

# TEACHING THE BILLINGS OVULATION METHOD

Part 1

The Correlation of Physiological Events of the Female  
Reproductive Cycle with Observations Made at the Vulva

*By Dr E. L. Billings AM, MB BS, DCH (Lond.)*

Third Edition February 2001

"This manual is a practical guide to the Billings Ovulation Method. We gratefully acknowledge the Scientific contributions of Professor J. B. Brown (Reproductive Hormones) and of Professor Erik Odeblad (Cervical Function). See *Teaching the Billings Ovulation Method Part 2* for more information about their superb research."

Text approved by:



This document is made available for educational purposes only and  
may not be sold for profit.

© The Ovulation Method Research and Reference Centre of Australia

# Teaching The Billings Ovulation Method

## The Correlation of Physiological Events of the Female Reproductive Cycle with Observations Made at the Vulva

Dr E. L. Billings AM, MB BS, DCH (Lond.)

### Introduction

During the days leading up to ovulation, cervical mucus leaves the vagina when the woman is in the upright position and as she moves about. The mucus is observed at the vulva:

- 1 By the changing sensations of the vulva over the whole day.
- 2 By direct inspection of visible mucus from time to time.

The recording of these observations is made at the end of each day. The record reveals the patterns of infertility and fertility.

The pattern of fertility is a **changing pattern**. The pattern of infertility is an **unchanging pattern**. Both of these patterns follow the hormonal patterns which control sperm survival and conception and therefore provide reliable information for achieving or postponing pregnancy.

The anatomy of the female reproductive system is illustrated in Figure 1. Features worthy of note are:

- i) the cavity of the uterus where the baby develops for 9 months;
- ii) the cervix which produces the mucus which is responsible for the vitality and health of the sperm cells;
- iii) the vagina; the Pockets of Shaw;
- iv) the vulva which senses the presence of mucus as it flows from the vagina;
- v) the ovaries which contain the full complement of egg cells. The follicles in the ovaries produce the hormones which are responsible for the growth of the endometrium and its preparation for pregnancy, the activation of the

cervix and the production of the mucus, and the cyclical changes in the function of the vagina and the fallopian tube.

The requirements of fertility are:

- 1 A satisfactory ovulation.
- 2 Healthy fallopian tubes which allow the passage of sperm cells to meet the ovum and then nourish and assist the embryo to proceed to the cavity of the uterus for implantation.
- 3 A healthy endometrium for implantation.
- 4 An adequate cervical function to produce mucus which will enable healthy sperm cells to navigate the genital tract.
- 5 Emotional harmony between husband and wife facilitates conception.

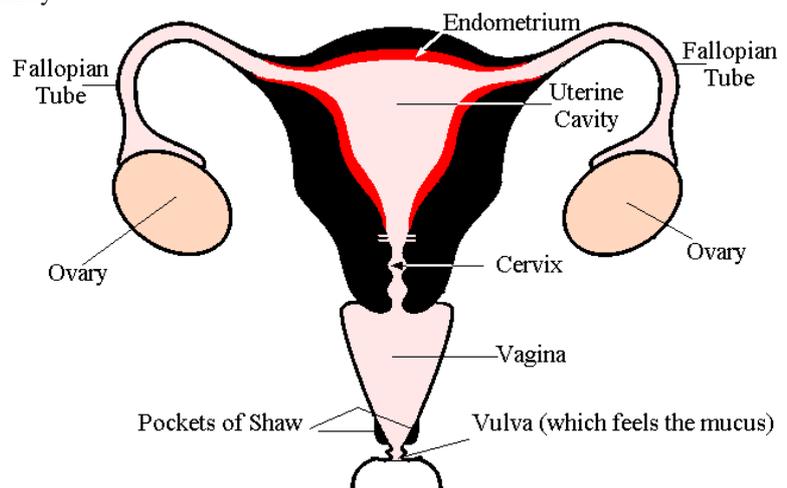
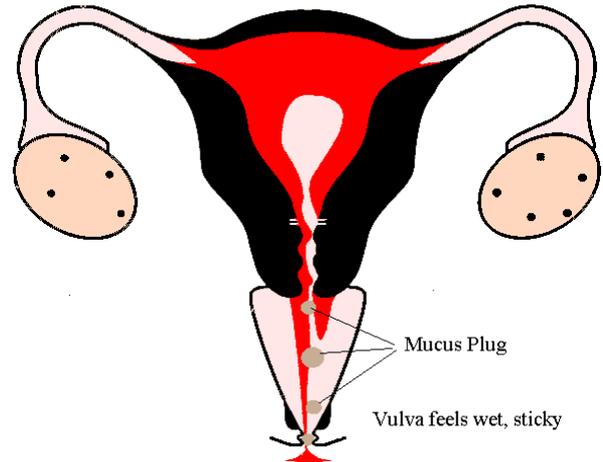


Figure 1. The female reproductive organs

### Keeping a Record

A daily record of observations made at the vulva is essential for the Billings Ovulation Method. The recording is made in the evening of the most fertile characteristics

noticed throughout the day. The first record, which is begun immediately, is usually of 2 - 4 weeks duration and is made without any genital contact so that the observations will not be confused by any secretions due to intercourse or contact. The resulting chart provides information for the husband and the opportunity for communication and decisions. There must be no internal examinations made as these will be confusing. Coloured stamps or symbols are used to make the recordings and underneath each stamp one or two words are written, if



**Figure 2.**  
**Menstruation**  
**indicated by a red**  
**stamp or the symbol**  
●

Stamp	Red	Red	Red	Red	Red with dots												
Symbol	●	●	●	●	●●●●												
Sensation/ Appearance of discharge	Wet	Wet	Wet	Sticky	Dry												

the woman is literate, which describe the sensation at the vulva and the appearance of the mucus.

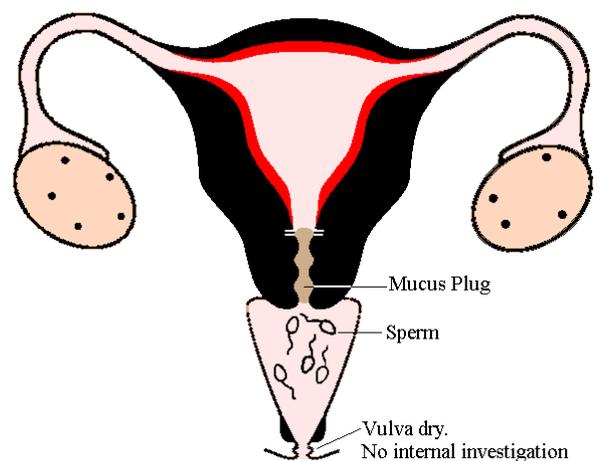
A helpful question to an anxious woman is to ask her how she knows when menstruation begins. She will readily admit that she both feels and sees the bleeding as it arrives at the vulva. The event is recorded with a red stamp or the symbol ● (Figure 2). The recording of sensation and appearance will then be made of all other observations the woman makes at the vulva. As the days go by she will recognize her patterns of fertility and infertility, according to the patterns of discharge.

Following menstruation the cervix is occluded with a thick, dense plug of mucus which prevents the passage of sperm cells into the cervix and which also protects the body from infection. The sperm cells which are kept out in the vagina very quickly become incapable of fertilizing the ovum and are destroyed by surrounding cells.

The ovaries are quiescent at this stage. There is nothing

leaving the cervix and the vulva feels dry. Nothing is felt and nothing is seen. The recording of this observation is made with a plain green stamp or the symbol ▮ (Figure 3)

Following intercourse, the discharge of seminal fluid from the vagina may last for 24 hours and be felt as a wetness at the vulva. **This seminal fluid contains no live sperm cells.** They will have been destroyed within an hour or two in the vagina when the cervix prevents them from entering the uterus.



**Figure 3. Basic**  
**Infertile Pattern of**  
**dryness. There is no**  
**entry of sperm into**  
**the cervix because of a**  
**thick dense plug of**  
**mucus.**

Stamp	Red	Red	Red	Red	Red with dots	Green	Green	Green	Green	Green							
Symbol	●	●	●	●	●●●●	▮	▮	▮	▮	▮							
Sensation/ Appearance of discharge	Wet	Wet	Wet	Sticky	Dry	Dry	Dry	Dry	Dry	Dry							

### Basic Infertile Pattern

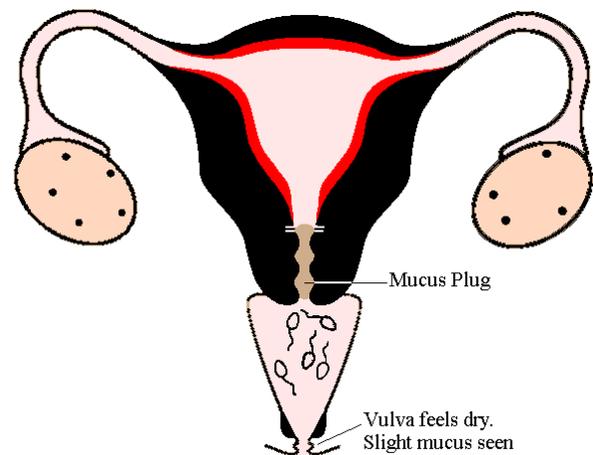
The Basic Infertile Pattern is an **unchanging pattern** and reflects cervical inactivity. In cycles of average length it is recognized by:

- 1 Unchanging dryness (Figure 3), or
- 2 Dry vulva with a small amount of mucus seen and which is the same every day. Figure 4 illustrates a Basic Infertile Pattern of mucus. Three cycles are studied (4a, 4b, 4c ) in order to identify correctly the point of change

of (i) sensation or (ii) the appearance of the mucus or both.

The ovaries are quiescent. Very little oestrogen is being produced. The cervix is occluded and there is no sperm penetration. If the discharge remains the same day after day for three cycles, it is a sign of infertility. The vulva feels dry and the mucus, which results from small fragments breaking off from the lower part of the plug, is slight and cloudy. This unchanging pattern of infertility is common for many women.

**Figure 4 (a) - (c) Basic Infertile Pattern of mucus remains the same day after day, cycle after cycle [initially recorded with a white baby stamp or the symbol ○ (4a) but then recorded with a yellow stamp or the symbol ≡ when the pattern is seen to be unchanging (4b, 4c) ]. There is no entry of sperm into the cervix because of the plug of mucus.**



(a)	Stamp																	
	Symbol	●	●	●	●●●●	○	○	○										
	Sensation/ Appearance of discharge	Wet	Wet	Sticky	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus										
	Stamp																	
(b)	Stamp																	
	Symbol	●	●	●	●●●●	≡	≡	≡	≡	≡								
	Sensation/ Appearance of discharge	Wet	Wet	Wet	Sticky	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus							
	Stamp																	
(c)	Stamp																	
	Symbol	●	●	●	●●●●	≡	≡	≡	≡									
	Sensation/ Appearance of discharge	Wet	Wet	Sticky	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus									
	Stamp																	

### Point of Change

Figure 5 shows that the ovaries are now active and are producing oestrogen (- - -), which stimulates the cervix to activity. Fluid mucus is produced and this frees the plug so sperm can now enter the cervix. A change in sensation from dry to no longer dry is now experienced at the vulva and is recorded on the chart with a white baby stamp or the symbol ○. The appearance of the mucus may be thick and cloudy. This cloudy, sticky mucus does not indicate infertility. The fact that it has arrived at the vulva means that it has left the cervix, leaving it open to sperm cells.

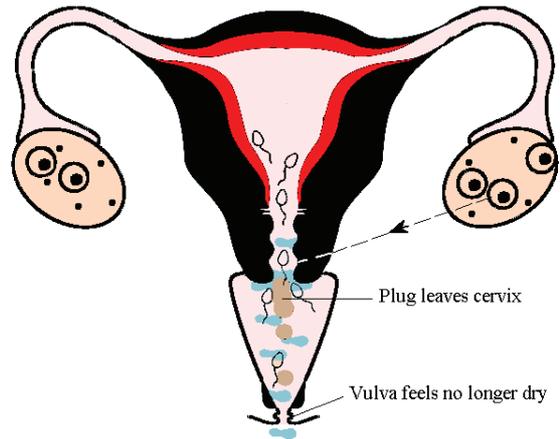
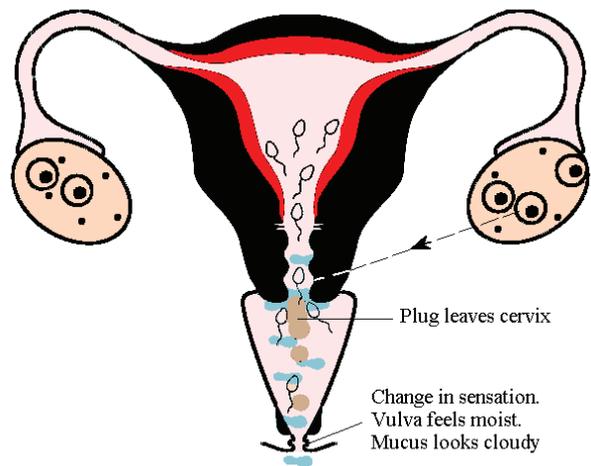


Figure 5. Point of change in sensation at the vulva, from dry (green stamp or the symbol █) to no longer dry (white baby stamp or the symbol ○) and is associated with the rise in oestrogen being produced by the ovary (- - -). Sperm are now able to enter the cervix.

Stamp														
Symbol	●	●	●	●	●●●●	█	█	█	█	█	○			
Sensation/ Appearance of discharge	Wet	Wet	Wet	Sticky	Dry	Dry	Dry	Dry	Dry	Dry	Sticky Cloudy			

In the same way where there is a Basic Infertile Pattern of mucus (Figure 6) the ovary has become active. The point of change is noted at the vulva where the sensation changes, indicating that now the sperm cells can enter the cervix. The recording of this change is made with a white baby stamp or the symbol ○ (Figure 6).

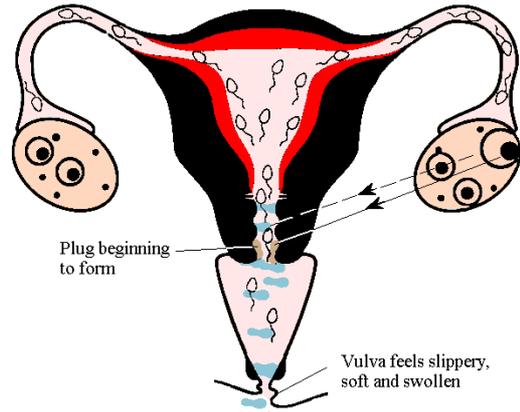
Figure 6. Point of change in sensation at the vulva from a Basic Infertile Pattern (yellow stamp or the symbol █) to mucus which feels moist and looks cloudy (white baby stamp or the symbol ○). This change is associated with a rise in oestrogen being produced by the ovary (- - -). Sperm are now able to enter the cervix.



Stamp														
Symbol	●	●	●	●●●●	█	█	█	█	○					
Sensation/ Appearance of discharge	Wet	Wet	Sticky	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus	Dry Slight Mucus	Moist Cloudy					

Figure 7 shows the changing pattern of fertility. (The Basic Infertile Pattern has been unchanging.) The ovary is producing greater and greater amounts of oestrogen (---). The mucus is changing from being sticky to that giving rise to a wet, slippery sensation. Clear strings of mucus may be noticed. **The maximum amount of mucus may diminish and a slippery sensation continue for a day or two. The last day of the slippery sensation is the most fertile day in the cycle and is termed the Peak because it is the peak day of fertility and is associated with a heightened sensitivity and swelling of the vulva.**

**It is marked with a cross (x) on the record.** This point is very close to the time of ovulation. Already the ovary is producing progesterone (\_\_\_\_) as the follicle is preparing to shed the ovum into the fallopian tube. Progesterone is



**Figure 7. The Peak, the last day of slippery sensation is marked with a (x) on the white baby stamp or the ○. Progesterone production is indicated by the solid line (\_\_\_\_). See Figure 8 "Day1 past the Peak".**

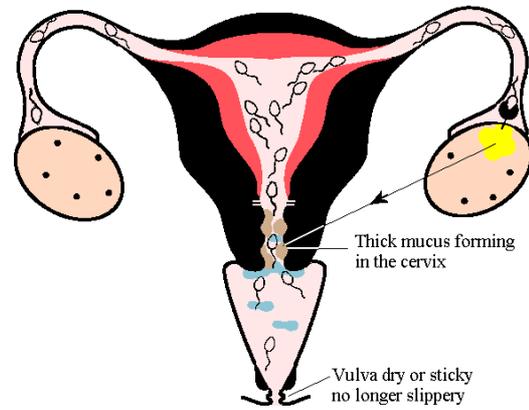
Stamp																				
Symbol	●	●	●	●	●●●●						○	○	○	○	○	○	○			
Sensation/ Appearance of discharge	Wet	Wet	Wet	Sticky	Dry	Dry	Dry	Dry	Dry	Dry	Sticky Cloudy	Wet Clear	Slippery Clear	Slippery Clear Strings	Slippery	Slippery				

activating the lower part of the cervix to produce thick, sticky mucus which, over the next 3 days, will gradually close the canal of the cervix. However, during these 3 days there remain small channels through which sperm cells can travel. These rapidly reach the outer part of the fallopian tube where the egg cell will be waiting to be fertilized.

The egg can now be seen in the fallopian tube (Figure 8). The cervix is beginning to close with the thick mucus under the influence of progesterone (\_\_\_\_) from the luteinized follicle (the corpus luteum). The progesterone has an influence on the mucus so that the woman appreciates the change in sensation at the vulva and she feels dry or sticky.

**There is no longer any lubricative sensation at the vulva.** This is due to changes both in the cervix and in the lower part of the vagina, which are both under

hormonal control. The mucus is dried as it passes through the vagina by the action of the Pockets of Shaw.

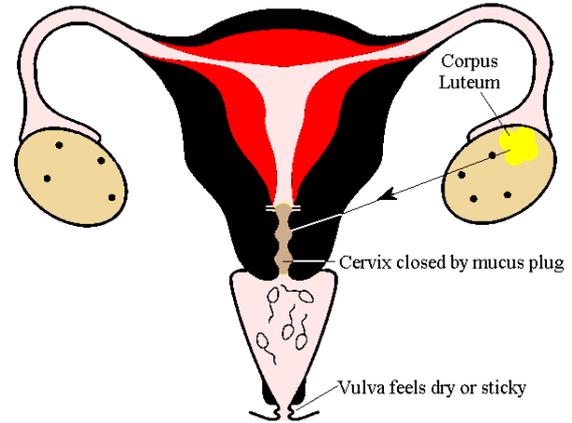


**Figure 8. Day 1 past the Peak. Ovulation has occurred (or is imminent) and sensations at the vulva are no longer slippery. They are recorded with a numbered green or yellow baby stamp or a numbered symbol || or ==. Thus the Peak is verified retrospectively.**

Stamp																				
Symbol	●	●	●	●	●●●●						○	○	○	○	○	○	○			
Sensation/ Appearance of discharge	Wet	Wet	Wet	Sticky	Dry	Dry	Dry	Dry	Dry	Dry	Sticky Cloudy	Wet Clear	Slippery Clear	Slippery Clear Strings	Slippery	Slippery	Dry			

### The Luteal Phase

Figure 9 illustrates the luteal phase of the cycle, where from the fourth day after the Peak (the last day of the slippery sensation at the vulva) the cervix is closed with a thick plug of mucus, preventing sperm cells from entering the cavity of the uterus. The corpus luteum is in the ovary producing both oestrogen and progesterone. If there has been no genital contact from the beginning of the first point of change to the beginning of the fourth day past the Peak, the egg will not have been fertilized and will disintegrate in the fallopian tube.

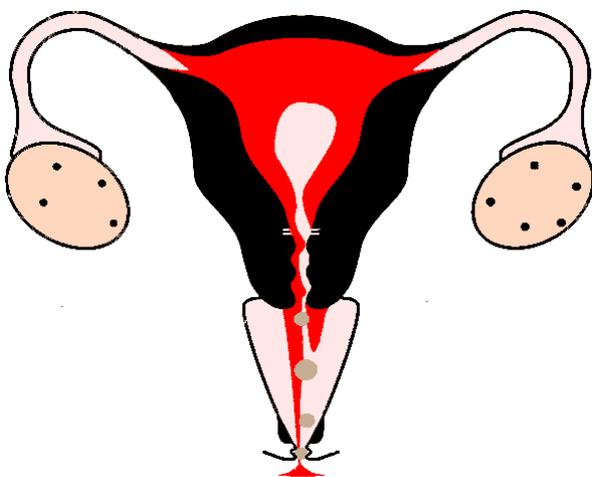


**Figure 9.** By day 4 past the Peak the ovum has disintegrated. There is no entry of sperm into the cervix. Plain yellow or green stamps are now used for the record, or the symbols **—** for discharge or **||** for dry. The egg has gone, the woman is infertile.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Stamp	[Red]	[Red]	[Red]	[Red]	[Red with 4 dots]	[Green]	[Green]	[Green]	[Green]	[Green]	[Baby]	[Baby]	[Baby]	[Baby]	[Baby]	[Baby]	[Baby]	[Baby]	[Baby]	[Baby]	[Baby]
Symbol	●	●	●	●	●●●●						○	○	○	○	○	○	X○	1	2=	3=	3=
Sensation/ Appearance of discharge	Wet	Wet	Wet	Sticky	Dry	Dry	Dry	Dry	Dry	Dry	Sticky Cloudy	Wet Clear	Slippery Clear	Slippery Clear Strings	Slippery	Slippery	Dry	Sticky	Sticky	Sticky	

	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Stamp	[Green]	[Yellow]	[Yellow]	[Yellow]	[Green]	[Yellow]	[Green]	[Green]	[Green]	[Green]					
Symbol		==	==	==		==									
Sensation/ Appearance of discharge	Dry	Dry Cloudy	Dry Cloudy	Dry Cloudy	Dry	Moist Cloudy	Dry	Dry	Dry	Dry					



**Figure 10.** Menstruation which usually occurs 11-16 days after ovulation.

Menstruation (Figure 10) heralds the end of the cycle, usually 11 - 16 days after ovulation, and the start of the next cycle. The plug has left the cervix to allow the passage of blood from the uterus to the exterior. The ovaries have now returned to their quiescent state.

## **Delayed Ovulation - the Extended Pre-ovulatory Phase and the Basic Infertile Pattern**

Ovulation is often delayed at times of stress, during lactation and at the pre-menopause. The concept of the Basic Infertile Pattern is an essential element of the Billings Ovulation Method. Recognition of this unchanging pattern of pre-ovulatory infertility allows freedom for intercourse without conception in the pre-ovulatory phase, no matter how long or how short it may be.

The Basic Infertile Pattern is an unchanging pattern, observed over a period of at least two weeks, of either:

- 1 no mucus (vulval dryness); or
- 2 an unchanging discharge at the vulva which accompanies a low unchanging level of oestrogen; or
- 3 a combination of (1) and (2) when the discharge remains unchanged during 2 weeks of observation and is interrupted by dry days.

The Basic Infertile Pattern of discharge, examples (2) and (3), is of vaginal origin. When the oestrogen rises sufficiently to cause a cervical response, the pattern changes and signifies possible fertility. Rising and falling oestrogens may produce an endometrial response with bleeding, either break-through or withdrawal bleeding.

The Early Day Rules (see below) applied to the Basic Infertile Pattern provide security in the Billings Ovulation Method, and ensure the recognition of the return of fertility in the case of delayed ovulation due to any cause.

## **Cervical Failure and the Basic Infertile Pattern**

The cervix must produce adequate mucus for the proper functioning of sperm. Under some circumstances, e.g. approaching menopause, post contraceptive medication, the cervix fails to respond to the oestrogenic stimulus with consequent failure of the sperm-receptive mucus discharge. The woman is then infertile, even if she is

ovulating. She will recognise this as an unchanging pattern, i.e.

- 1 BIP of dryness,
- 2 an unchanging discharge, or
- 3 a combination of both dry and unchanging discharge.

The Early Day Rules apply, allowing any return of fertility to be recognised.

## **The Rules of the Billings Ovulation Method**

1. For the Achievement of Pregnancy:

Apply the Early Day Rules. This enables the change to the fertile pattern of mucus to be recognized. Then postpone intercourse until slippery mucus occurs. The next few days are the most fertile. Therefore intercourse should occur while slippery mucus is obvious and for one or two days past the Peak.

2. For the Postponement of Pregnancy:

- (a) The Early Day Rules and
- (b) The Peak Rule

are applied. These rules are as follows:

### **The Early Day Rules**

Rule 1: Avoid intercourse on days of heavy bleeding during menstruation.

Rule 2: Alternate evenings are available for intercourse when these days have been recognized as infertile. (Basic Infertile Pattern)

Rule 3: Avoid intercourse on any day of discharge or bleeding which interrupts the Basic Infertile Pattern. Allow 3 days of Basic Infertile Pattern afterwards before intercourse is resumed on the fourth evening. Rule 2 continues.

### **The Peak Rule**

When the Peak is identified following a change from the BIP, the Peak Rule is applied. From the beginning of the fourth day following the Peak until the end of the cycle intercourse is available every day at any time.

## Importance of Charting

If these guidelines are applied, the couple can expect 99% success in avoiding pregnancy.

The daily chart is important in reminding a woman to pay attention to the mucus sign every day.

The record gives valuable information to the husband, so that he and his wife can discuss the possibilities, and together decide when they will bring their first or next baby into the world. In this way a powerful and loving communication is set up between them and the baby is welcomed and loved.

## Legends to Stamps and Symbols

The legends to the various coloured stamps and symbols used in the charts, are given below:

						I
bleeding	dry infertile	possibly fertile	discharge, infertile (i) BIP of unchanging discharge before Peak (ii) from the 4th day past the Peak	Peak	1 2 3 days after Peak possibly fertile - dry or mucus which is not wet or slippery	intercourse
						I

The Author gratefully acknowledges

Jane Mooney for the original artwork, and

Lou Bennett for editorial assistance.