



Natural Contraceptive Methods

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Development and Research Training
in Human Reproduction



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



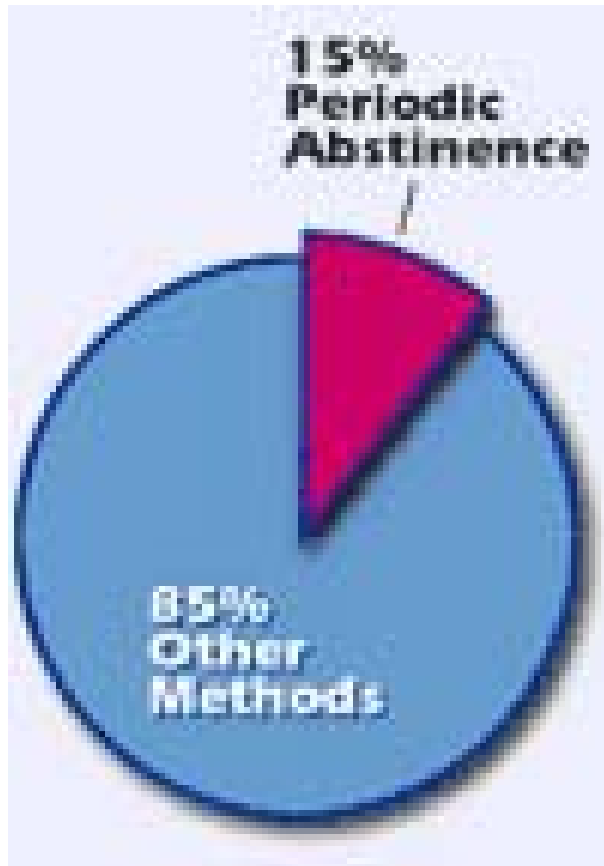
Periodic Abstinence

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

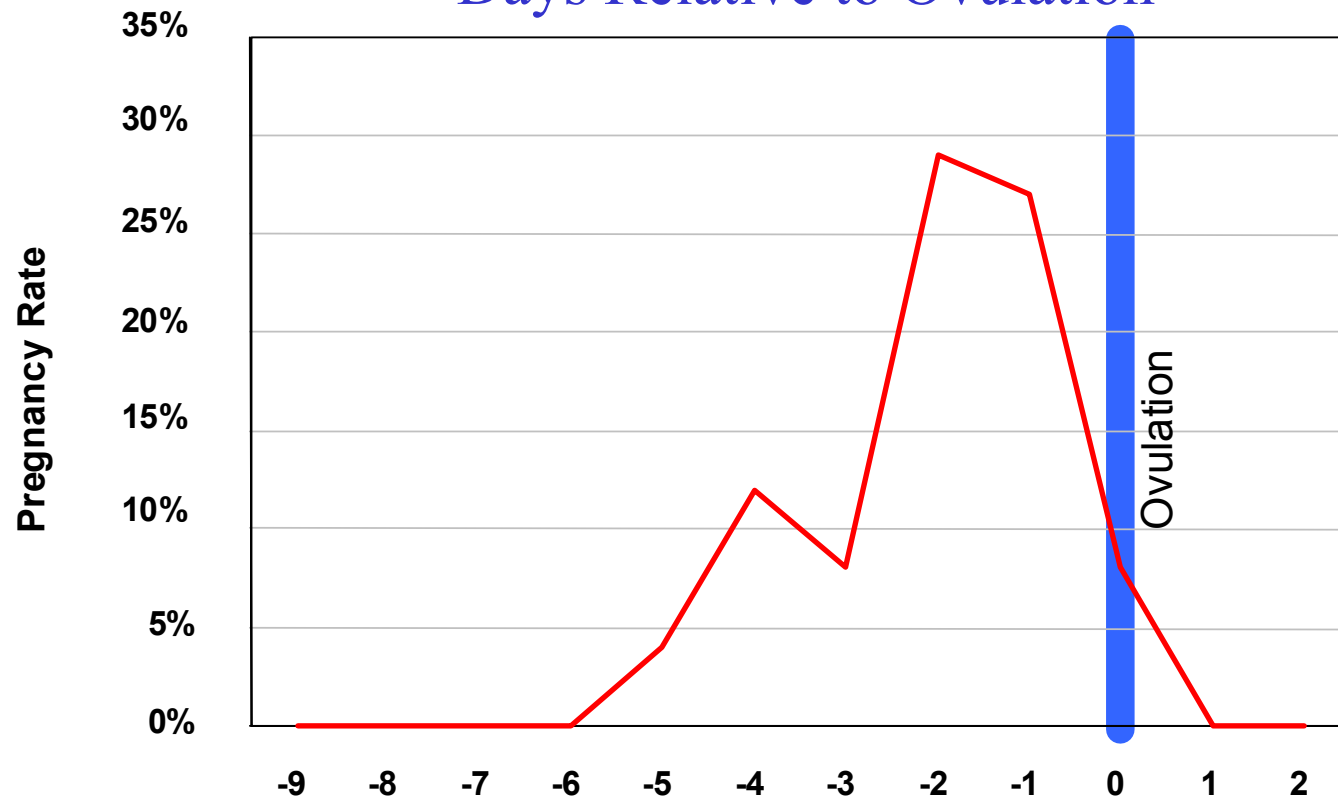
Use is based on assumptions

- 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

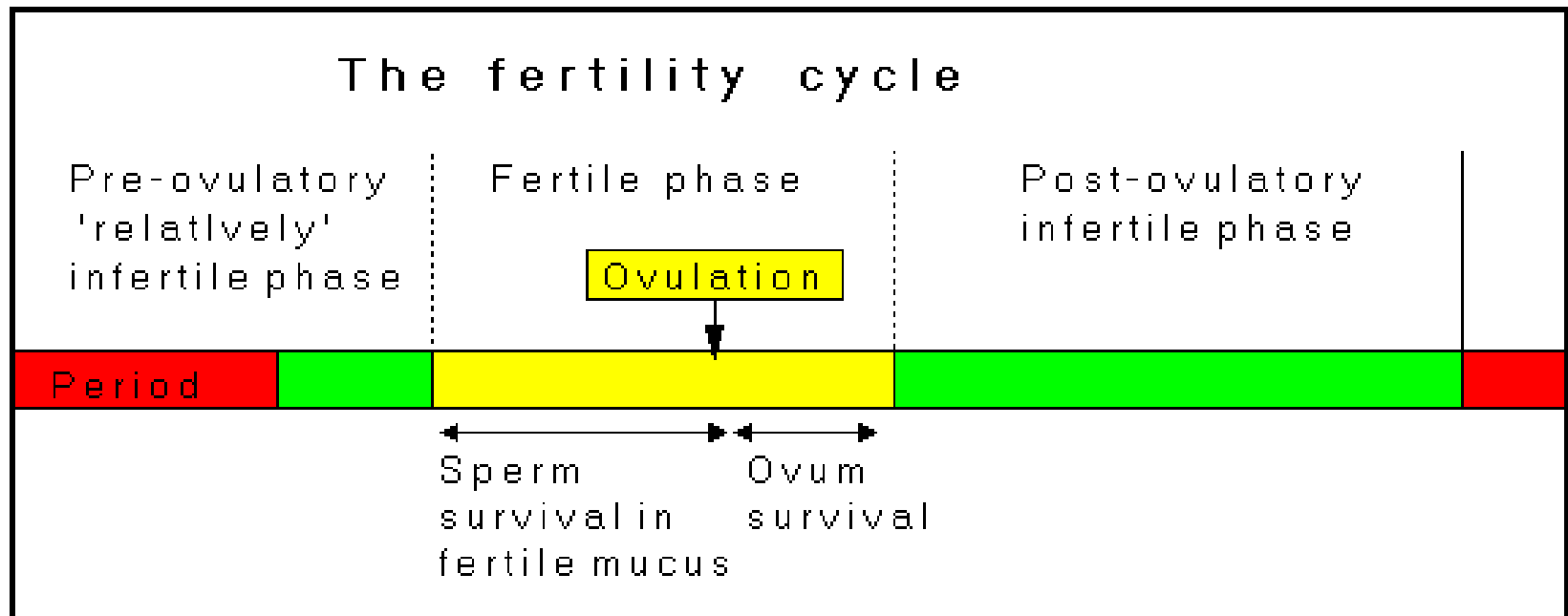
Probability of Pregnancy from Intercourse on Days Relative to Ovulation



Source: Wilcox et al. (1998)

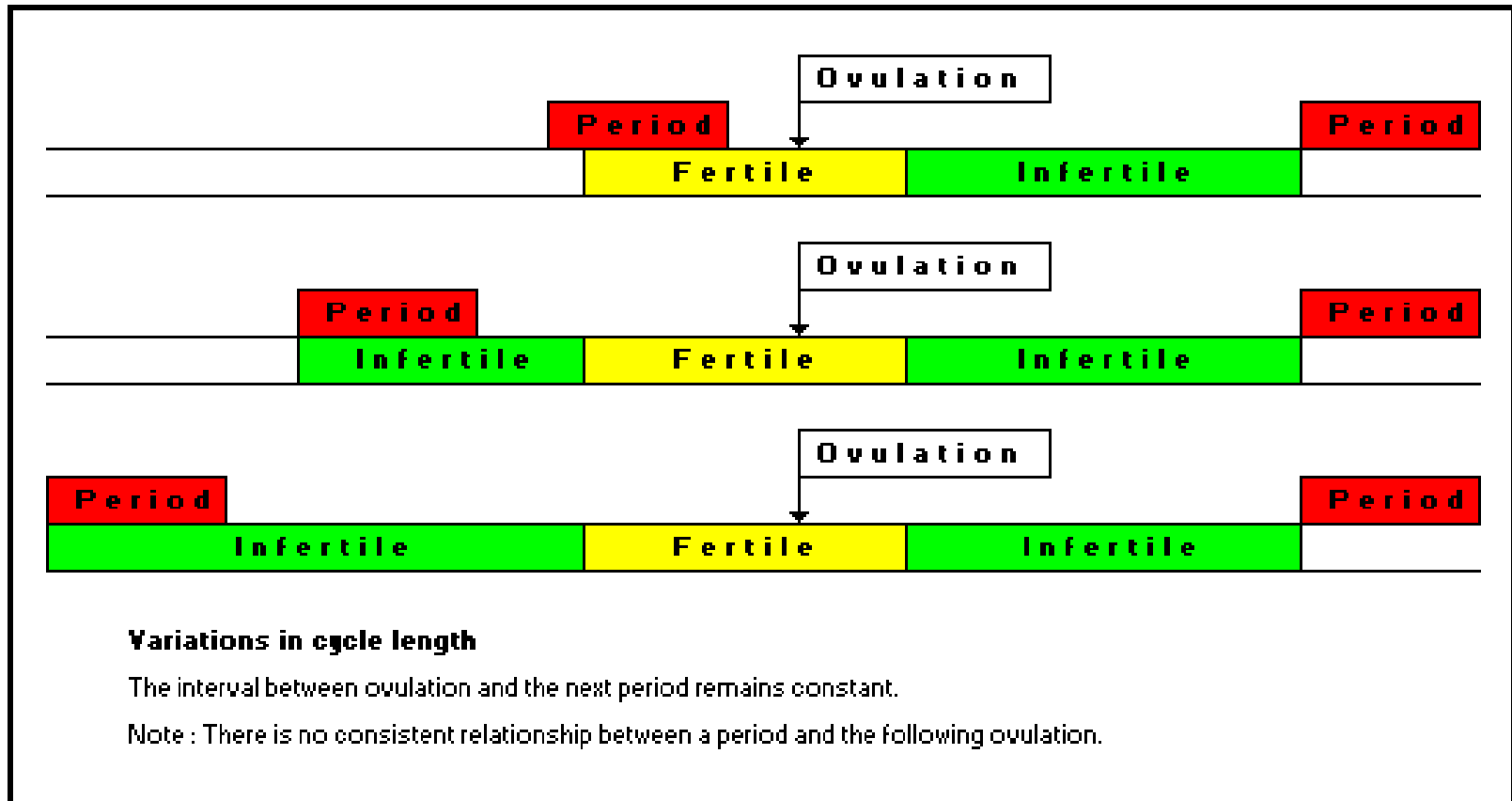


Periodic Abstinence





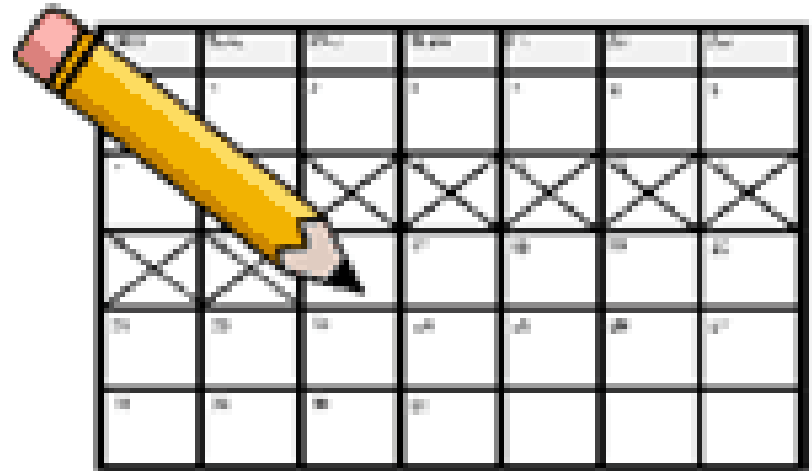
Periodic Abstinence





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

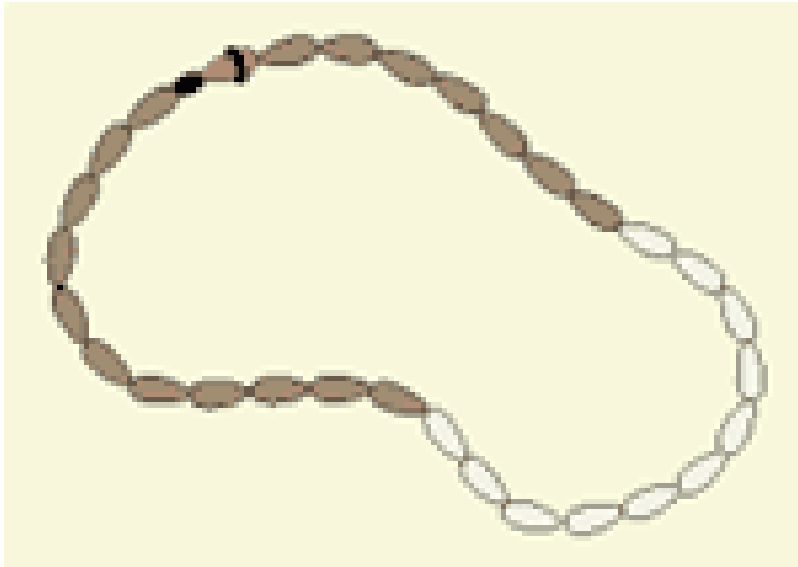
EXAMPLE

- 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

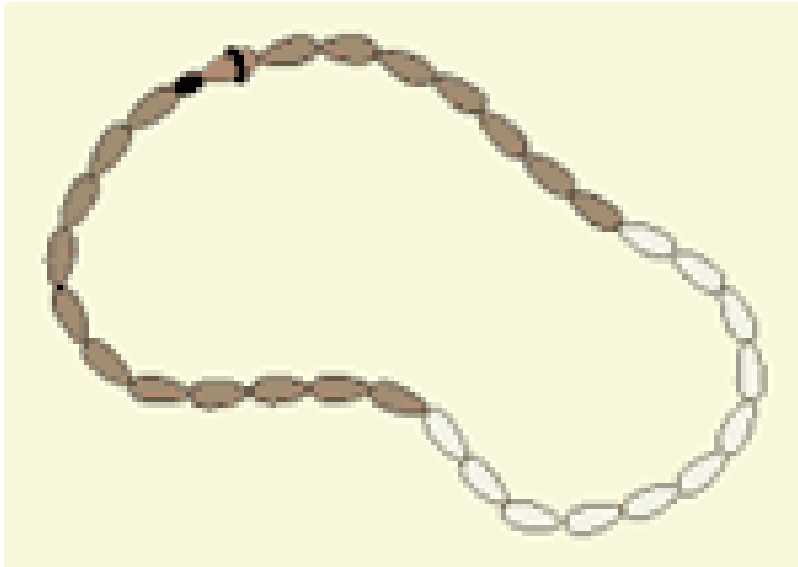


- Simple fertility awareness-based method
- No calculation or observation
- “Standard rule” or “fixed window”
- Identifies days 8-19 of the cycle as fertile



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

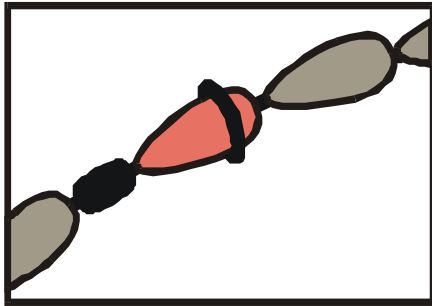
#8-19 are white

#20-32 are brown

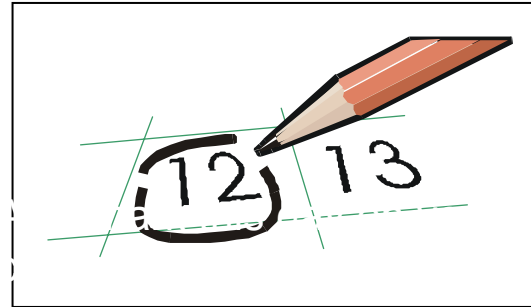


Standard Days Method

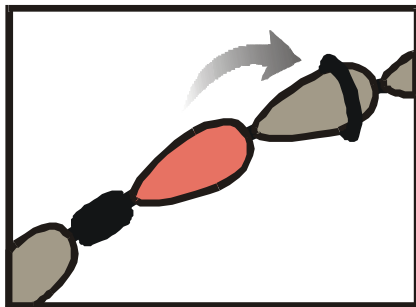
Tool for teaching and use



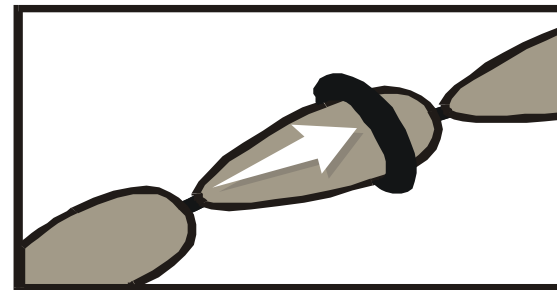
Move the band to the red bead
when your period starts



Also mark this day on your calendar



Move the band every morning

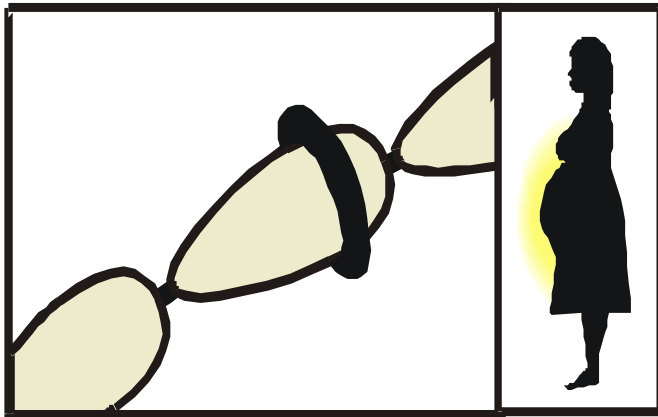


Always move the band from narrow to wide
end of bead

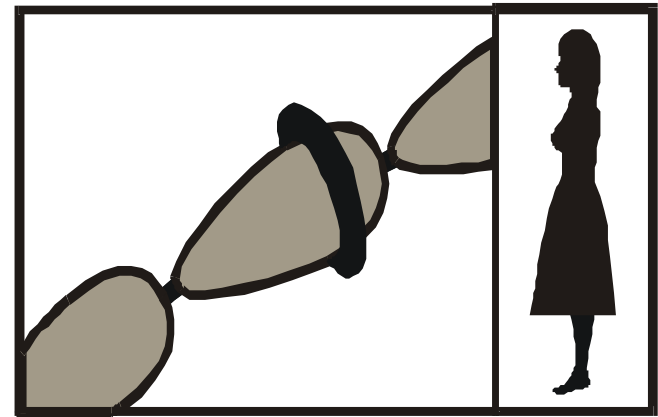


Standard Days Method

Tool for teaching and use



Band on WHITE bead, abstain
from unprotected intercourse



Band of BROWN bead, you
may have intercourse



Standard Days Method

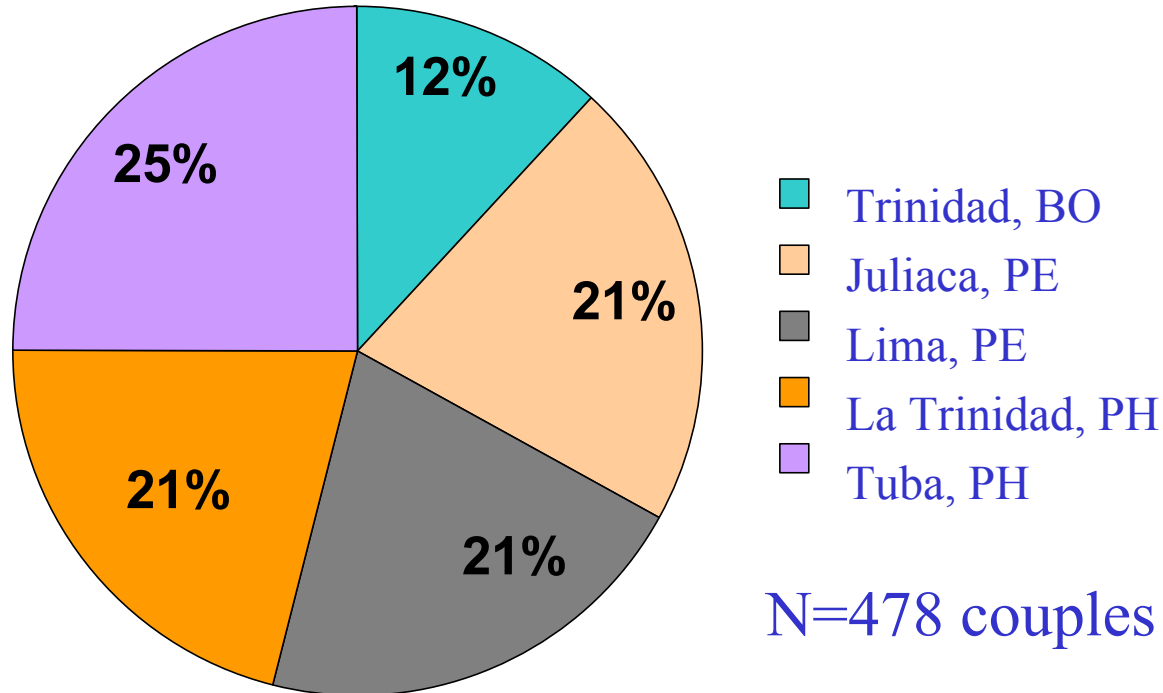
Efficacy Trial

- 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

Correct use

4.8%

(w/abstinence)

Correct use

5.7%

(abstinence + other method)

Typical use

12.0%

(Correct + non-compliant)



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%
SDM	12%	5%
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

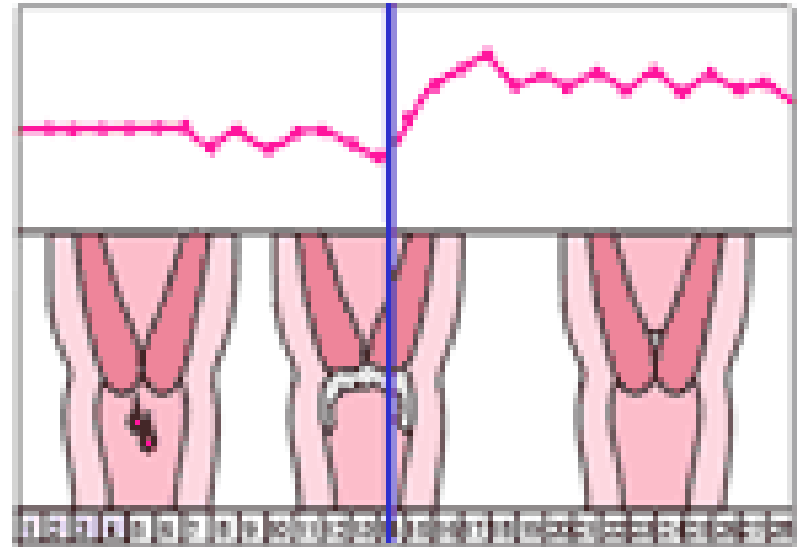
- Sensitize and train providers
- SDM is easy to learn and use
- Many couples are willing and able to use the method correctly
- Involving men is needed for successful use
- Many men can and do support use of SDM
- The necklace is an effective tool
- Some will prefer to use with other methods
- Correct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



Periodic Abstinence

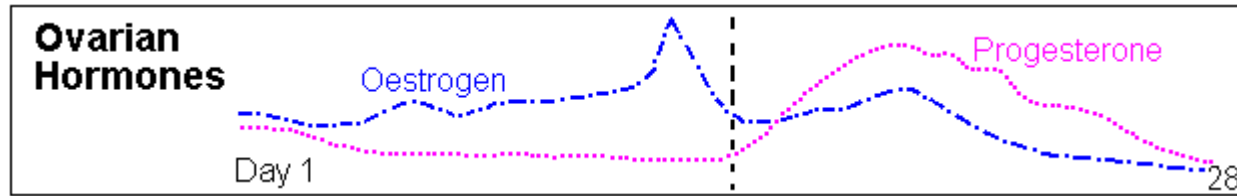
Observation-based Methods

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



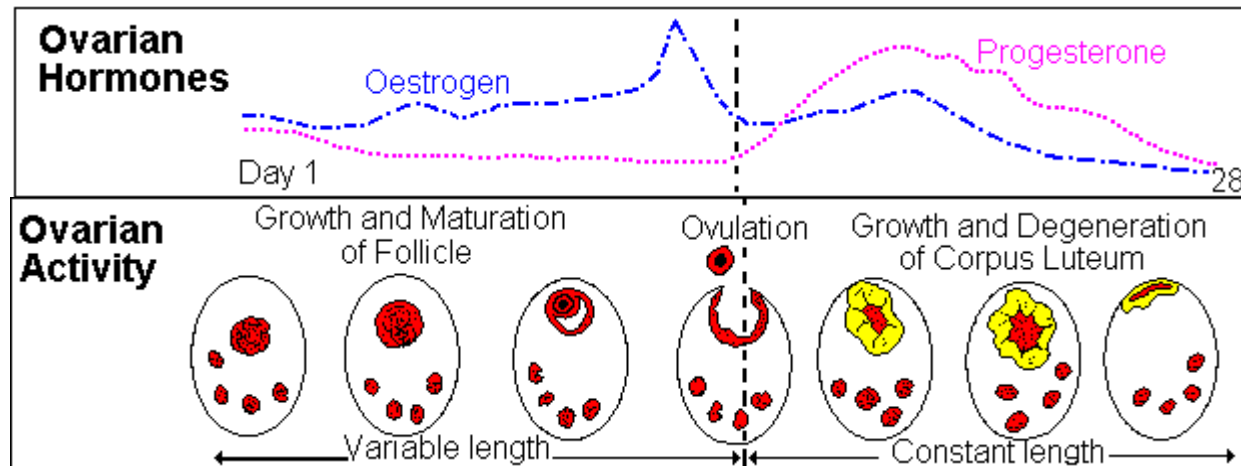


Observation-based methods



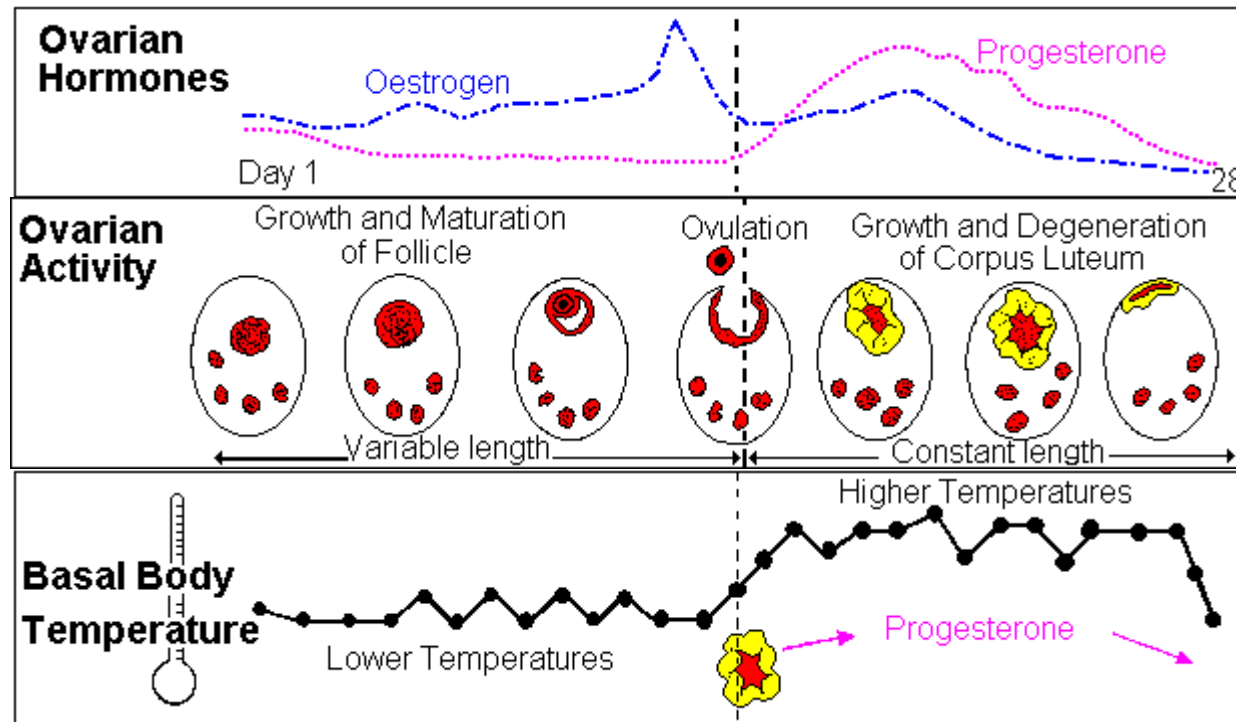


Observation-based methods





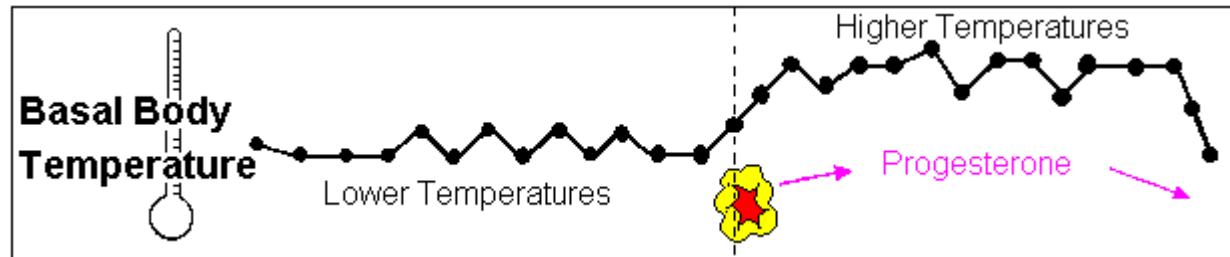
Observation-based methods





Observation-based methods

Temperature Method

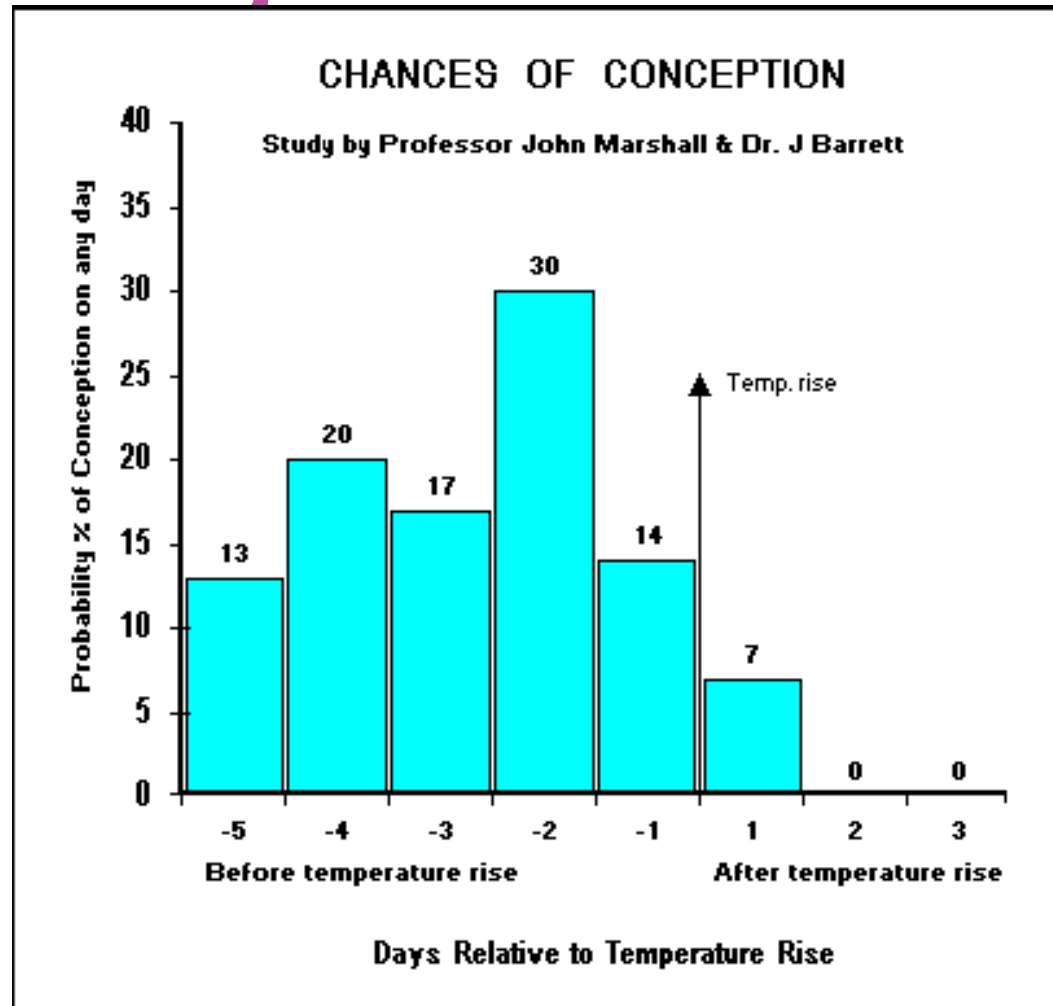


- Increase in temperature is an indication that ovulation has occurred; it is used to indicate the end of the fertile time
- Abstain from unprotected intercourse until after 3 days of continuous increased temperatures
- Probability of pregnancy between 2-20%



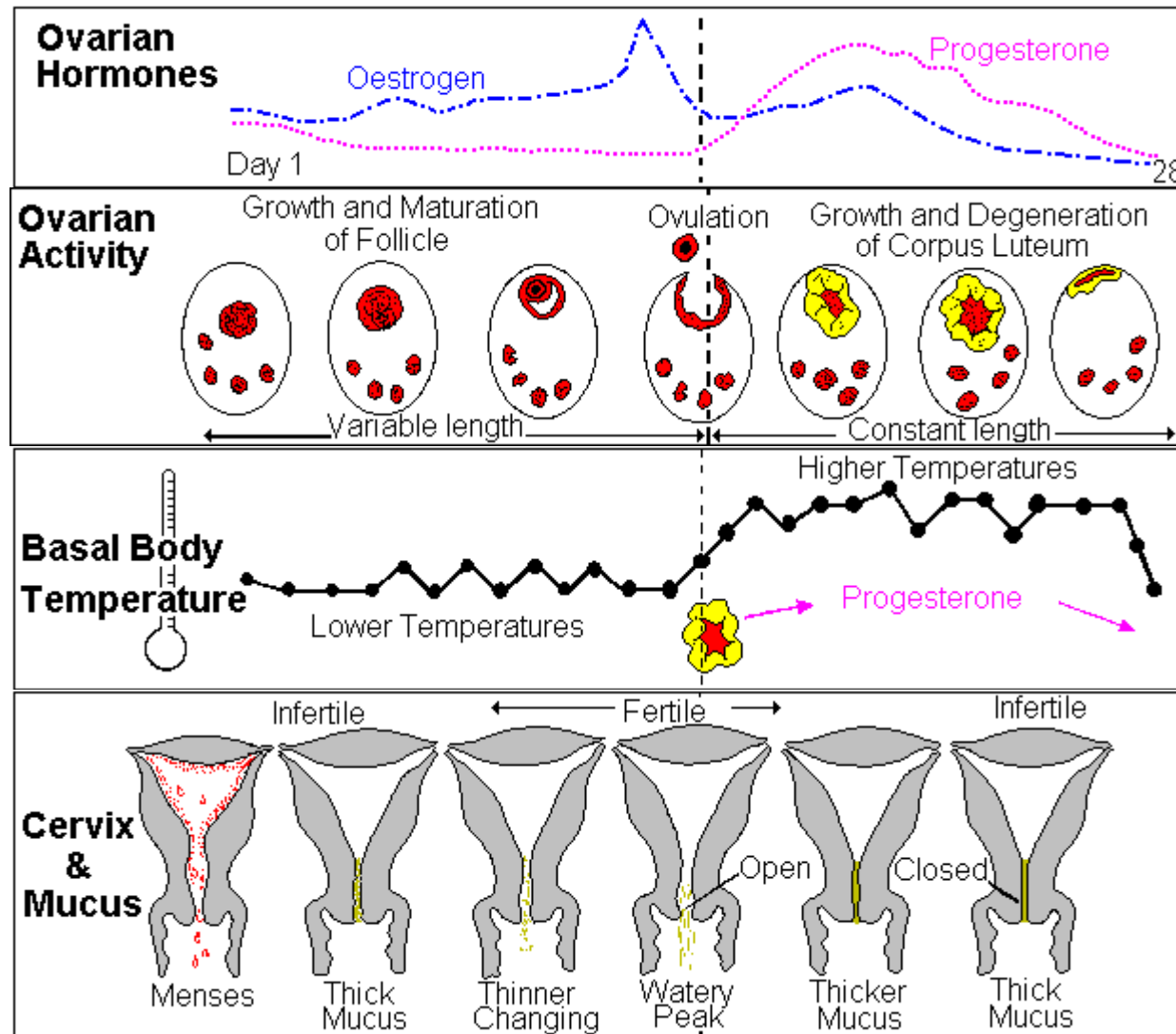
Observation-based methods

Temperature Method





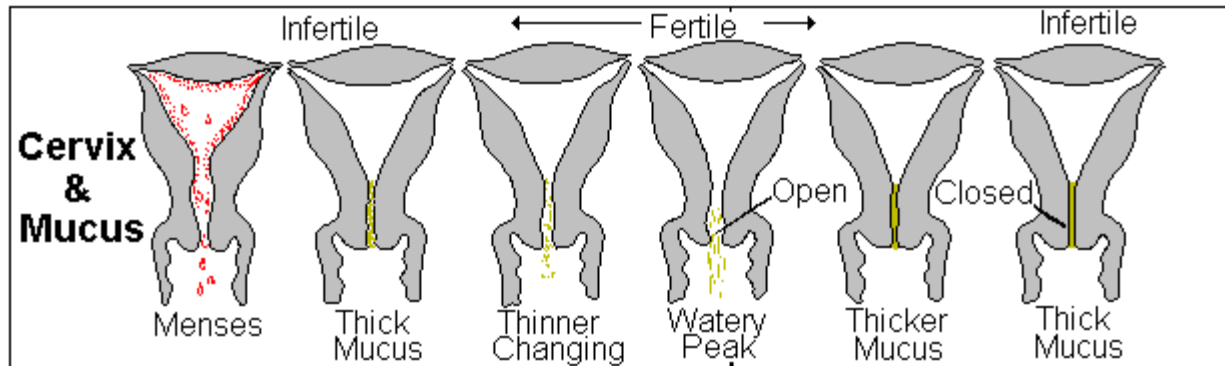
Observation-based methods





Observation-based methods

Mucus Method

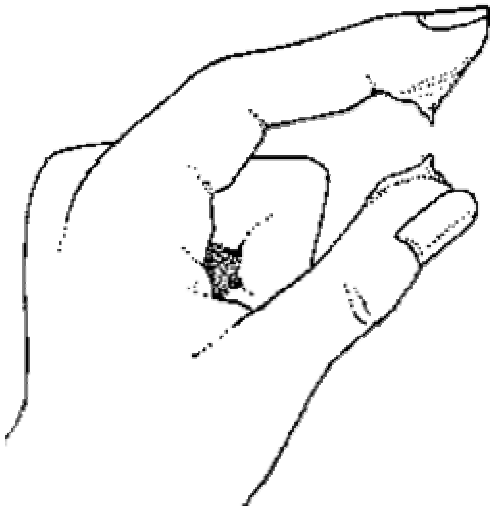


- Abstain during menses
- Abstain every other day during dry days
- Abstain between Day #1 of mucus and 4th day after peak mucus
- Can be used by women with irregular cycles
- Probability of pregnancy between 3-20%



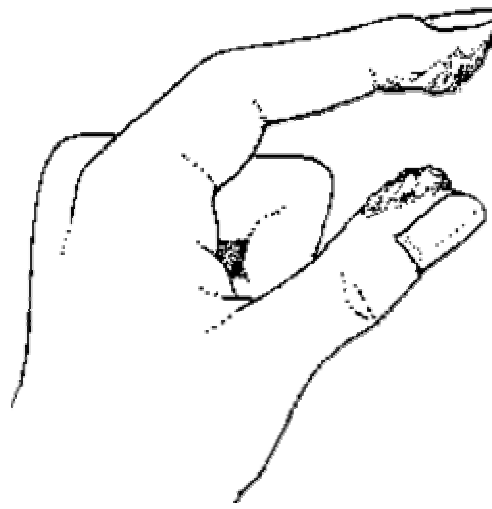
Observation-based methods

Mucus Method



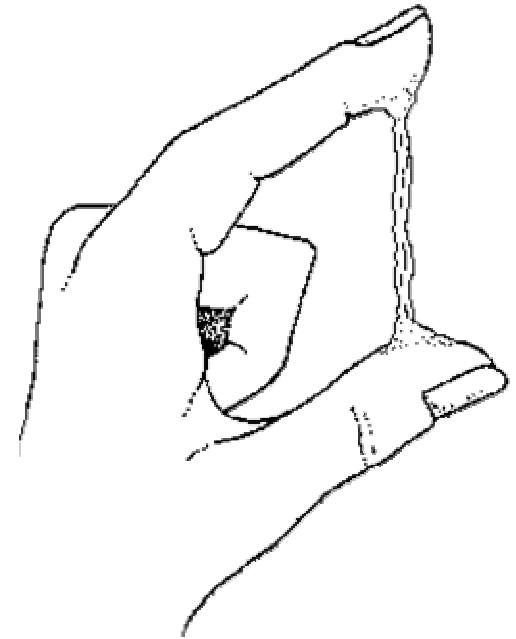
Early Mucus

Scanty, thick,
white, sticky



Transitional Mucus

More, Thinner,
cloudy, stretchy



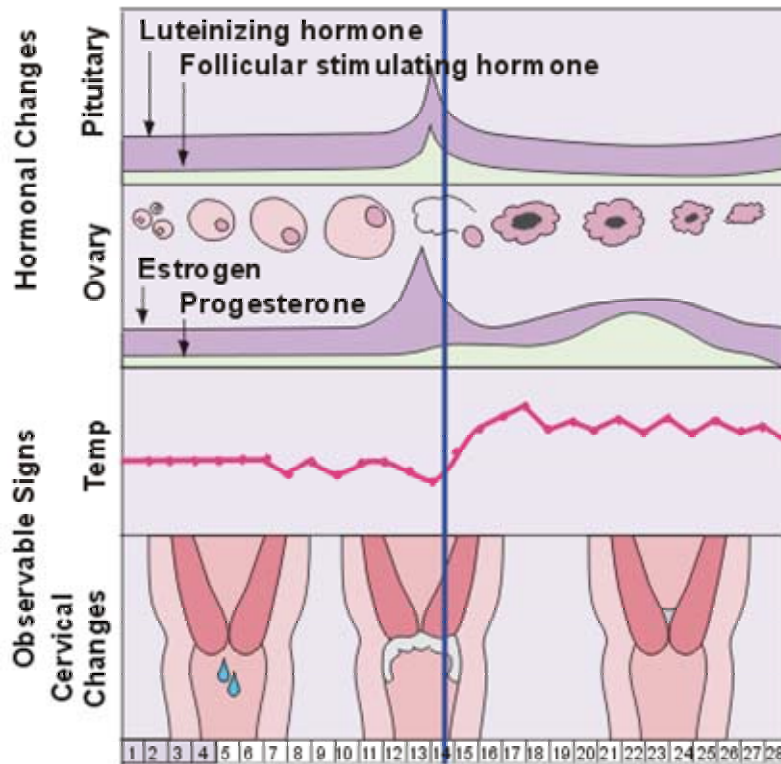
Highly fertile mucus

Profuse, thin,
transparent, Stretchy



Observation-based methods

Symptothermal Method

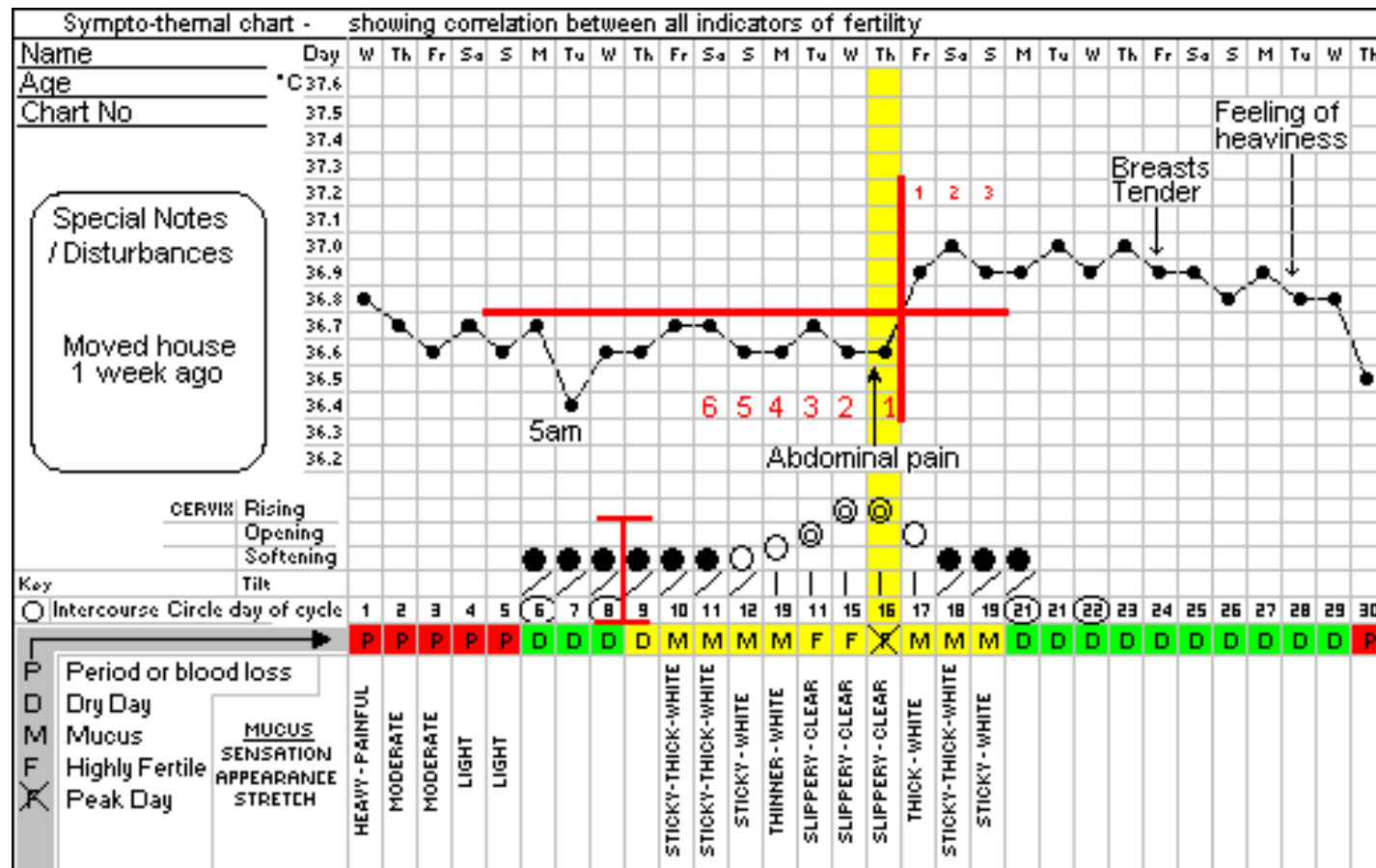


- Observation of more than one indicator of fertility
- Cervical secretions and temperature
- Position and feel of cervix; calendar
- Probability of pregnancy between 2-20%



Observation-based methods

Symptothermal Method





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

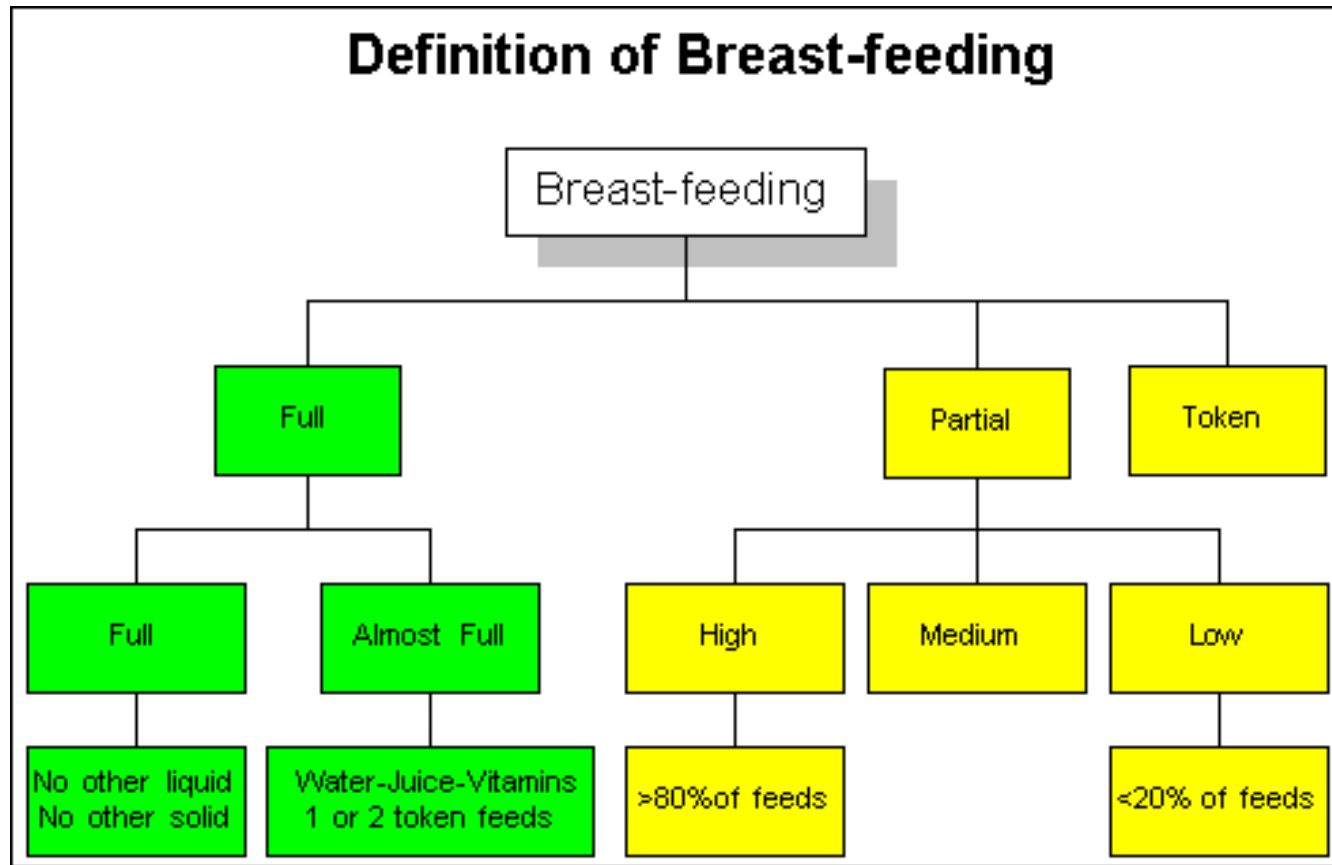


Lactational Amenorrhea

- 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

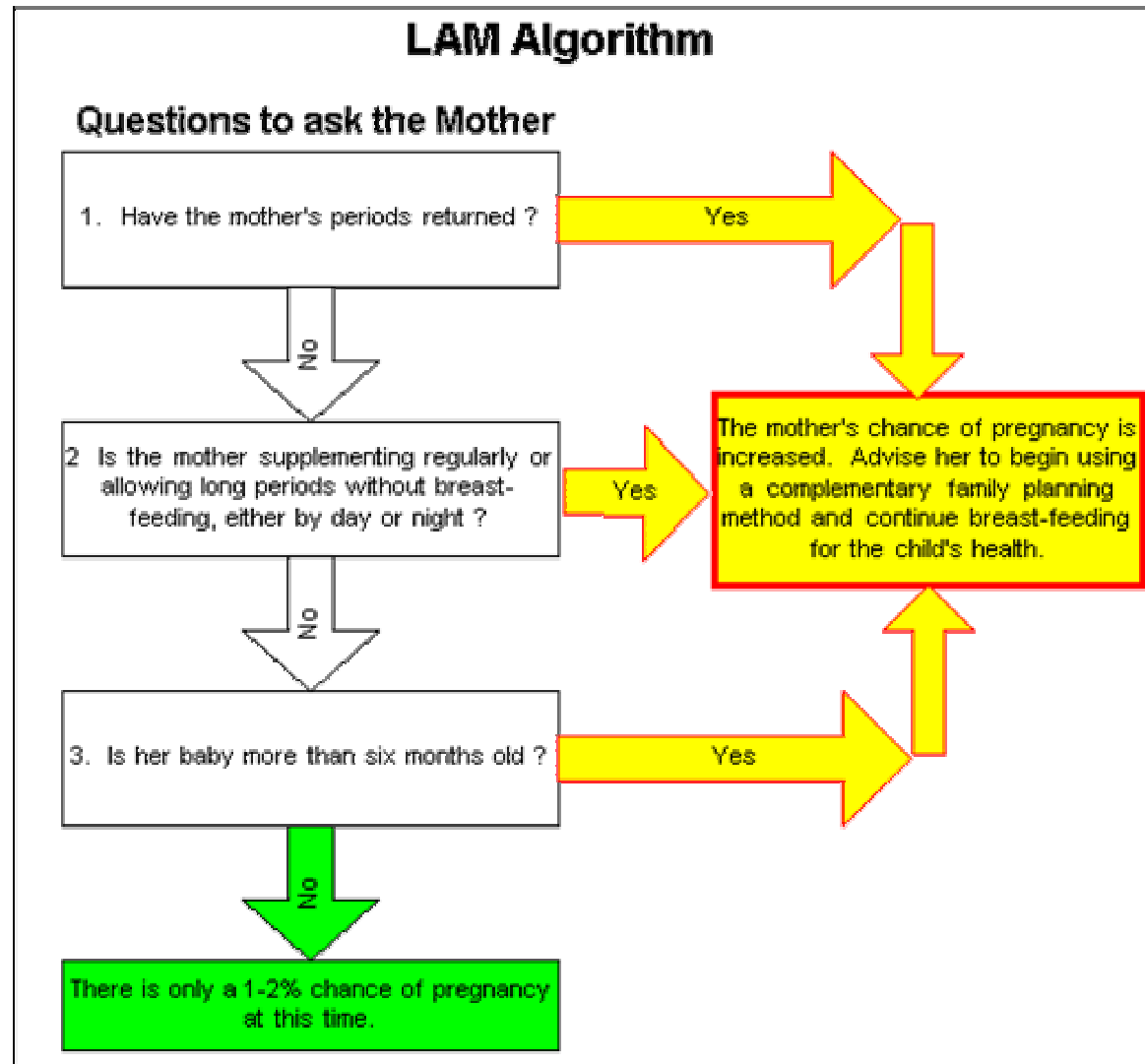


Lactational Amenorrhea





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/>