar Methods

- Uses calculations to determine the fertile period of each cycle
- A variety of calculations are used.
- Efficacy ranges between 85-91% in the first year of use







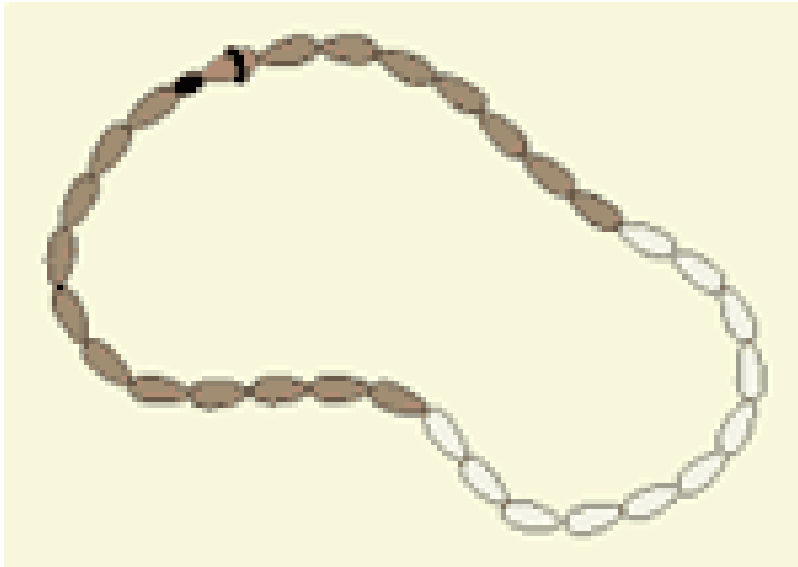
# Periodic Abstinence Calendar Methods

## EXAMPLE

- Client #1's last 6 cycles ranged in length from 27 to 30 days
- She is taught the 11-18 rule: she will subtract 18 from the number of days in her shortest cycle ( $27-18=9$ ) and 11 from the number of days in her longest cycle ( $30-11=19$ ).
- Her fertile period is determined to be between days 9 and 19 of her next cycle.



# Periodic Abstinence Standard Days Method

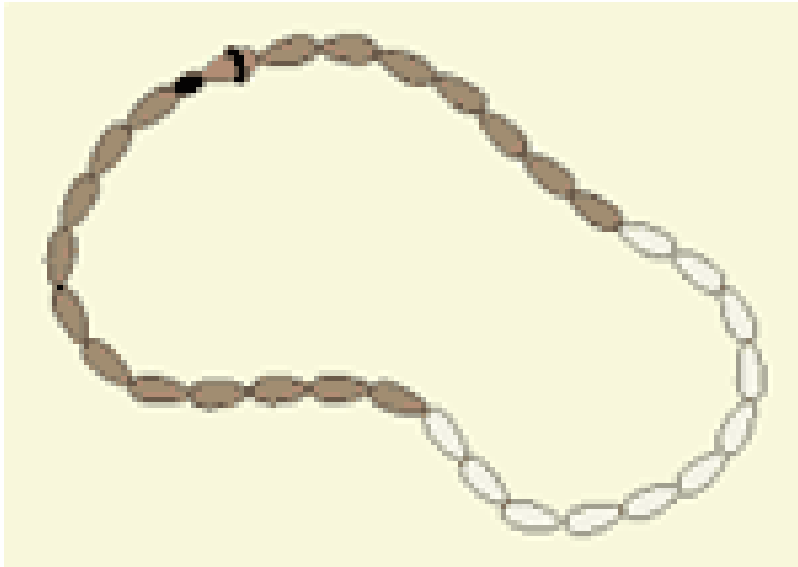


- Simple fertility awareness-based method
- No calculation or observation
- “Standard rule” or “fixed window”
- Identifies days 8-19 of the cycle as fertile



# Standard Days Method

## *Tool for teaching and use*



- The method is designed for women with regular cycles 26-32 days long
- The necklace has 32 beads

#1 is red

#2-7 are brown

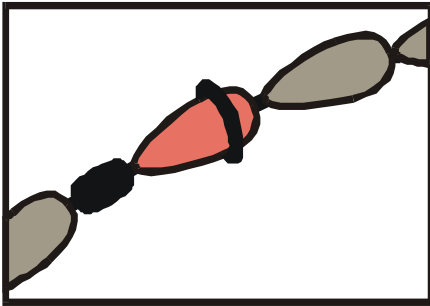
#8-19 are white

#20-32 are brown

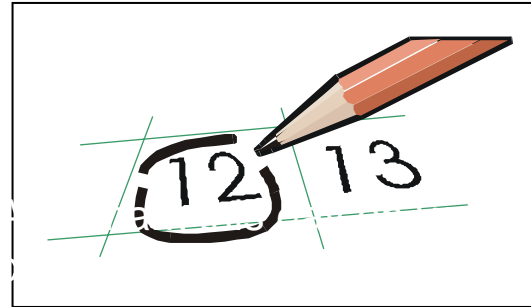


# Standard Days Method

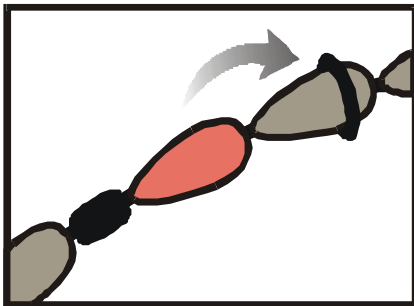
## *Tool for teaching and use*



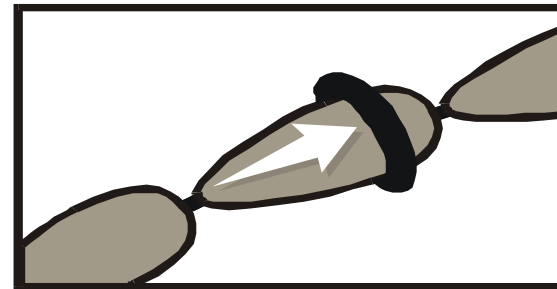
Move the band to the red bead  
when your period starts



Also mark this day on your calendar



Move the band every morning

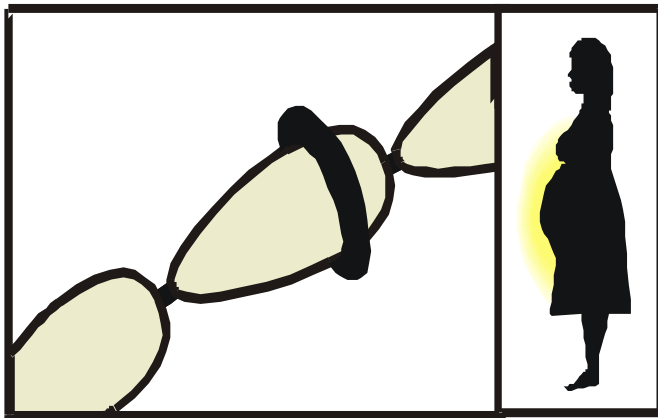


Always move the band from narrow to wide  
end of bead

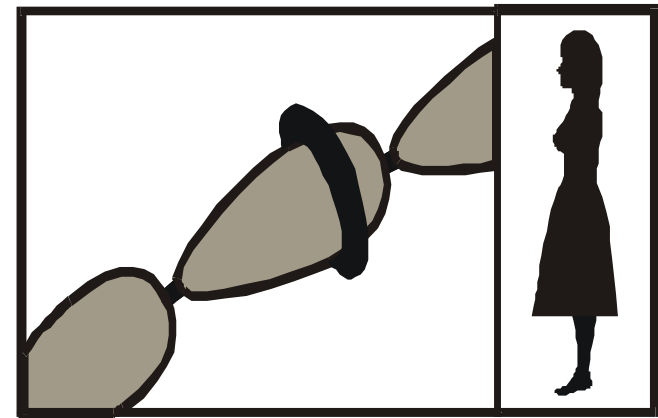


# Standard Days Method

## *Tool for teaching and use*



Band on WHITE bead, abstain from unprotected intercourse



Band of BROWN bead, you may have intercourse



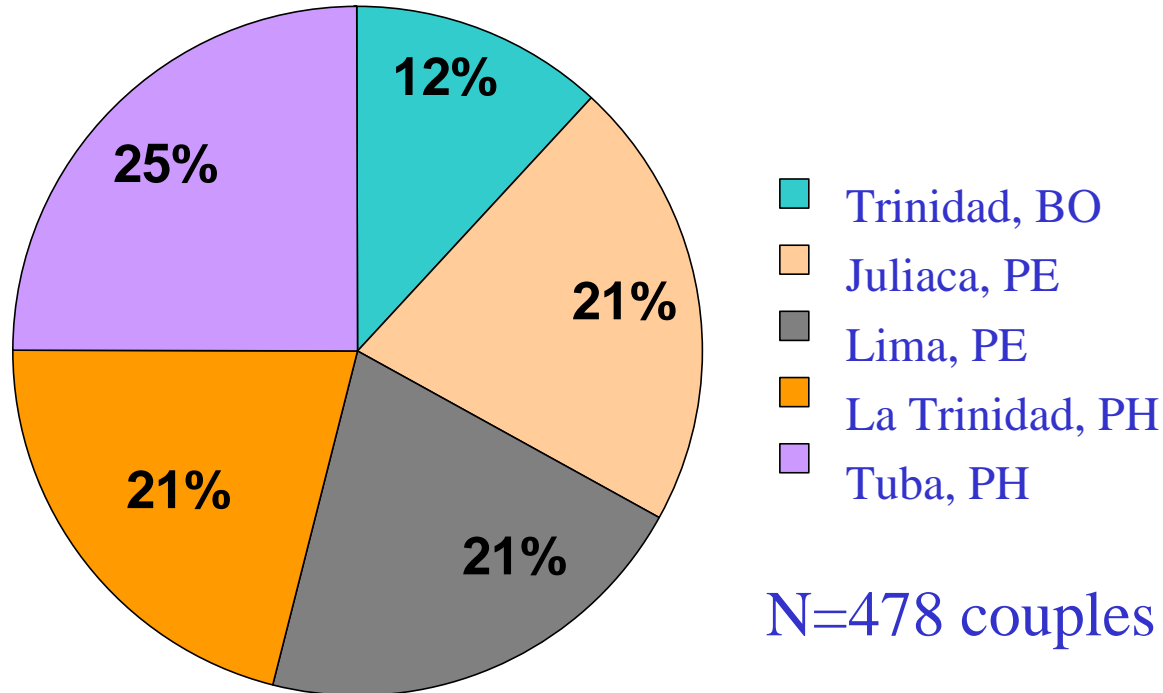
# Standard Days Method

## *Efficacy Trial*

- Multi-site prospective efficacy trial recently completed
- Services provided through existing programs in Peru, Bolivia and the Philippines
- Clients followed monthly for 13 cycles



# Standard Days Method *Efficacy Trial - Study Sites*





# Standard Days Method *Efficacy Trial - Results*

**Are couples able to use the  
SDM?**

**Total Cycles 4035**

**% cycles with correct use 97%**

Correct use is defined as abstinence or use of another method during the fertile window (days 8-19).





# Standard Days Method

## *Efficacy Trial - Results*

	Cumulative probability of pregnancy over 13 cycles
<b>Correct use</b> (w/abstinence)	<b>4.8%</b>
<b>Correct use</b> (abstinence + other method)	<b>5.7%</b>
<b>Typical use</b> (Correct + non-compliant)	<b>12.0%</b>



# Standard Days Method

## *Efficacy Trial - Results*

	% of women experiencing an unintended pregnancy within the first year of use	
	Typical use	Correct use
Chance	85%	85%
Spermicides	26%	6%
Female condom	21%	5%
Diaphragm	20%	6%
Withdrawal	19%	4%
<b>SDM</b>	<b>12%</b>	<b>5%</b>
Male condom	14%	3%
Pill	5%	0.1%

Emergency contraception reduces the risk of pregnancy by  $\pm 75\%$ .



# Standard Days Method

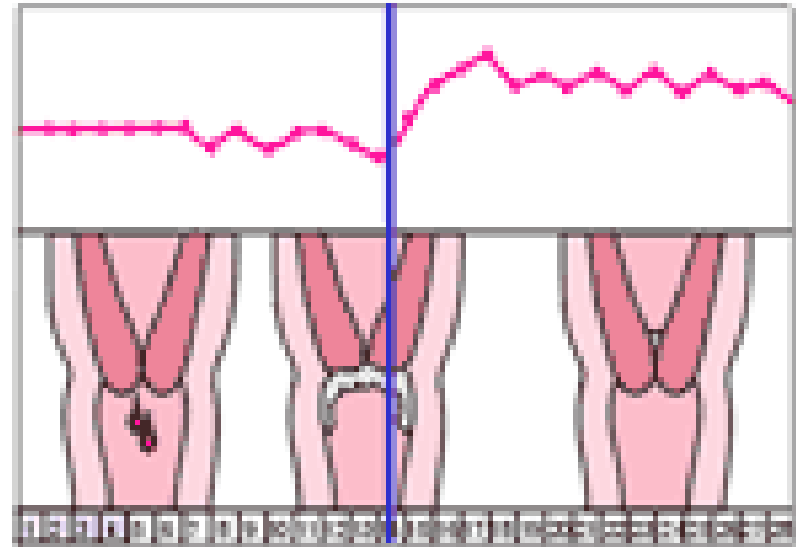
## *Efficacy Trial - Lessons Learned*

- Sensitize and train providers
- SDM is easy to learn and use
- Many couples are willing and able to use the method correctly
- Involving men is needed for successful use
- Many men can and do support use of SDM
- The necklace is an effective tool
- Some will prefer to use with other methods
- Correct use increases over time



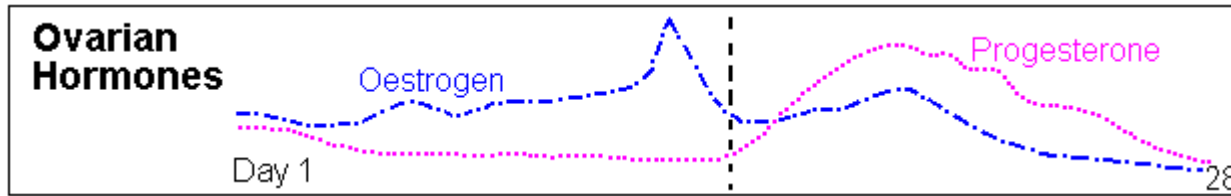
# Periodic Abstinence Observation-based Methods

- Rely on the observation of signs and symptoms of fertility
- Signs are induced by hormones and include:
  - cervical secretions
  - cervix
  - basal body temperature



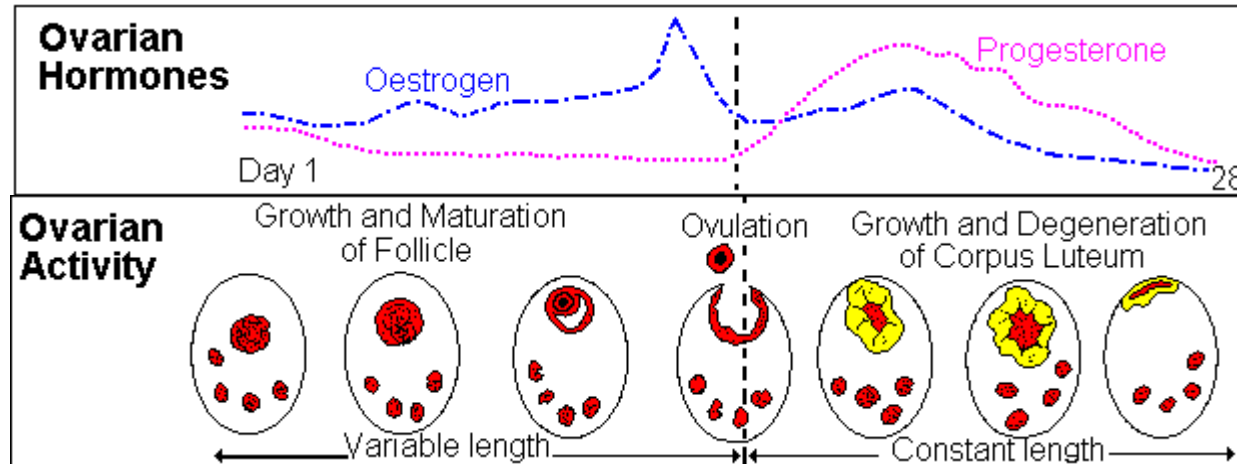


# Observation-based methods



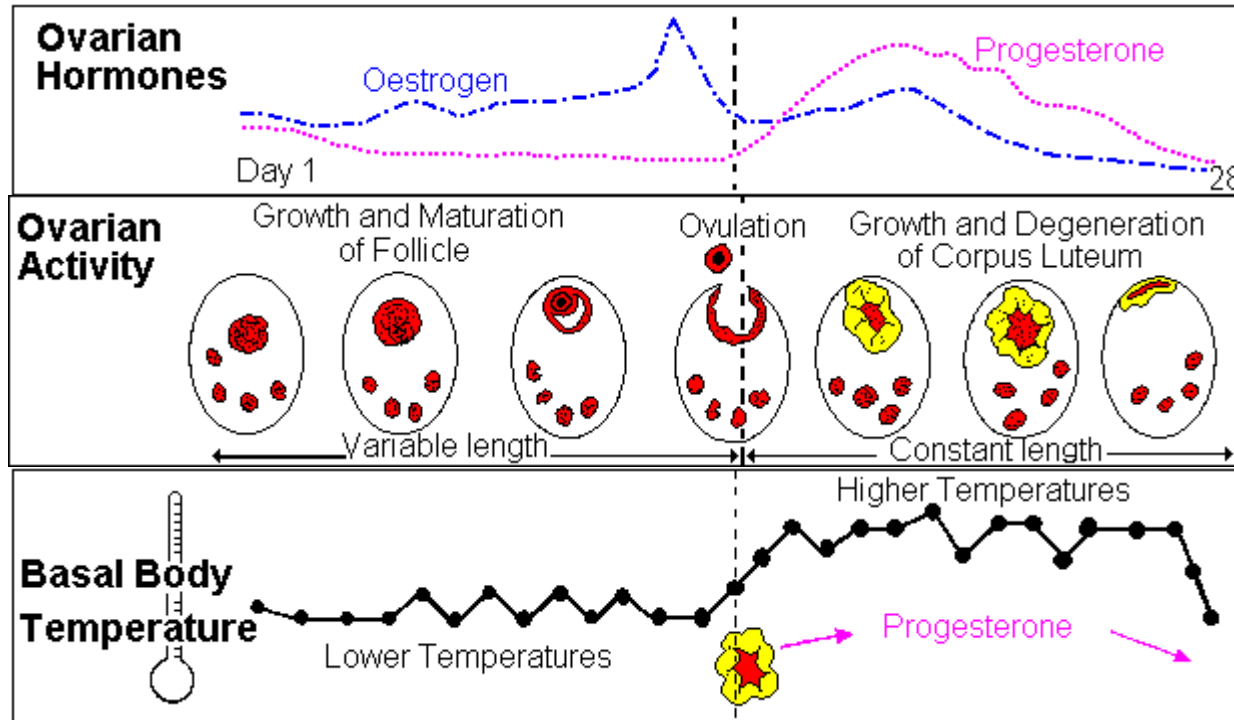


# Observation-based methods





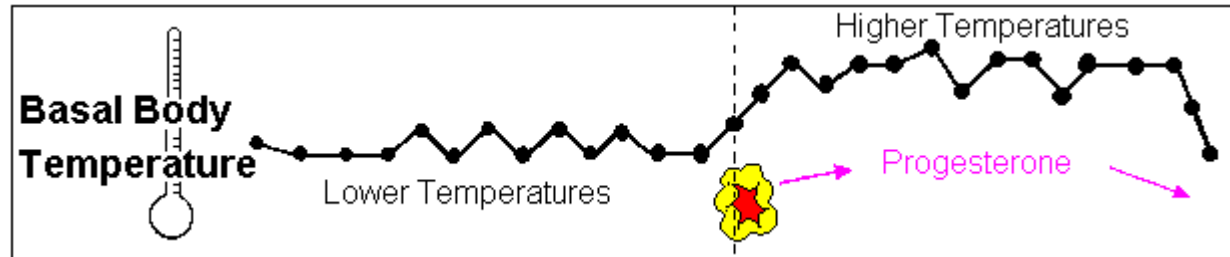
# Observation-based methods





# Observation-based methods

## *Temperature Method*



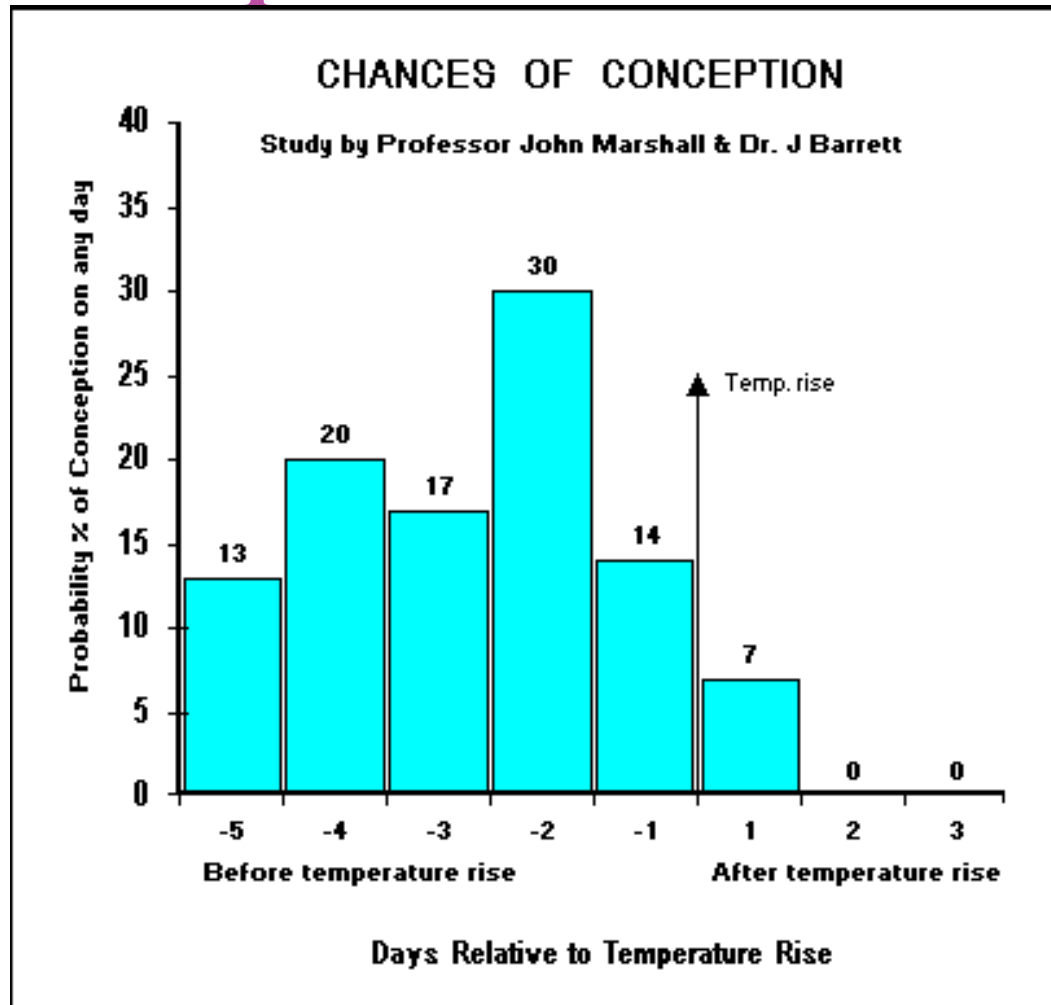
- Increase in temperature is an indication that ovulation has occurred; it is used to indicate the end of the fertile time
- Abstain from unprotected intercourse until after 3 days of continuous increased temperatures
- Probability of pregnancy between 2-20%





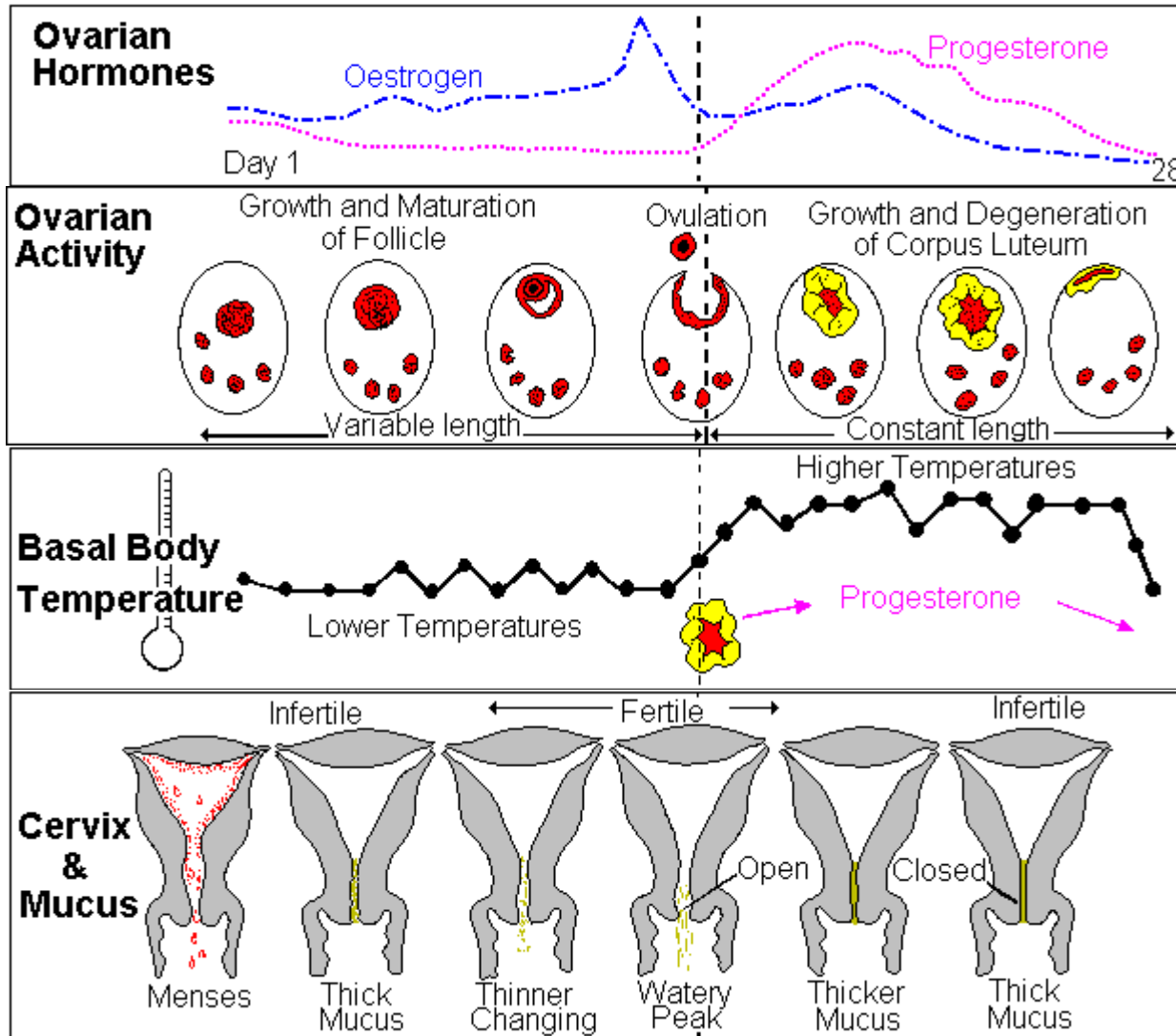
# Observation-based methods

## *Temperature Method*





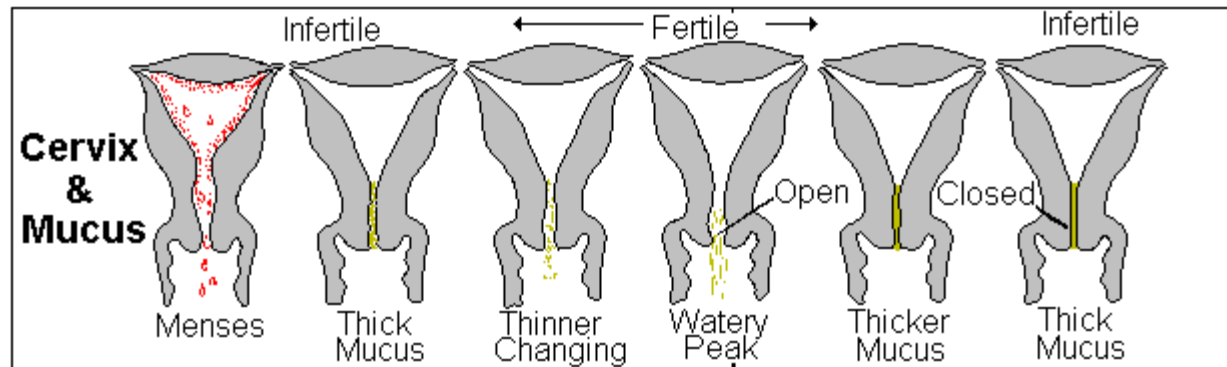
# Observation-based methods





# Observation-based methods

## *Mucus Method*

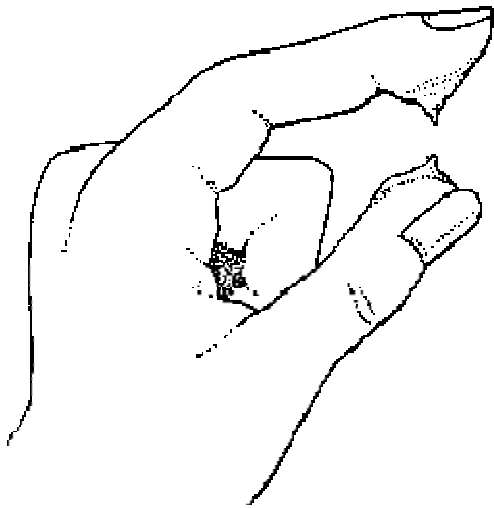


- **Abstain during menses**
- **Abstain every other day during dry days**
- **Abstain between Day #1 of mucus and 4th day after peak mucus**
- **Can be used by women with irregular cycles**
- **Probability of pregnancy between 3-20%**



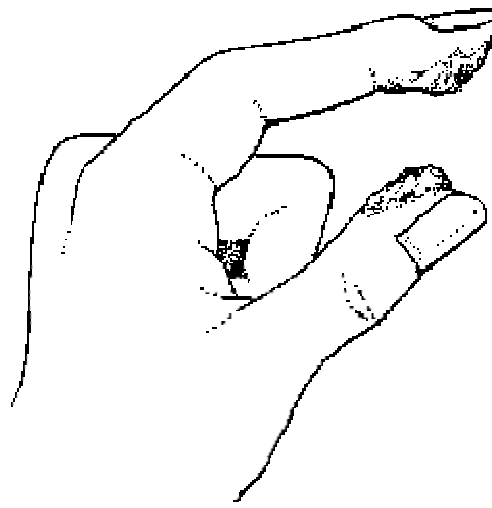
# Observation-based methods

## *Mucus Method*



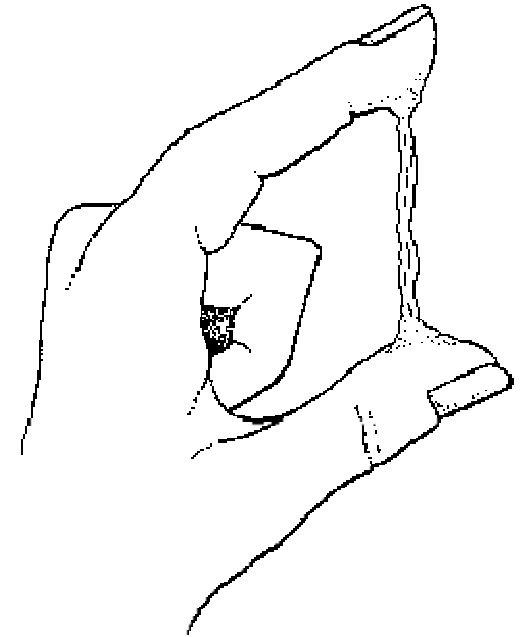
### **Early Mucus**

Scanty, thick,  
white, sticky



### **Transitional Mucus**

More, Thinner,  
cloudy, stretchy



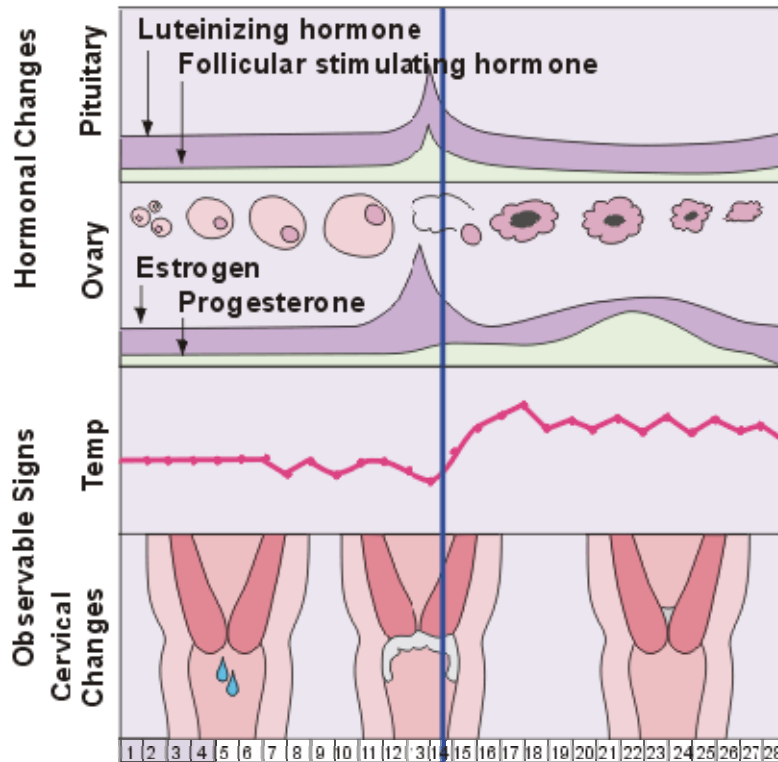
### **Highly fertile mucus**

Profuse, thin,  
transparent, Stretchy



# Observation-based methods

## *Symptothermal Method*



- Observation of more than one indicator of fertility
- Cervical secretions and temperature
- Position and feel of cervix; calendar
- Probability of pregnancy between 2-20%





# Observation-based Methods

## *The TwoDay Method*

- Simple observation-based method
- Based on the presence or absence of cervical secretions
- If a women notices **any secretions on the current or previous day**, then she is probably in her **fertile phase**
- If she notices **no secretions** on either day, then she is probably **not fertile**
- Clinical trials ongoing to test efficacy



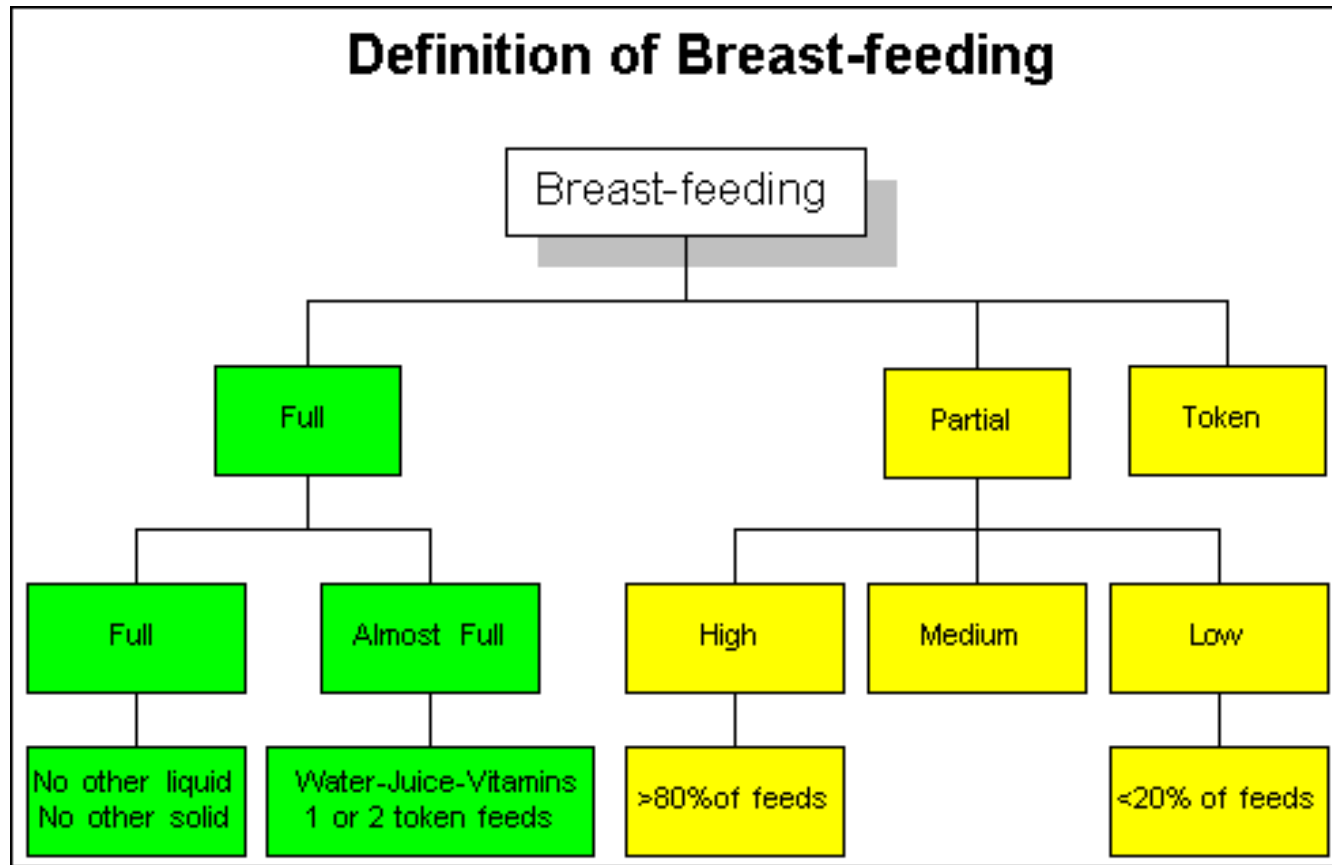
# Lactational Amenorrhea

- Post-partum breastfeeding to achieve contraception
- Suckling stimulates the production and release of prolactin and B-endorphin
- Prolactin inhibits LH synthesis and release; endorphins suppress GnRH release, and therefore ovarian stimulation is inhibited and Ovulation is blocked
- Efficacy is up to 98% for 6 months



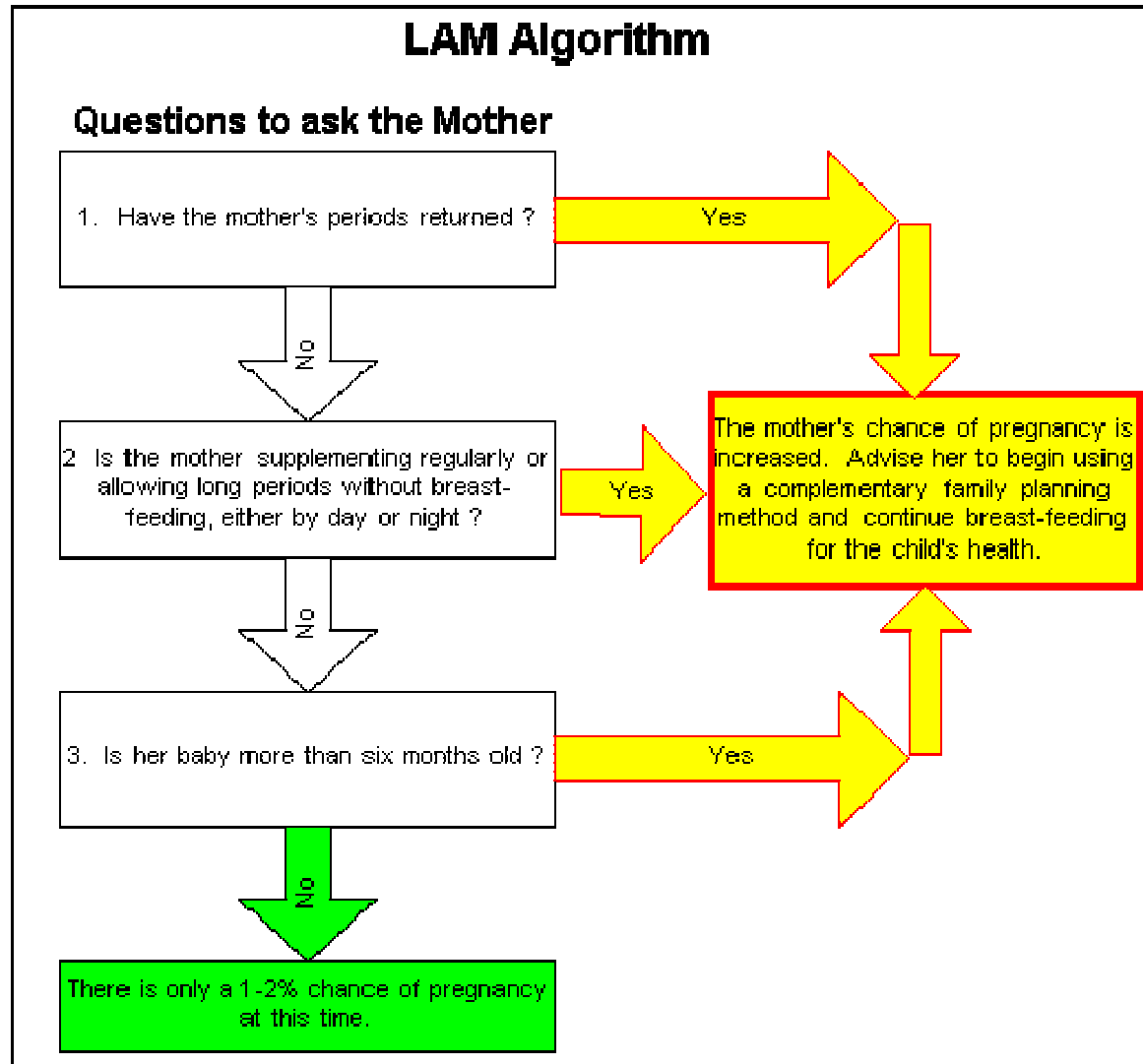


# Lactational Amenorrhea





# Lactational Amenorrhea





# Natural Contraceptive Methods

## *The Future*

- Continue to simplify and test simple methods
- Mainstream methods into programs
- Streamline the training and follow-up
- Methods to assist in determining the fertile window



# Home Test Kits for Ovulation Prediction and Detection

- Uses urinary metabolites and a computer chip to identify the beginning and end of the fertile time
- Can predict the fertile window 94% of the time
- Currently available in certain European countries



**PERSONA** (Unipath, Ltd)



# Home Test Kits for Ovulation Prediction and Detection

## BIOSELF



- Monitors temperature and cycle day
- Detects the fertile window in over 90% of cycles



# Natural Contraceptive Methods

For More Information:

- Georgetown University Institute for Reproductive Health <http://www.irh.org>
- The Fertility Awareness and Natural Family Planning Service UK  
<http://www.fertilityuk.org>
- The Billings Ovulation Method of NFP  
<http://billings-centre.ab.ca/>