SYMPTO-THERMAL METHOD
&
CLINICAL PRACTICE

Course Manual

natural fertility
te whakato kakano tuturu
NZ aotearoa

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Introduction

This manual contains the core course content for:

- Sympto-thermal Method 1
- Clinical Practice 1
- Sympto-thermal Method 2
- Clinical Practice 2

These courses are components of the Natural Fertility New Zealand (NFNZ) Fertility Educator Training Programme.

This course manual provides students with training in the Sympto-thermal method, and its application in clinical situations.

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1.0 Natural Family Planning History and Methods

Introduction

This section delves into the history of Natural Family Planning worldwide and looks at the various methods of Natural Family Planning.

1.1 Objectives

The student will be able to:

1. Describe the difference between the Billings Ovulation method and the Sympto-Thermal method of Natural Family Planning.
2. Explain the difference between a single-index method and multiple-index method.

1.2 History of Natural Family Planning

Natural Family Planning (NFP) is based on the ability to recognize naturally occurring physiological signs and symptoms of the fertile and infertile phases of the menstrual cycle and to use this information to avoid or achieve a pregnancy

NFP was preceded by various methods of periodic abstinence known collectively as the **rhythm/calendar method**. These must be distinguished from NFP as they relied not on physiological symptoms to identify the fertile time but on the potential for conception drawn from a record of the woman's past cycles.

A structured approach to the rhythm/calendar method began in the 1930's with the work of Ogino in Japan and Knaus in Austria. Starting with the observation that there was a constant time between ovulation and the next menstruation, they developed a method based on predicting the probable time of the fertile phase, calculated from a woman's record of the length of her previous cycles.

As early as 1868, Squire reported to the London Obstetrical Society his observation of a biphasic basal body temperature (BBT) pattern during the menstrual cycle, although he was unable at that stage of knowledge to give a reason for this. In 1904 the Dutch gynaecologist van de Velde suggested a relationship between the shift in BBT and ovulation. This was confirmed in the 1930's when research into hormonal influences controlling the menstrual cycle showed that the rise in progesterone post-ovulation caused BBT to rise to a higher level.

The **first to develop a temperature method of NFP** was a German Catholic priest, Wilhem Hillebrand. In 1935, he carried out the first study based on temperature change, with 12 women and a total of 76 cycles.

It was not until the 1950's that temperature recording was widely used for family planning. At this stage, John Marshall (England) carried out a study using Ogino's calculation to identify the pre-ovulatory fertile time and a rise in basal body temperature to identify ovulation. His study showed that, if the method was used correctly, its effectiveness was 5 pregnancies per 100 woman years (i.e. if 100 women used the method for one year, 5 would become pregnant).

In 1955, Cynn (United States) reported that cervical mucus was significant in fertility and could also be used as a marker of fertility. The changes observed during the cycle were later shown to be caused by the pre-ovulatory rise in oestrogen and the post- ovulatory rise in progesterone. John and

Lyn Billings (Melbourne) in the 1960's developed an approach teaching women how to recognize, record and interpret these symptoms as a method of NFP (the **Billings Ovulation Method**).

The **Sympto-Thermal method**, using both temperature and cervical mucus symptoms to identify the fertile phase, was introduced in the 1960's.

The reliability and acceptability of the Billings Ovulation Method was addressed by the World Health Organization in a multicentre study started in 1976 and involving different cultures and socio-economic levels. NZ was one of 5 countries involved, along with Ireland, India, El Salvador and the Philippines.

The results of the Billings Ovulation Method study were published in a series of scientific papers in the 1980's. They showed that the pregnancy rate was unacceptably high, at least in developed countries. These results confirmed for the NZ Association of NFP that the method they would offer was the Sympto-Thermal method with its effectiveness of 2.3 pregnancies per 100 women years when used correctly.

The **Creighton Model FertilityCare**™ System (CrMS) was researched and developed at the Pope Paul VI Institute for the Study of Human Reproduction, a non-profit organization. The Creighton Model is a standardized modification of the Billings Ovulation Method. Research leading to the development of the Creighton Model System began in 1976 and the system was released in 1980. The teachers of the Creighton Model are trained allied health professionals and specifically-trained physicians who have been educated to incorporate the model into their medical practice. Teachers are trained in a 13-month Allied Health Education Program which is designed to help them meet the client's needs. Research shows the method-effectiveness to avoid pregnancy to be 98.7 to 99.8%. The user-effectiveness to avoid pregnancy ranges from 94.6 to 97.9%. For more information about the Creighton Model visit http://www.creightonmodel.com/index.html

The **Standard Days Method** is a fairly new method developed by the Institute for Reproductive Health at Georgetown University (USA). It does not use observations or temperature. It is an updated calendar method. The couple abstain from sexual intercourse on days 8 through 19 of each cycle; cycles begin on the first day of her period, and cycles must be from 26 to 32 days in length. It relies on ovulation occurring mid cycle, the fertile window beginning five days before ovulation and lasting a day after ovulation, and sperm survival of up to five days. Standard Days Method effectiveness : ~95% and user effectiveness of 88%. CycleBeads are a visual tool that facilitates use of SDM by helping a woman keep track of the days of her cycle and know when she is likely to get pregnant if she has unprotected intercourse. It is a string of 32 color-coded beads, with each bead representing a day of a woman's menstrual cycle. CycleBeads has a black rubber ring that the woman moves over one bead each day, in the direction of the arrow. For more information http://www.irh.org/?q=content/efficacy-and-scientific-basis-sdm

The **Two-Day Method**, also developed at Georgetown University (USA), uses observations and a simple two-day rule. A woman using the TwoDay Method checks for cervical secretions at least once a day. If she notices secretions of any type, color, or consistency either "today" or "yesterday," she considers herself fertile. It is easier to learn than the Billings or Creighton methods, but somewhat less effective at ~96% method effectiveness and a user effectiveness of 86%. More information visit http://www.irh.org/?q=content/twoday-method

The final major development was in breastfeeding. An international meeting of researchers interested in lactation and NFP was held in 1988 in Bellagio, Italy. The purpose of the meeting was to come to a consensus about the conditions under which breastfeeding can be used as a safe and

effective method of family planning. The outcome was the Bellagio Consensus Statement, which set out guidelines for the avoidance of pregnancy based on full breastfeeding and continuing amenorrhea. In 1992, New Zealand did its own research in a study following the Bellagio guidelines. The results, published in 1996 confirmed the effectiveness of the Bellagio approach.

1.3 Fertility Indicators

Natural Family Planning would be a wonderfully simple exercise if women released a mature ovum at exactly the same time in each cycle. Unfortunately, this process is never so clear-cut and even woman whose menstrual cycles are normally regular note irregularities from time to time, all of which affect the timing of the fertile phase.

However, a woman's body does produce signs, or clues to what is happening. As the fertility cycle runs its course the hormones oestrogen and progesterone affect the body in various ways. The woman may not be aware of many of these effects, but she can detect some of the bodily changes that occur and learn to recognise and interpret them as indicators of the different phases of her cycle.

The major observable indicators of the fertility cycle are:

a. Changes in the basal body temperature

b. Changes in the quantity and quality of the mucus produced by the cervix

c. Changes in the cervix

There are also a host of minor indicators, such as breast tenderness, ovulation pain, changes in mood etc, which vary from woman to woman. These may be more difficult to measure although once a woman recognizes these signs, they can become useful back-up indicators of the different phases.

1.4 Natural Family Planning Methods

All methods of natural family planning are aimed at determining, as accurately as possible, the beginning and end of the fertile phase. The choice of indicator or indicators for detecting the fertile phase determines the family planning method. There are three main methods of natural family planning in common use.

1. The Temperature Method

The indicator in this method is the sudden rise in the woman's basal body temperature that occurs around the time of ovulation. From this it is possible to calculate the end of the fertile phase and the beginning of the infertile phase. It does not, however, enable us to detect the beginning of the fertile phase.

2. The Billings Ovulation Method (also known as the cervical mucus method, and then the modernised Creighton Model Version)

Billings and colleagues in Melbourne first promoted observation of the oestrogen-induced changes in cervical mucus in the 1970s, as a means for women to recognise the pre-ovulatory fertile days of their cycle as well as ovulation. When cervical mucus is used by itself to define fertility, it is known as the Billings Ovulation Method.

The levels of hormones directly control the production of mucus in the cervix at various stages in the fertility cycle.

When ovulation is imminent the hormonal activity causes the cervix to manufacture thin, watery mucus designed to assist the passage of the sperm to the waiting ovum.

Once ovulation has occurred a change in hormonal activity causes the cervix to produce thick sticky mucus which literally plugs the opening of the uterus to prevent sperm entering. These changes in the pattern of mucus production indicate the onset and end of the fertile phase.

3. The Sympto-thermal Method (STM)

As the title suggests this method involves taking the changes in the basal body temperature and combining it with observation of one or more of the other indicators of fertility. It is possible to determine the beginning and end of the fertile phase using this method.

Multiple-index methods

Practical experience suggests that this traditional division of methods is often too rigid and confining when applied to individual situations. Instead, we have developed a more flexible, approach to natural family planning, which allows individual women scope in determining which method is best for her, given her specific requirements.

This approach has a broader framework and divides the natural methods into the following:

a. Single-index methods - in which only one indicator of the different phases of the cycle is used.
b. Multiple-index methods - in which several indicators are used in combination. This differs from the STM, to which it is closely related, in that temperature need not necessarily be one of the indicators used.

Each woman has a unique pattern of hormone production. The effect of these hormones on specific organs is also unique to the individual, as are her predominant signs and symptoms of fertility.

The art of successful natural family planning is for each woman to discover which are her best indicators of fertility, and so tailor the method to suit her requirements. At first a woman may want to use several indicators to assess the fertile phase of the cycle; as she gets to know her body and gains confidence in reading the signs of her fertility, she may find that a single indicator is sufficient. In either case she is free to choose the methods in which she and her partner have most confidence.

The information that follows looks at the STM in detail. It looks at the major indicators of fertility to see how each can best be observed in the body, how their individual patterns can be charted and what guidelines apply to their interpretation, taken either singly or in combination.

1.5 Fertility Awareness

The information and knowledge that is gained from STM charting is called fertility awareness. Clients choose to learn about their fertility for a number of reasons and these are outlined in this section.

The way this information is then applied depends on the client's needs and these are covered in depth throughout the training manual. Section C specifically looks at those clients who wish to conceive.

Uses of Fertility Awareness

As educators we are trained to teach the recognition and interpretation of symptoms of fertility. Our clients may choose to put this knowledge to one of a number of uses, the most common of which are listed below.

a. They may wish to use Natural Family Planning (NFP) to avoid pregnancy, by charting their fertility and then abstaining from intercourse on potentially fertile days.
b. They may wish to use NFP to achieve a pregnancy by identifying the most likely time of conception.
c. They may wish to chart their fertility, and use a condom or diaphragm during the fertile time as their method of contraception (fertility awareness with barriers).
d. They may wish to chart their fertility and use a condom or diaphragm in the pre-ovulatory days and at the earlier stages of the fertile time, while abstaining for the few days that they consider the most fertile (fertility awareness with barriers).
e. They may wish to chart their fertility for self-awareness, even if they are not in a sexual relationship at this time.
f. They may wish to use a barrier method during a confusing or transitional time e.g. a long weaning, while charting their fertility (fertility awareness with barriers).
g. They may wish to chart their fertility for sex pre-selection.
h. They may wish to chart their fertility for help in coping with PMS, but not as a contraceptive method, whether or not they are in a sexual relationship.
i. They may use a condom for protection against sexually transmitted infections while charting their fertility (fertility awareness with barriers).
j. They may wish to use an IUCD (excluding the Mirena) and chart their fertility, either for self awareness or to gain greater safety by abstaining during the fertile time (fertility awareness with barriers).

Obviously the teaching of fertility awareness is the same for all the above groups

2.0 The Sympto-Thermal Method

Introduction

The focus of this section is on the Sympto-Thermal Method (STM) of Natural Family Planning (NFP), which is taught by NFNZ Fertility Educators. It is the most effective NFP method currently available. The indicators of fertility are explained at length and the section includes information on how to teach clients to observe, record and interpret these.

2.1 Objectives

The student will be able to:

1. Name the two main indicators of fertility when using the Sympto-Thermal method.
2. Describe how to observe cervical mucus.
3. List the three descriptive categories required when documenting cervical mucus.
4. Explain the importance of sensation as a sign of fertility.
5. Outline how to take an oral temperature.
6. Explain the difference between a biphasic and a monophasic chart.
7. Explain the significance of the position of the cervix at various times of the menstrual cycle.
8. Describe how to palpate the cervix.
9. Draw a diagram showing the relationship between the factors involved in combined fertility.
10. Explain the post-ovulatory guidelines.
11. Explain the pre-ovulatory guidelines.
12. Chart the signs and symptoms of their own fertility for one cycle on the blank chart provided. (or the sample chart) and correctly place the double check indicators pre- and post ovulatory.
13. Correctly apply the pre and post ovulatory guidelines to charts.
14. Correctly identify the length of the luteal phase on a STM chart.

2.2 STM Fertility Indicators

The STM defines fertility by two main indicators.

Cervical Mucus & Sensation changes which:

- Reflect rises in oestrogen
- indicate that ovulation may be about to occur
- provide a suitable environment for sperm transport and survival

A rise in Basal Body Temperature (BBT) which:

- occurs about the time of, or just after ovulation
- reflects a rise in progesterone

Another sign, which can be used to back-up the two main indicators, is changes in the cervix. Under the influence of oestrogen the cervix can change its position, openness and texture.

2.3 Cervical Mucus Description & Sensation

Mucus Description

The mucus is produced by the glands of the cervix. At the beginning of the menstrual cycle it forms a thick, viscous barrier to sperm, and sperm survival is only a few hours. With rising levels of oestrogen before ovulation, the mucus at the cervix becomes clear, watery and stretchy, and is highly receptive to sperm.

Mucus observations are made at the vulva, and vary from woman to woman. The symptom-thermal method requires that women describe the Colour, Amount and Texture of their cervical mucus.

Sensation

Sensation is an awareness of a feeling at the vulva, not something seen or felt by touch. Wet, dry or damp are the most common sensations observed, but other descriptions may also be recorded. The sensation of wetness usually increases as ovulation approaches.

The following list contains some adjectives women use to describe the sensation they feel when mucus is present and what the mucus looks like.

	Sensation	**Appearance**
Infertile Type Mucus	Dry	Cloudy
		White
		Yellow
		Opaque
		Flaky
		Pink
		Thick
		Tacky
		Sticky
		Gooey
Fertile Type Mucus	Damp	Clear
	Wet	Stringy
	Lubricative	Stretchy
		Blood-stained
		Runny
		Thin
		Watery
		Slippery

2.4 Basal Body Temperature and Ovulation

The hormone progesterone has the property of being thermogenic and consequently the presence of increased blood concentrations of progesterone following ovulation is associated with a higher basal body temperature (BBT).

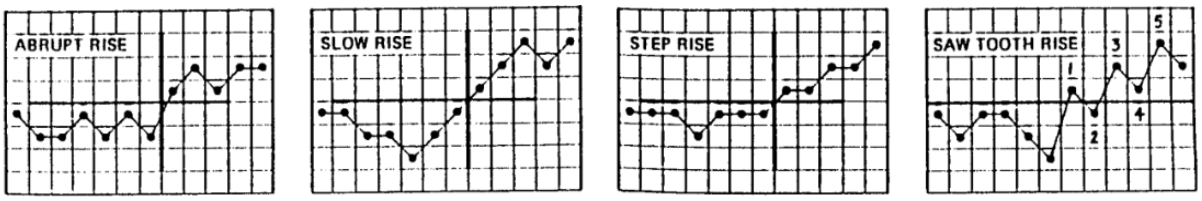
BBT Interpretation

When a woman records her BBT daily throughout her menstrual cycle, if she ovulates, her chart will show a biphasic pattern with the temperature shift from the lower to higher reading occurring around the time of ovulation. Once the shift has occurred, the temperatures remain at the higher level until the next period begins.

The change in temperature from the lower to the higher level can occur in many ways:

a. As an acute/abrupt rise
b. As a slow gradual rise
c. As a step-like rise
d. As a saw tooth rise

These examples of different types of rises, from 'Fertility - a Guide to NFP' by E Clubb and J Knight, show some of the possible variations:



Biphasic and Monophasic Charts

The basal body temperature record is either biphasic or monophasic.

A **biphasic** temperature record shows a low temperature level during the first phase of the menstrual cycle and a slightly elevated temperature level in the second phase.

- The temperature shift occurs between the change from low to first high temperature.
- **Biphasic** BBT charts indicate an ovulatory menstrual cycle.

In **monophasic** temperature charts, no temperature shift is observed because the daily temperatures fluctuate irregularly up and down between two menstruations.

Monophasic temperature charts indicate a menstrual cycle that is anovulatory.

Luteal Phase Length

The luteal length is calculated from the first high temperature to the day before the next period starts. The range is from 10-16 days and is fairly constant from cycle to cycle. It has been shown that stress does not affect the length of the luteal phase. Knowing one's luteal length, helps with predicting when one's next period will occur or if trying to conceive, may give an early indication of pregnancy, if the luteal length is unusually long. Luteal insufficiency is when the luteal phase is 9 days or shorter.

2.5 The 3 over 6 Rule for Identifying Ovulation

To identify the temperature shift associated with ovulation, look for three temperatures, which are higher than the preceding six temperatures (sometimes referred to as the 3 over 6 rule). This temperature rise will be sustained until the next period occurs. The temperature will then decline to a pre-ovulatory range. There are occasions when a clear temperature rise can be identified even though the preceding six temperatures may not all be lower. The number 'six' is a guideline only to help educators decide where the biphasic change occurs.

Note:

a. You may read from a variety sources various rules for identifying the rise. Some of these use a cover-line, some define the amount that the rise should be, e.g. one of the readings at least 0.2C higher, all three readings 0.2C higher, etc. Our rule of 3 over 6 is the most commonly used and the simplest.

b. A single reading, which is obviously out of line with the surrounding readings, a spike or a dip, may be discounted. However if there is a drop in the 3 days of rise, it is necessary to wait until the rise is clear (see 'saw tooth rise' on chapter 2.4).

c. The best way to see the rise when there are disturbances in the chart is to place a sheet of paper or a ruler over the lower readings (cover-line).

d. If clients are shown this they soon learn to see clearly whether there is a rise and where it is, even if it is very slight or jagged.

e. Erratic temperature charts with wide swings may result from incorrect temperature taking. Check how the client is taking her temperature.

f. Also check that the client is taking her temperature at the same time each morning. An hour or more difference in the usual time of temperature taking should be noted on the chart, as this can make a difference in the woman's temperature. Some clients may choose to set an alarm clock to decrease this variance. If there is no apparent reason for the erratic readings after the second cycle has been charted, change to a vaginal reading.

g. Disturbances may be caused by illness. For some women even a small amount of alcohol the night before can lead to a higher reading the next morning.

h. Some women are affected by a disturbed night, but generally if a woman has to get up during the night, a couple of hours' rest are enough for her to get a normal reading.

i. Don't assume that any of the above will cause disturbances in temperature. Reaction to such events varies tremendously.

j. Don't spend too much time in clinic trying to identify the reason for occasional disturbances in charting. It is better to enable the clients to learn to interpret a chart with a few disturbances, as all are going to meet these at some stage.

Some basal body temperature charts, which are ovulatory, show a dip immediately preceding the temperature rise.

Studies of large numbers of temperature charts show that the dip, however, occurs in less than 15% of cycles. Consequently it should not be regarded with any importance if it is missing but can be reassuring if it is present.

The temperature shift is an approximate indicator of the time of ovulation. Recording of the basal body temperature gives no information on the pre-ovulatory fertile phase.

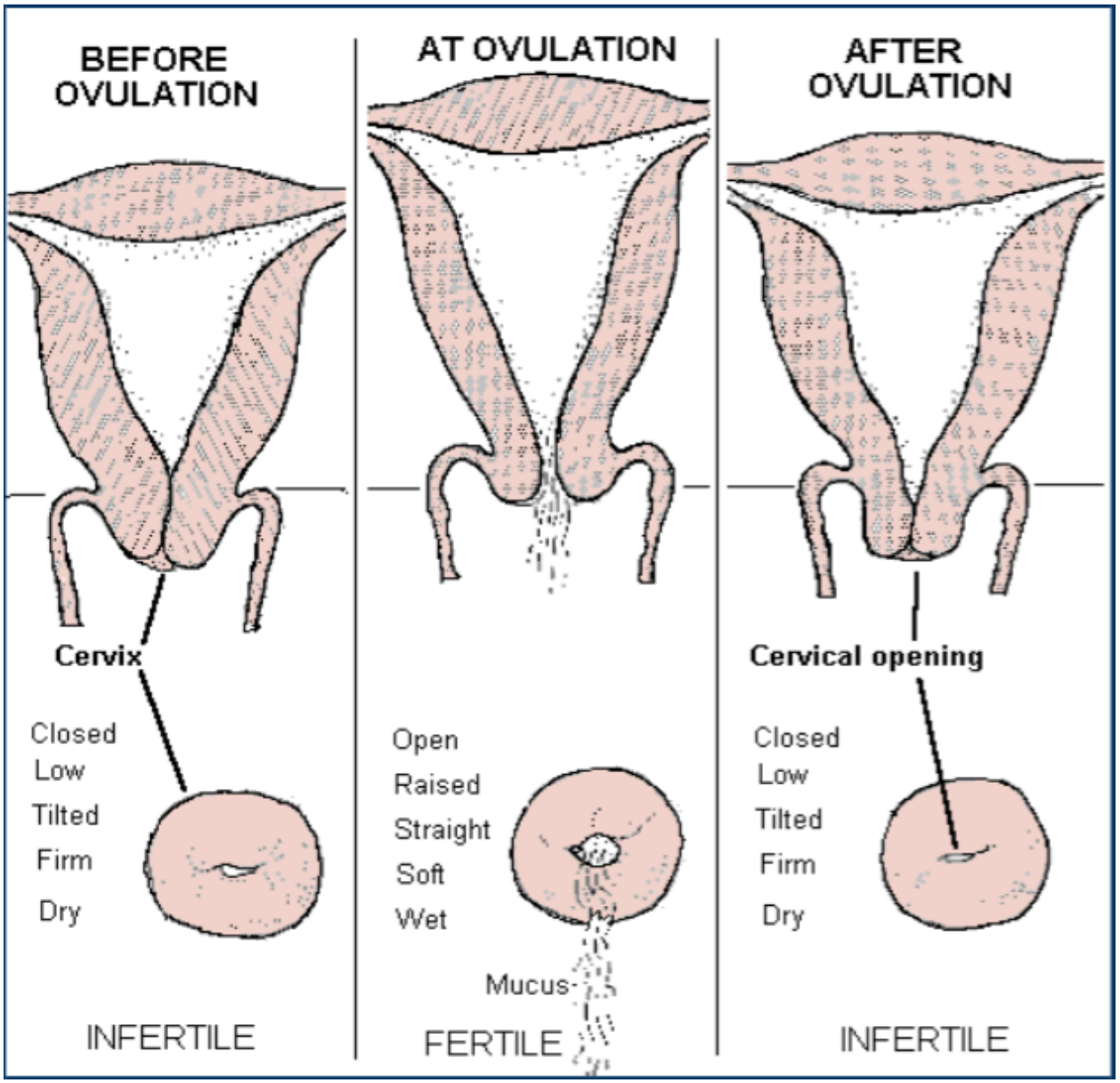
The post-ovulatory infertile phase of the cycle is indicated with 95% reliability as commencing on **the evening** of the third day of consecutive higher temperatures.

When BBT recording is coupled with charting of cervical mucus symptoms the post-ovulatory infertile phase is indicated with very high reliability as beginning on **the evening of the third day past the last day of fertile-type mucus or the evening of the third day of higher temperatures, whichever is the later.**

Prior to 2008 NFNZ Educators taught the infertile phase as beginning on the evening of the fourth day past the last day of fertile-type mucus or the evening of the third day of consecutive higher temperatures, whichever was the later). This was changed after considering the latest STM research from Germany and teaching guidelines in the United Kingdom.

2.6 Cervical Palpation

Changes that occur in the cervix during the menstrual cycle can be recognized by feeling the cervix with the fingers. Once recognised, these changes may be used by NFP users as an extra sign of fertility and infertility. The changes in position, openness, consistency and tilt of the cervix are most commonly observed, and are illustrated below:



C-1 Cervical changes

2.7 Sympto-thermal Method Guidelines

Introduction to the Double-Check Indicators

The pre and post ovulatory guidelines are clear and very safe markers for the beginning and end of the fertile time. Once clients are able to clearly identify both ends of the fertile time according to these guidelines, they have the skills to use the Sympto-Thermal Method (STM) as a highly effective method of family planning.

The NFNZ educator can recognise that the clients have learnt and understand these guidelines when the clients bring to clinic a chart with:

a. A vertical line drawn in the pre-ovulatory phase which correctly marks the end of the infertile pre ovulatory phase using the double check indicators (S-21 and last day of no mucus and a sensation of dry) **and**

b. The post-ovulatory changes in mucus, sensation and temperature (double-check indicators) correctly labelled and numbered **and**

c. A vertical line drawn to show the end of the fertile time

The Post-Ovulatory Double-Check Indicators

The post-ovulatory guidelines are taught first. The 2 indicators are Mucus Description + Sensation, and a 'sustained rise' in the Basal Body Temperature (BBT).

Mucus Description & Sensation

Mucus descriptions and sensation are recorded daily. Both descriptions are as important as each other.

1. A change from fertile-type mucus and sensation to a less fertile description is identified.

   The last fertile description is marked (usually with an 'X') and then three days of changed mucus **and** sensation are numbered on the chart. **The mucus and sensation may change to less fertile or infertile descriptions on the same day, or separate days.** You need to wait for the final change to occur, then mark that day of the cycle with an 'X'.

Basal Body Temperature (BBT)

2. Three raised temperatures, higher than the preceding six, are numbered (see chapter 2.5).

   It is possible that there may be occasional dips or rises that break the pattern, but with experience it can be decided to discount any one reading which is clearly out of line. The temperature will remain at this higher level until the period arrives.

3. If the change from fertile mucus to infertile mucus is difficult to identify or cannot be established, but there is a definite temperature rise of three days, **a fourth high temperature is added for safety for those using the information to avoid pregnancy**.

   This guideline can also be applied if there is a raised temperature that is questionable due to it being taken later than usual or potentially the result of alcohol consumption the evening before. Safe intercourse in both these cases can occur on the evening of the fourth high temperature for those clients choosing to avoid pregnancy

The End of fertile phase Guideline

Once a temperature rise **and** mucus/sensation change has been numbered, a line is drawn through the third day of changed mucus/sensation or third day of raised temperature,

<u>whichever comes later.</u>

Intercourse Guidelines for Avoiding Conception Clients

- Once the end of the fertile phase has been identified (using the indicators above), unprotected Intercourse can take place from the evening of the day in which the Guideline was placed.

The Pre-Ovulatory Double-Check Indicators

For couples who want to conceive, the focus in this phase is on identifying the start of fertility by the presence of mucus or a sensation that is greater than dry.

The pre ovulatory guidelines are specifically relevant to clients choosing to avoid pregnancy.

The 2 indicators are Mucus Description/Sensation, and the S-21 Calculation (S minus 21).

Mucus Description & Sensation

1. The pre-ovulatory infertile time according to mucus ends once **any mucus or sensation of dampness occurs.**

S-21 Calculation

The S-21 calculation is worked out by subtracting 21 (taking into account 7 days maximum sperm survival and the average luteal length of 14 days) from the shortest cycle length recorded over at least six cycles. For ongoing use the last 12 most recent cycles are kept in the record.

For example, if the shortest cycle is 29 days, 29-21 =8. So day 8 is the last safe day.

2. The S-21 is recorded on the chart at the start of that cycle.

With new clients who do not have a record of past cycle lengths, it is necessary to work with the cycle lengths you have from the first cycle charted.

The Start of fertile phase Guideline

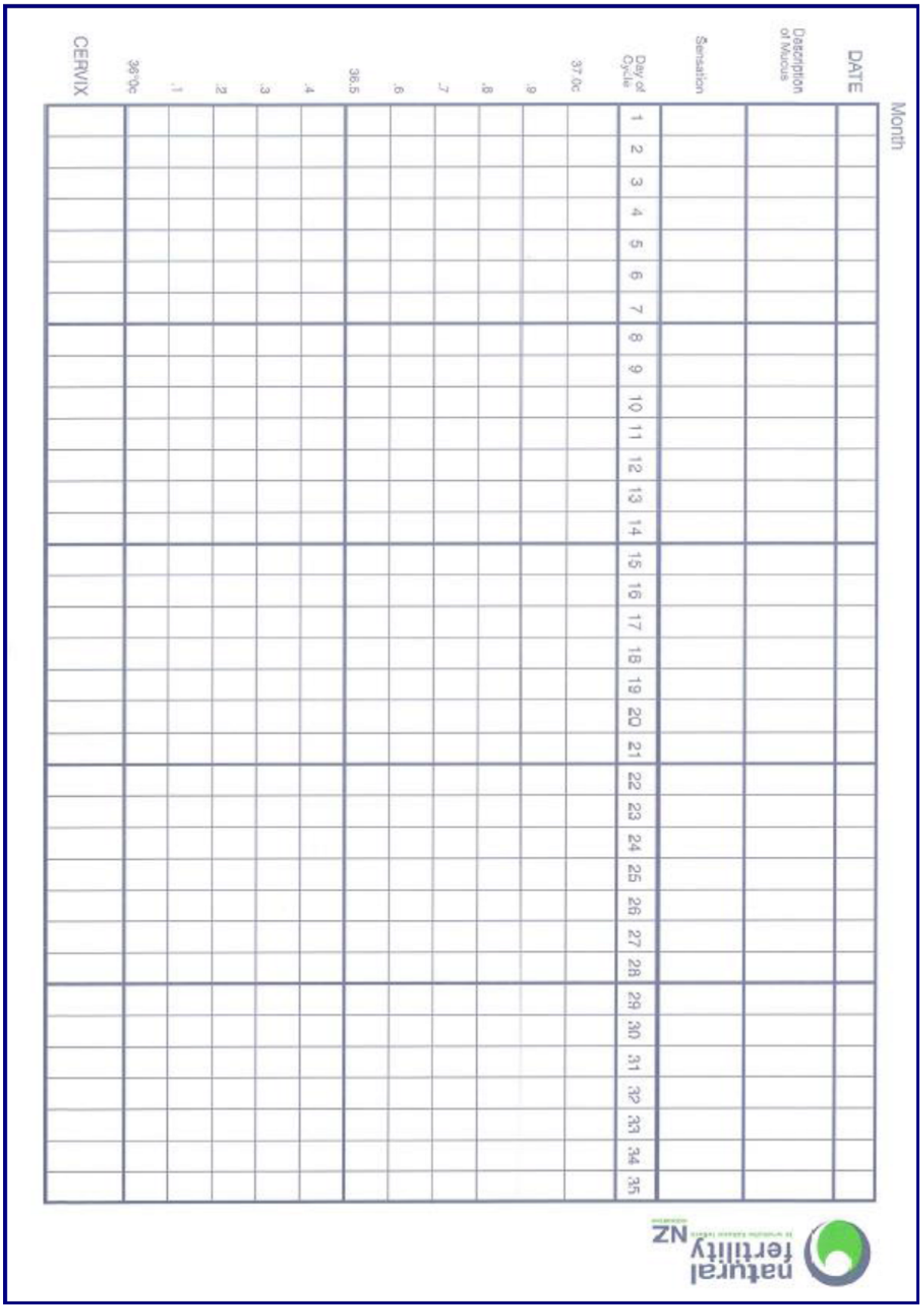
The end of the pre-ovulatory infertile phase / start of fertility is drawn at the end of the day of the S-21 calculation or at the end of the last day of dryness and no mucus,

whichever comes earlier.

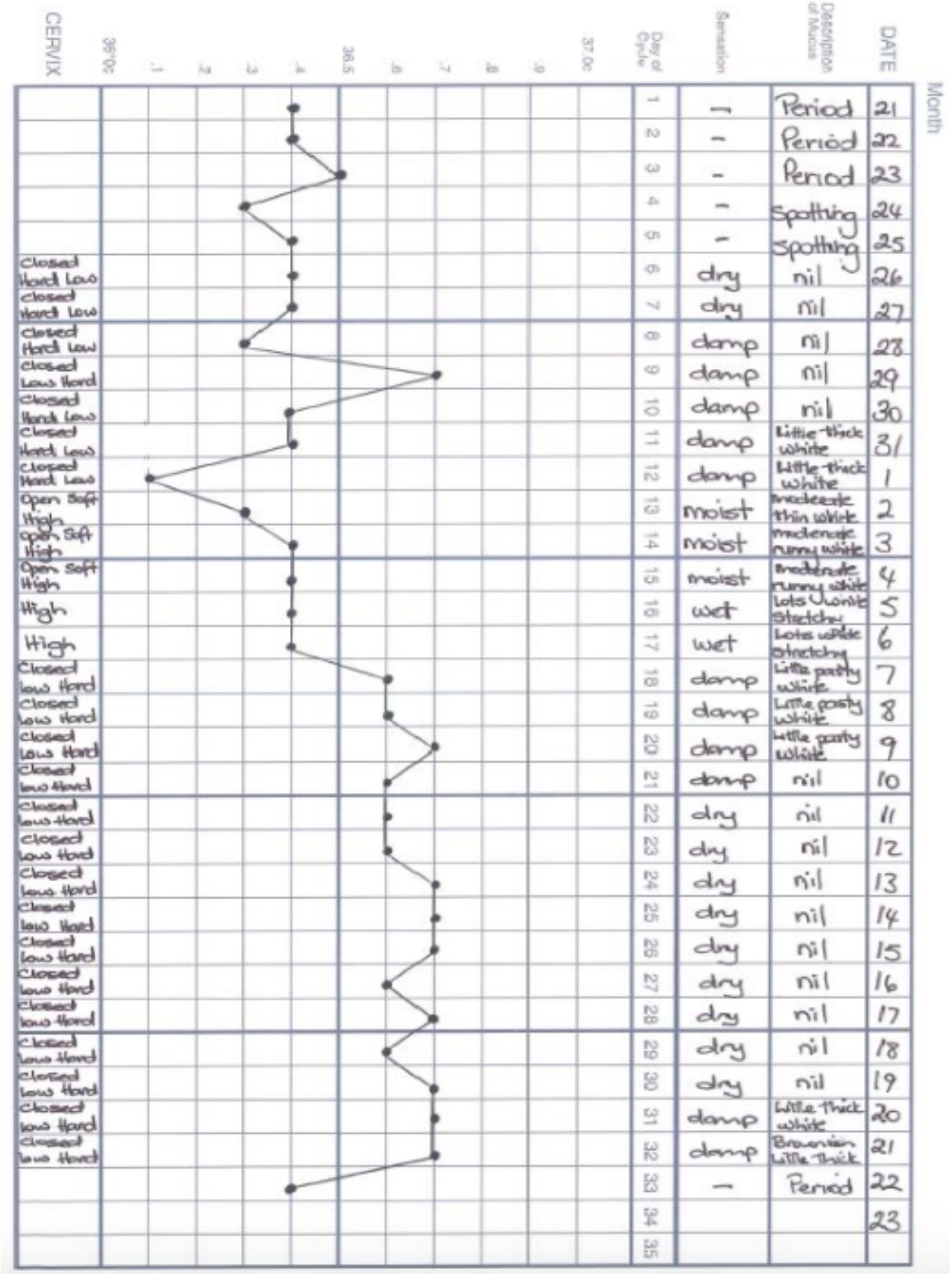
Intercourse Guidelines for Avoiding Conception Clients

- The first two days of menstruation are safe for intercourse if the previous cycle has been identified as ovulatory
- Safe up to and including the evening of the S-21, or the last day of dryness and no mucus, whichever comes first.
- Intercourse during menstruation after Day 2 should be restricted until the period is light enough to notice if any mucus is present.
- In order to avoid confusing seminal fluid with mucus or a damp sensation, restricting intercourse to alternate evenings is advised during the pre-ovulatory infertile time.
- For post-pill clients, those with returning fertility while breastfeeding, following weaning or following a miscarriage, we advise limiting intercourse to the post-ovulatory phase for the first 3 cycles if they are choosing to avoid pregnancy.

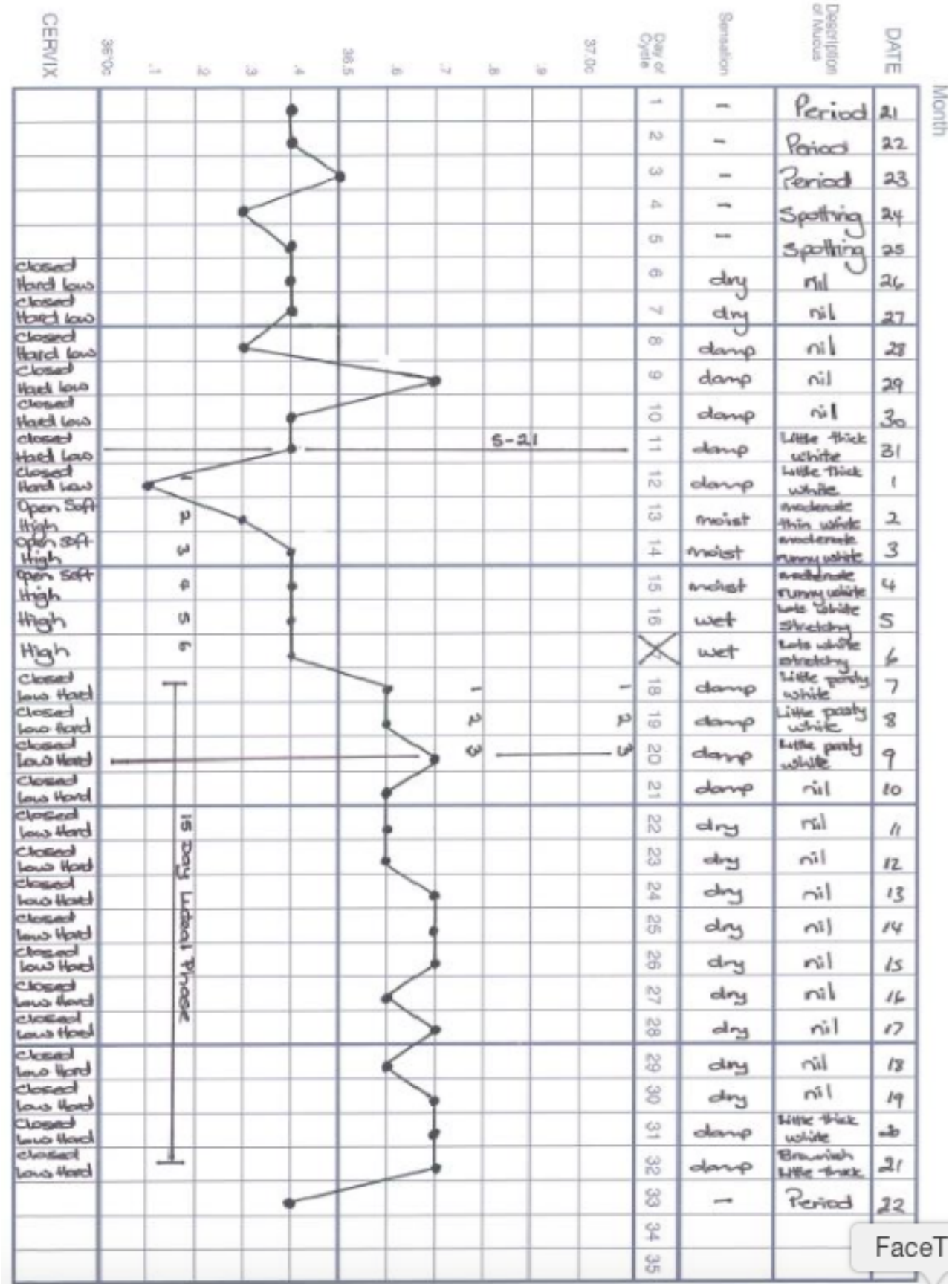
NFNZ Sympto-Thermal Chart



Example Chart 1



Example Chart 1 with Pre and Post-Ovulatory Guidelines Applied



3.0 Teaching Anatomy and Physiology to Clients

Introduction

The following information is provided as a supplement to the material you have read in the Anatomy and Physiology section. The purpose of this section is to enable you to use your knowledge in a teaching situation.

These pages are adapted from the WHO Study Kit designed for use by NFP teachers working with individuals and groups in a variety of socio-cultural situations with varying degrees of literacy and scientific knowledge.

This information covers the teaching of the male and female reproductive systems, the menstrual cycle and the role of the brain and pituitary gland.

In each section, teaching considerations and explanations which may be used in a session are covered.

The content is highly visual, referring the client to the accompanying diagrams at the end of this section.

Bear in mind that many people learning about the structure and functioning of the human body for the first time may feel embarrassed looking at diagrams, and inhibited about discussing the male and female genitals. Use local acceptable words for the human body and sexual activity whenever you can. Find out if it is culturally appropriate for your client to view diagrams of the female and male body, and whether it is appropriate for them to do so in the presence of their partner.

Remember to:

- Decide your objectives. Objectives state what you want the client to know by the end of the session and how you will determine that knowledge.
- Explain the process needed to reach the stated objectives.
- Review the requirements needed to teach the material, including revision of written material and visual aids.

While this material is a useful summary of anatomy and physiology for you, it also helps you to consider reproductive anatomy and physiology in the context of teaching, and will be a useful resource for you in developing your teaching plans.

Whether with clients in clinic or in group education sessions you need to:

- Know what your objectives are. What are you trying to achieve in the session?
- Know what the client's objectives are. What do they want to achieve in the session and how does this tie in with your objectives?
- Understand the unique circumstances of each client – their goals, relationship knowledge, motivation, cultural/ethnic roots, values and attitudes, and their ability/capacity to use the method.
- Select teaching material that is both essential and appropriate for the situation. We do not need to teach everything we know, but our knowledge should be such.

3.1 The Pituitary Gland

Teaching Considerations

This information is provided as back-up knowledge for the fertility educator. It is up to you to decide how much of it, if any, you share with your clients. Diagrams at the end of this section can be used to explain the essential facts of hormone production and regulation.

Explanations

In both the male and female, the pituitary gland is stimulated into action by the hormone Gonadotropin Releasing Hormone (GnRH) which is released from the hypothalamus

In the female:

The changes that take place in the ovaries, cervix and uterus follow a definite plan. The organ that controls these changes is the pituitary gland situated at the base of the brain.

At the beginning of the menstrual cycle, the pituitary gland secretes a hormone that stimulates several ovarian follicles to ripen. The follicles are the cells that surround the immature ova in the ovaries. The maturing follicles in turn secrete the hormone oestrogen in increasing amounts as they mature, to reach a peak just prior to ovulation. The increase in oestrogen feeds back to the pituitary and cause it to release another hormone that triggers ovulation. The most mature ovum will be released from the ovary.

After ovulation, the follicle that enclosed the mature ovum changes into the corpus luteum which secretes the hormone progesterone. Progesterone and oestrogen signal the pituitary to cease activity at this point in the cycle.

The corpus luteum persists for approximately two weeks, at which point it degenerates and levels of progesterone and oestrogen fall, removing the feedback inhibition to the pituitary, which then begins to stimulate the ovaries again, and a new cycle begins.

In the male:

The hypothalamus releases Gonadotropin hormone (GnRH) which stimulates the pituitary to also release hormones. These hormones, Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH), stimulate the testes to produce spermatozoa and testosterone.

3.2 Male Reproductive System

Teaching Considerations

Use the client's own knowledge and experience – they will most likely have seen semen, know the penis becomes erect, and produces a sticky fluid. Although it is not necessary for the client to be able to identify all the organs of the male reproductive tract, diagrams can be used during teaching and when questions arise (examples are at the end of this section).

Explanations

The **penis** has two functions: first to allow passage of urine; secondly to allow passage of semen.

The **scrotum** is the bag of loose skin which hangs in the groin behind the penis and contains the two testes.

The **testes** are the site of testosterone and sperm production.

The **vas deferens**, also known as the sperm duct, passes from the testes around the bladder to the prostate gland. Each vas joins with the seminal vesicle on that side before entering the prostate as a single duct. The vas acts as a passageway for sperm from the testes to the prostate gland and also as sperm storage prior to ejaculation.

The **seminal vesicles** produce seminal fluid, which contributes to the fluid of semen.

The **prostate gland** is situated at the base of the bladder and produces a fluid which contributes to the semen.

The **bladder** is a hollow organ which acts as a reservoir for urine prior to its expulsion during urination.

The **urethral sphincter** is the muscle at the base of the bladder which controls the passage of urine along the urethra.

The **urethra** serves as a common pathway either for the passage of urine from the bladder, or the passage of semen. It is a duct that passes from the lower part of the bladder through the prostate gland, then into and through the penis.

Semen is made up of seminal fluid from the prostate gland and seminal vesicles, and spermatozoa.

Spermatozoa are the male reproductive cells. The singular form is spermatozoon. Sperm are minute and not visible to the naked eye. Sperm production is a constant process and it takes 3 months for sperm to mature and be able to fertilize an egg. They "swim" in the seminal fluid and in any one ejaculation there may be 300-500 million sperm. Spermatozoa may survive in the female reproductive system for five days in the fertile phase, and possibly up to seven days.

Sexual intercourse is the penetration of the vagina by the erect penis.

Ejaculation is the release of semen from the penis.

The **male sex hormone**, testosterone, is responsible for the development and maintenance of the male sexual characteristics which are:

- Growth and function of male sexual organs
- Growth of facial and body hair
- Deepening of the voice
- Muscle and bone growth and development

Testosterone is produced in the testes under the influence of hormones released by the pituitary gland.

3.3 Female Reproductive System

Teaching Considerations

Use the client's own knowledge and experience. Most clients in the clinic situation will have experienced menstruation, but may be unaware of the parts of the female reproductive system, as it is mostly internal, unlike the male reproductive system. Ensure the client can differentiate between the words "ovaries" and "ova". These words sound very alike and may easily be confused. Visual aids may be helpful in showing the way the ends of the fallopian tubes cover the ovary at ovulation, and for describing the different aspects of cervical mucus over the course of the menstrual cycle, depending on whether the woman is in the fertile phase or not.

Explanations

The **vulva** has two thick folds of skin called the major lips or **labia majora**, and two inner folds of tissue called the minor lips or **labia minora**. The function of the labia is to protect the inner sensitive parts of the vulva.

The **labia minora** cover the vaginal opening and meet in front over the **clitoris**, a sexually sensitive structure similar to the male penis. The clitoris enlarges to some extent during sexual arousal and stimulation of it will lead to sexual feelings.

The **urethra** is the tube which allows passage of urine from the bladder to the exterior and the opening is located between the clitoris and the vaginal entrance.

The **bladder** is a hollow organ which acts as a reservoir for urine prior to its expulsion during urination.

The **vagina** is the passage which extends from the external opening within the labia to the cervix. The vagina allows the flow of blood from the uterus to the exterior during menstruation. It receives the erect penis during sexual intercourse and is also the passage through which a baby is born.

The **cervix** is the lower part of the uterus which opens into the vagina. The cervical canal is lined by glands known as **cervical crypts**. These glands produce the cervical mucus under the influence of the hormone oestrogen. Sperm are dependent on cervical mucus for their survival and transport in the female reproductive system.

The **uterus** is a hollow muscular organ which lies between the bladder in front and the rectum behind. The internal cavity of the uterus is covered by a lining known as the endometrium. The function of the uterus is to receive the fertilised ovum and support the growing baby, and it expels the baby at birth through muscular contractions.

There are two **fallopian tubes**, one on each side of the upper part of the uterus. They connect the uterus with the ovaries. The end of each fallopian tube is dilated and opens close to the ovary. The function of the fallopian tubes is to transport the sperm to the ovum, to transport the ovum, if fertilised, to the uterus and to provide a place for fertilization to occur.

The **ovaries** are the sites of ovum (egg) production. There are two ovaries, one attached on either side of the uterus. The ovaries contain about two hundred thousand ova each at birth, but this number has already been reduced by puberty.

The **ovum** is the female reproductive cell. Each ovum is approximately the size of a pinhead. From puberty until menopause one ovum is released each cycle usually from alternate ovaries. This is

ovulation. Once the ovum is released, it may survive in the female reproductive system for a maximum of 24 hours. On rare occasions in the same menstrual cycle a second ovum is released, this is usually within 24 hours of the first ovulation.

The ovaries are the site of **female sex hormone** production.

Oestrogen is produced by ripening follicles. It is responsible for the growth of the uterine lining, the production of fertile cervical mucus and the development and support of female sexual characteristics which are:

Growth and function of the female sexual and reproductive organs

Hair distribution

Breast and hip development

Progesterone is produced by the corpus luteum, which is formed from the ovarian follicle after release of the ovum at ovulation. Progesterone causes changes in cervical mucus and a rise in basal body temperature.

Fertilization takes place when one ovum is penetrated by one sperm. If viable sperm are present in the female reproductive system at the time of ovulation, pregnancy can occur. Fertilization takes place in the part of the fallopian tube closest to the ovary. If fertilization does not occur, the ovum dies and disintegrates.

3.4 The Menstrual Cycle

Teaching Considerations

Visual aids can help show the process of menstruation. Refer to menstruation by whatever name is commonly used by the client e.g. “period”, “monthly”.

Suggest to the client/s that you take time to review what they have already learned that could apply to the recognition of the fertile phase. Visual aids can reinforce previous learning, demonstrating the changes that occur over the course of the menstrual cycle and comparing the different phases of the cycle.

Explain to the client/s one of the concepts that is involved with the Sympto-Thermal Method – namely the rise in basal body temperature as an indicator of ovulation. The woman may also be aware of other symptoms that occur mid-cycle and it is important to take these into account and encourage feedback.

It is also important to encourage feedback from the client/s regarding any pre-menstrual changes they may be aware of.

Explanations

Menarche is the first menstruation in adolescence. Young girls will usually experience their first menstruation between the ages of 10-16.

Menstruation is the periodic, normal bleeding which results from the shedding of the endometrium (the uterine lining), through the vagina. At the end of the menstrual cycle, the levels of oestrogen and progesterone drop. The endometrium loses its hormonal support and can no longer be maintained. It detaches from the uterus and is released through the cervix and into the vagina.

The interval between the first day of one menstruation and the first day of the next menstruation constitutes the menstrual cycle.

Day 1 of the menstrual cycle is the first day of actual bleeding (not spotting).

The last day of the menstrual cycle is the day before Day 1 of the next cycle.

The length of the menstrual cycle varies, especially during the first years after the start of menstruation, after childbirth, and before menopause.

The fertile phase of the menstrual cycle includes the day of ovulation, when the ovum is released from the ovary, and those days immediately before and after ovulation during which sexual intercourse may result in pregnancy.

There are several factors that together affect the fertility of a woman, all of which have been mentioned individually:

- The lifespan of the ovum. After it is released from the ovary it will survive in the fallopian tube for a maximum of 24 hours. If it is not fertilized in that time it will disintegrate.
- The lifespan of the spermatozoa. The survival time of the sperm in the female reproductive system depends upon a number of conditions, one of which is cervical mucus, and has been determined to be at least five and up to seven days.

- The penetrability of cervical mucus. When the mucus is more liquid and clearer, it is easier for the sperm to penetrate and travel up to the fallopian tubes. The slippery type of mucus helps sperm mature.
- The time of ovulation. This cannot be precisely determined beforehand and is usually recognised retrospectively.

The **pre-ovulatory phase** of the menstrual cycle is mainly under the influence of oestrogen. Oestrogen is produced by the developing ovarian follicles which are the cells surrounding the maturing ova. Very early in the menstrual cycle the amount of oestrogen is low and the woman is "relatively" infertile. In NZ we say the woman is potentially fertile, to make the 'risk' clear.

As the amount of oestrogen increases, the woman becomes progressively more fertile. This is due to the action of oestrogen on different parts of the uterus:

- The endometrium – this is the lining of the uterus which gradually thickens after menstruation.
- The cervical glands – begin secreting mucus, which at first is rather thick and sticky and is difficult, but possible for sperm to penetrate. As ovulation approaches the mucus becomes more liquid, slippery and stringy. This type of mucus is easily penetrated by sperm. Therefore the woman is increasingly more fertile in this phase.
- The cervix – becomes less firm and its opening widens as ovulation nears, and it will become higher in the vagina due to the action of oestrogen on the uterine ligaments.

The **post-ovulatory** phase of the menstrual cycle is mainly under the influence of progesterone. It extends from the end of the fertile phase to the last day of the cycle. It usually lasts from 10-16 days.

Progesterone is secreted by the corpus luteum, which is formed after ovulation from the ruptured ovarian follicle. The high level of progesterone inhibits further ovulation during the remainder of the cycle.

Progesterone acts on different parts of the uterus:

- The cervical glands – amount of cervical mucus is diminished and becomes thick and impenetrable to sperm. A dry sensation may be felt around the vagina.
- The endometrium – becomes receptive to the implantation of a fertilized ovum with the development of many extra blood vessels and glands.

Other changes observed in the **post-ovulatory phase** are the rise in basal body temperature, breast tenderness, abdominal bloating, swelling of hands and/or feet, and irritability or moodiness.

Implantation is the process by which the fertilized ovum attaches to the endometrium. If this occurs, menstruation does not, and the corpus luteum continues to grow and secrete progesterone to maintain the pregnancy.

The rise in basal body temperature is maintained by the secretion of progesterone until the end of the menstrual cycle, when the corpus luteum degenerates and hormone production falls. The lining of the uterus begins to break down, menstruation results and a new cycle begins.

Towards the end of the menstrual cycle some women may become more irritable and moody. They may also experience increasing tenderness and fullness of the breasts, overly sensitive nipples, food cravings, lower back pain, abdominal bloating or swelling of hands or feet. Different parts of the menstrual cycle are under the influence of different hormones which can affect the way the woman feels, and can make her more aware of the physical and emotional aspects of her sexuality.

Diagrams

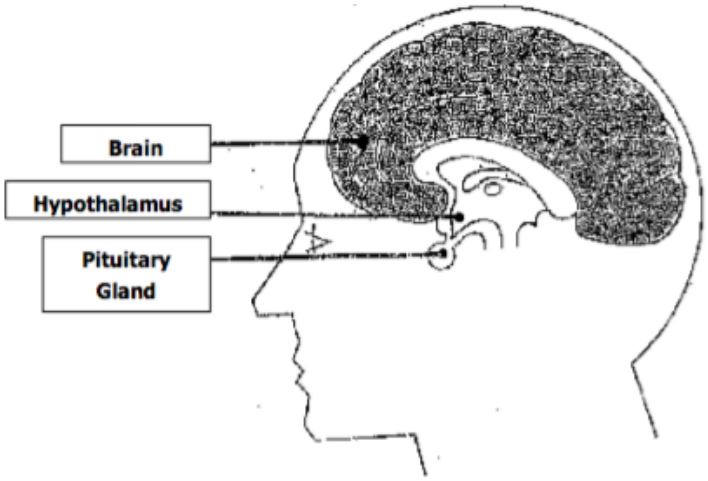
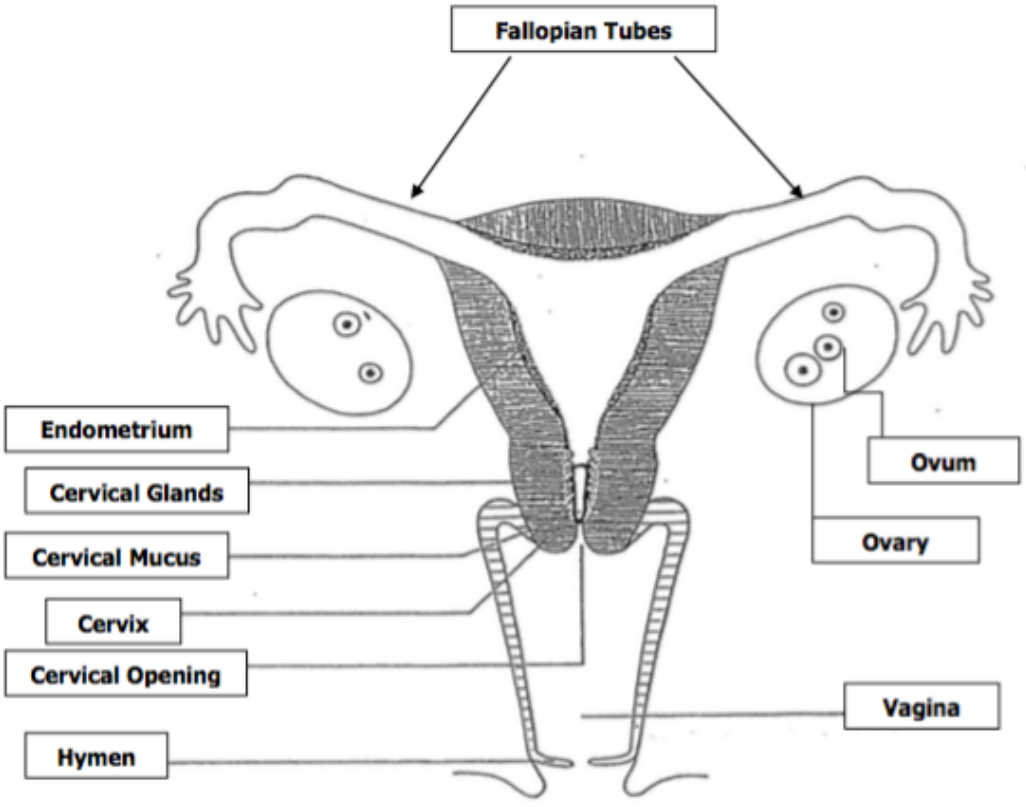
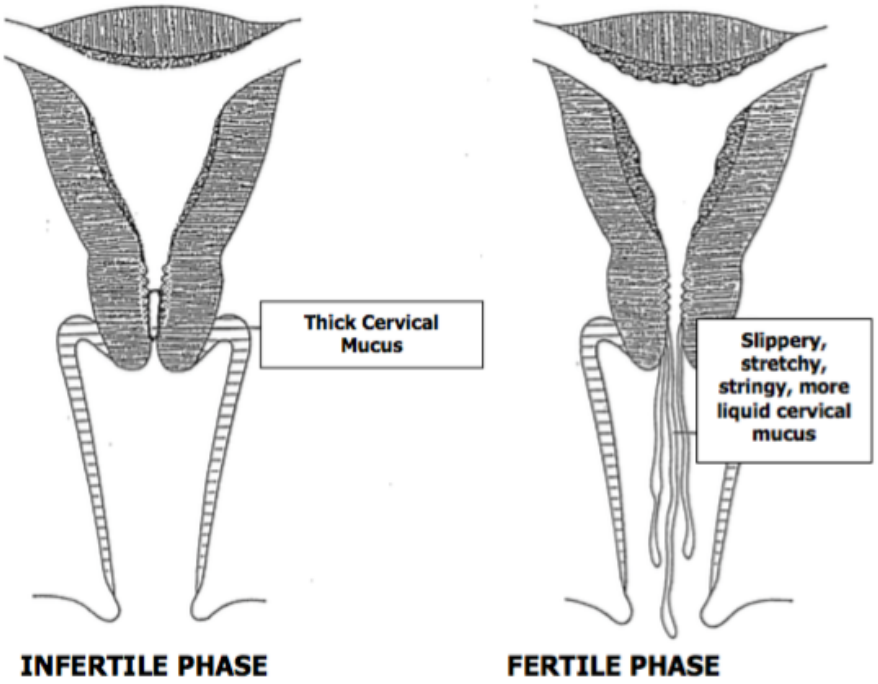


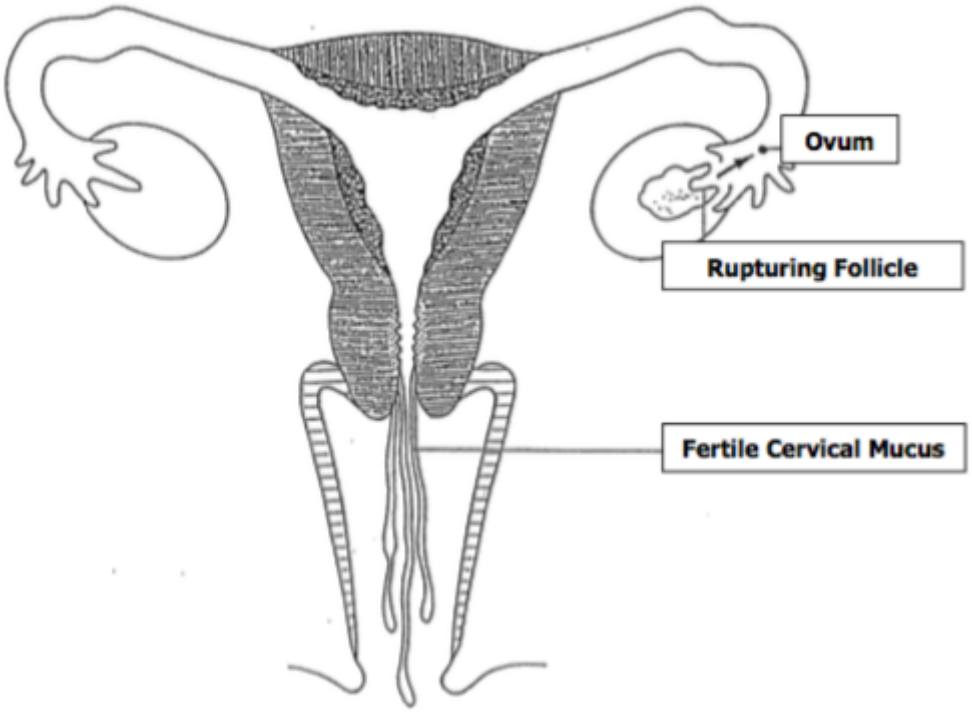
Diagram of Hormonal Control



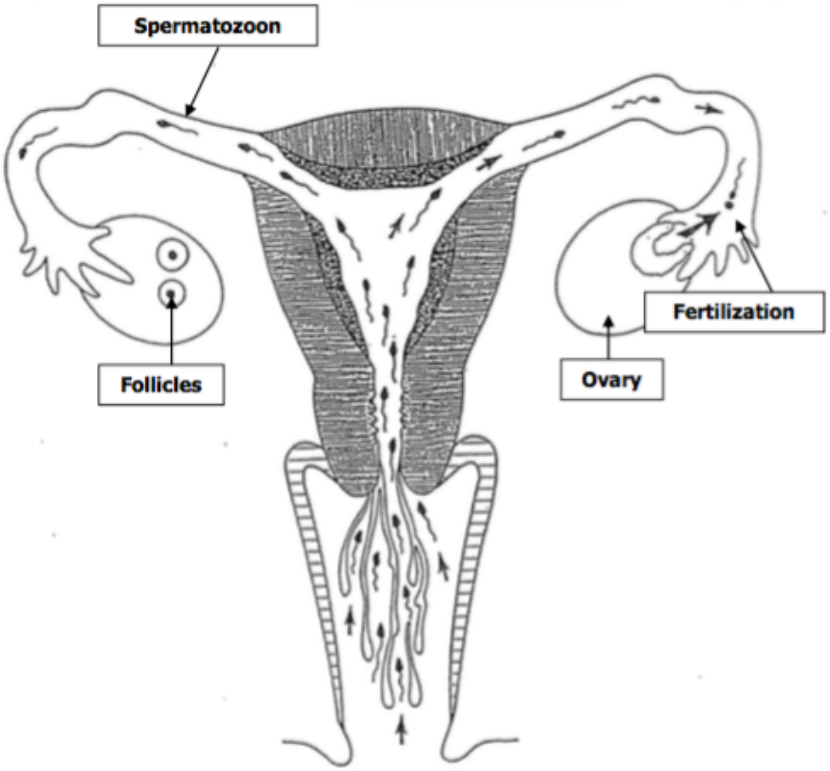
Internal Female Reproductive Organs



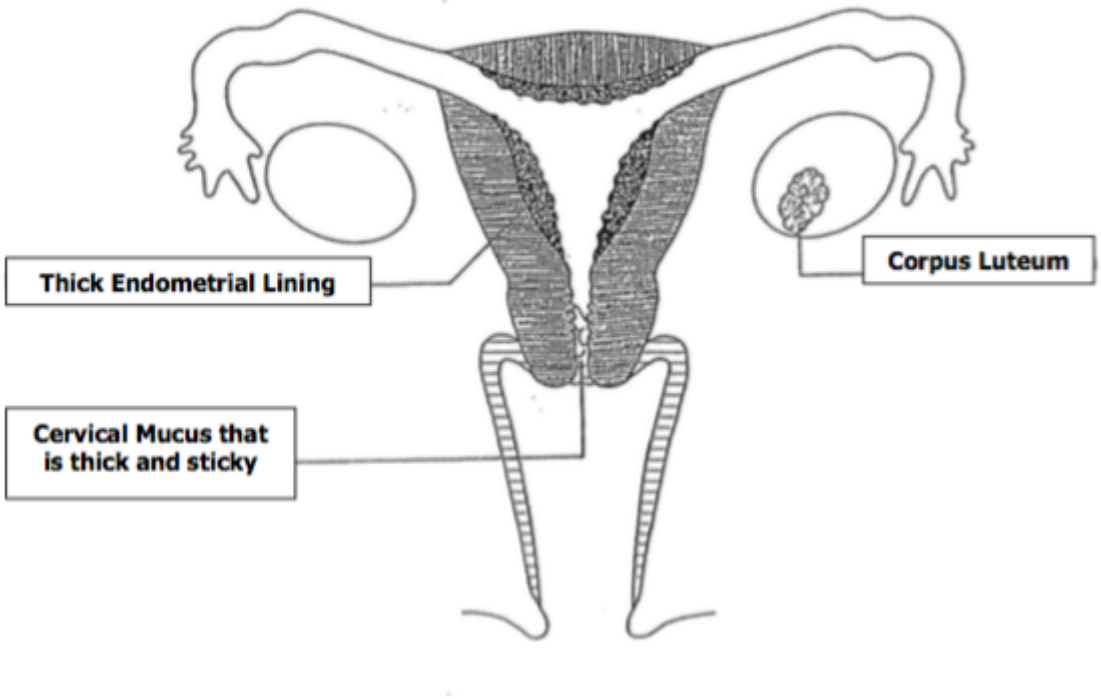
Comparison between infertile and fertile mucus



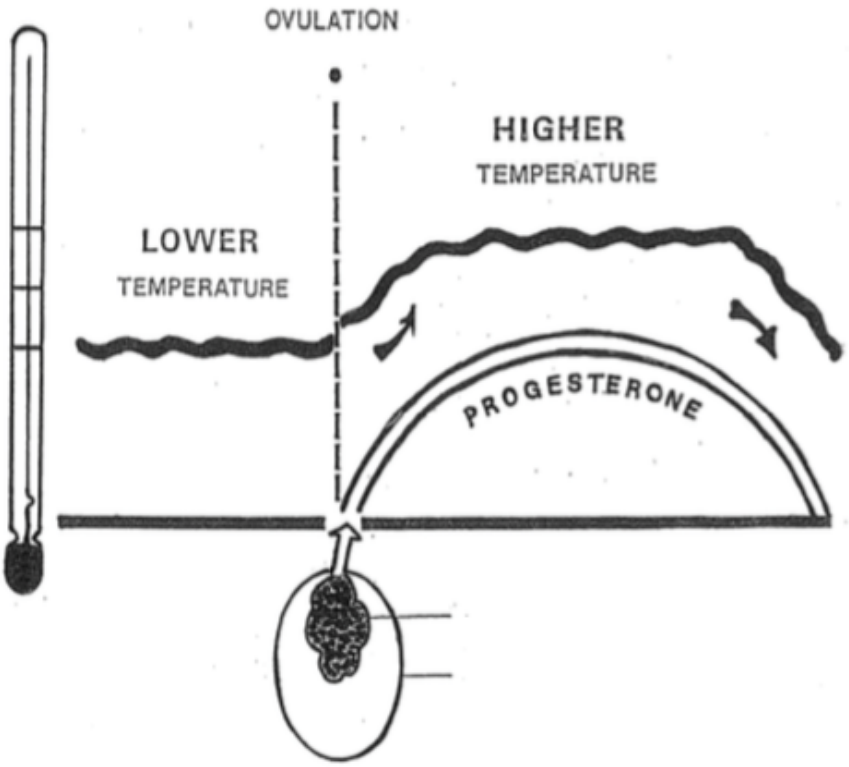
Ovulation



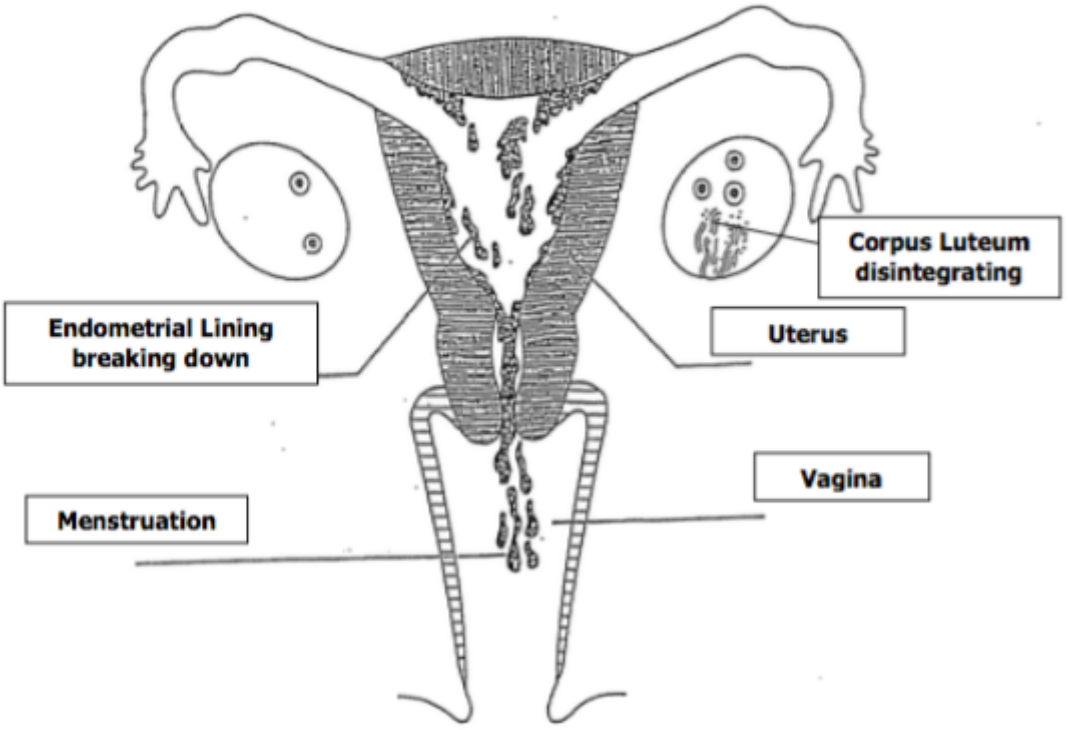
Fertilization



Post-ovulatory Phase Effects of Progesterone



Basal Body Temperature



Menstruation

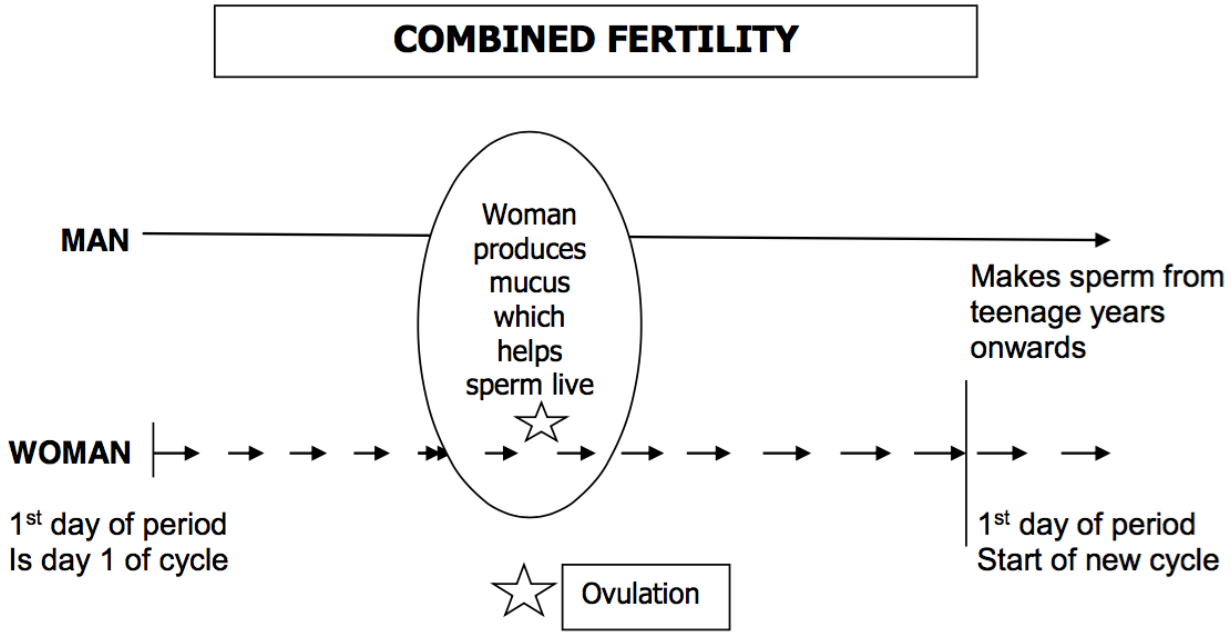
4.0 Teaching Combined Fertility

In many approaches to teaching NFP **the emphasis has been on the woman** and the process of ovulation. This tends to make NFP a woman-centred method so that even when her partner is encouraged to attend the clinic and be involved in charting and its interpretation, it has been more in a supportive role while the woman is the one who is being taught. This still puts the onus on the woman as the one that is fertile or infertile.

NFNZ's emphasis in teaching the STM is on the fertility of **both partners**. Both the man and woman are registered as clients and each is taught to recognise how he or she contributes to their combined fertility as a couple. Their shared responsibility is based on a physical reality, rather than being regarded as an extra, resulting from the co-operation of a supportive male partner.

It has been found that it is important to place equal emphasis on both mucus symptoms and temperature for the best possible effectiveness rate. Neither should be regarded just as a back up for the other.

The following diagram is useful for explaining how both men and women contribute to the combined fertility of the couple.



Combined Fertility Diagram

The solid line represents the man's fertility. You can explain that the man is always fertile as he is continuously producing sperm (we need to be aware that this is an assumption unless we have a semen analysis result that tells us otherwise).

The arrowed line represents a woman's changing fertility. The woman is fertile for a short time of fertile mucus production plus ovum survival of up to 24hrs.

In clinic you can construct this drawing step by step, adding to it as you go along or use a pre-drawn diagram which has been laminated. Educators can develop their own additions to the basic diagram above, but they should be kept simple. This is also an opportune time to fill in any gaps they may have in their knowledge of female or male reproductive anatomy and physiology.

We can show how mucus helps sperm to survive and suggest that the woman record mucus so that she can understand her partner's contribution to their fertility. (It is important for her to remember that although mucus changes precede ovulation, ovulation does not always follow a mucus patch). We can encourage the man to keep the temperature record so that he can recognise by the temperature shift when his partner has ovulated.

Once both are contributing to the charting, they can make a joint decision about chart interpretation. Together they can agree about where to draw a line on the chart to mark the beginning of the fertile time. Then after they have recognised that ovulation has taken place they can agree to mark off the end of the fertile time which is the beginning of the post-ovulatory safe time.

The ideal way to teach the half-and-half approach is to see both partners together. Sometimes it is not possible for a man to attend the first appointment with his partner. We need to make sure that he is given the opportunity to attend the follow up appointments and that extra time is allowed to review combined fertility and any questions he may have.

5.0 Teaching Recording of Fertility

Observing Cervical Mucus

Women are asked to check their cervical mucus throughout the day by wiping the vulva area with toilet paper before urinating. Any mucus observed on underwear is ignored due to the moisture content and colour changing. Mucus can be described according to its texture, colour and amount. Can the client describe any mucus she may have observed? Does she perhaps say that she has seen mucus that looks **"slippery, wet, thick"?**

Determining Sensation

Sensation is an awareness of a feeling at the vulva, not something seen or felt by touch. Wet, dry or damp are the most common sensations observed, but other descriptions may also be recorded. The sensation of wetness usually increases as ovulation approaches. Ask the client to describe any sensations she has felt around her vagina, or feels right now, in her own words. Can you help her to relate her sensations to feeling dry, sticky, or wet? Some women may experience a day of moistness or wetness but not see any mucus. Moistness and wetness are signs of fertility, therefore if a couple are trying to conceive, this is still a good time to be having intercourse.

Recording Cervical Mucus and Sensation

NFNZ charts have separate columns for describing mucus and sensation, as each are equally Important.

At the end of each day the woman writes a summary on her chart of what mucus she has seen throughout the day, using the descriptions of colour, texture and amount. She also writes a description in the sensation column of vaginal sensation i.e. dry, damp, moist or wet.

Clients are asked to write something in each column every evening. This helps clients to be specific and will make interpretation easier. If they see no mucus, they can write nil or nothing. If they sense nothing, then that should be recorded in the sensation column.

Avoid any preconceived ideas about fertile descriptions; one woman's fertile mucus could be another's infertile. For example, some women observe 'thick' as fertile and 'thin' as infertile, while others observe the opposite. Be aware that the sensation of 'wetness' is always potentially fertile, and often is more significant than the appearance of the mucus in identifying the fertile time.

Emphasize to the client that her mucus pattern is individual. Although similar patterns may appear in her consecutive cycles, none can be predetermined. A woman will only learn to understand her individual mucus pattern if she makes an accurate record by careful observation on a daily basis.

Other factors that can influence mucus that should be recorded:

- Illness
- Infections such as thrush and some Sexually Transmitted Infections (STI's)
- Medications (especially Antihistamines, and some cough medicines)
- Sexual activity

Measuring Basal Body Temperature (BBT)

NFNZ educators teach clients to take an oral temperature. Either mercury or electronic digital thermometers may be used, however most clients choose to use a digital thermometer due to its accuracy and quickness (approximately one minute to establish BBT). There is no need for a thermometer that reads to the 1/100 degree, a fever thermometer is all that is required. It is important to use the same thermometer for the whole cycle as different thermometers can read slightly differently.

Electronic ear thermometers are not recommended due to their inability to accurately measure the thermal shift post-ovulatory.

Mercury thermometers need to be shaken down the night before. They need to be left in the mouth for at least 5 minutes.

If using a **digital thermometer**, follow the instructions that come with the thermometer.

- The BBT is taken at the same time every morning, after a night's rest (minimum of 3 hrs), immediately after waking and before any activity (eg: before going to the toilet, drinking water, or displays of affection to your partner).
- For those who do shift work (especially night shifts) the temperature is taken after the longest sleep.
- If the temperature is taken more than an hour later or earlier than usual, get the client to record the time the temperature was taken on their chart.
- The thermometer should be placed in the same position deep under the tongue and as far back in the mouth as is comfortable each morning.

Recording BBT on a chart

The temperature is recorded on the chart in the centre of the horizontal line of the day in which the temperature was taken. If it is put on the vertical lines, this makes it confusing as to which day the temperature belongs to.

Any changes to their temperature taking routine should be noted on the chart:

- Temperature taken earlier or later than usual
- Change of thermometer

Other factors that can influence temperature that should be recorded:

- Illness or fever
- Medications (especially NSAID's such as Nurofen, ibuprofen, diclofenac) can delay ovulation, dependent on when it is taken during the cycle.
- Alcohol

6.0 Teaching the Guidelines

Teaching post-ovulatory guidelines

At the second appointment the clients are taught to identify the end of the fertile phase or post-ovulatory phase by numbering changes in temperature and mucus/sensation and then drawing a line to indicate the end of the fertile time. They are then asked to mark these on their chart themselves before coming to the next appointment. If this is not done when they arrive for their third appointment, give them a pen to enable them to put in the numbers and lines.

For some clients (especially with those who have returning fertility e.g. post-pill) the initial mucus picture may be difficult to interpret.

If the change from fertile mucus to infertile mucus is difficult to identify or cannot be established, but there is a definite temperature rise of three days, **a fourth high temperature is added for safety for those using the information to avoid pregnancy**. This guideline can also be applied if there is a raised temperature that is questionable due to it being taken later than usual or potentially the result of alcohol consumption the evening before. Safe intercourse in both these cases can occur on the evening of the fourth high temperature for those clients choosing to avoid pregnancy.

When there is a mucus change without a temperature rise it is essential to wait for a temperature rise, as it is possible to have a mucus change, which does not lead to ovulation. In such cases there is a second mucus patch before ovulation and the temperature rise.

Teaching the pre-ovulatory guidelines

At the second appointment clients should begin learning the pre-ovulatory guidelines.

For post-pill clients, those with returning fertility while breastfeeding, following weaning or following a miscarriage, we advise limiting intercourse to the post-ovulatory phase for the first 3 cycles if they are choosing to avoid pregnancy.

For many clients it will take one or two cycles before a pattern is recognised. This does not mean that clients will be given no teaching about the guidelines for the pre-ovulatory time. It may mean that for a couple of cycles we cannot advise that intercourse would be safe, because the mucus pattern is not obvious.

In summary

After the 2nd Appointment, the 'To Conceive' Client will know:

- How to recognize the beginning of fertility according to mucus appearance and sensation. Any mucus or moist feeling in the pre-ovulatory phase must be regarded as the start of fertility in that cycle.

After the 2nd Appointment, the 'Avoiding Conception' Client will know:

- How to recognize the beginning of potential fertility according to the appearance of mucus or a sensation other than dry.
- The advisability of abstaining until after ovulation for 3 cycles, if post-pill, post breastfeeding or following a miscarriage.
- Where their pre-ovulatory cut-off time would be according to the information available on their chart so far.
- The S-21 rule. If there is an accurate record of past cycle lengths the 'S-21 if dry' rule may be able to be applied.
- The higher effectiveness of an S-21 cut-off compared to an 'end of dryness' cut-off. Any client choosing the extra freedom of the latter must be clearly informed of the risk.
- If clients are advised not to have any unprotected intercourse in the pre-ovulatory phase for three cycles, these three cycles should be used for teaching the pre-ovulatory guidelines. Those who have been breastfeeding need to have it emphasized that the 'Basic Infertile Pattern' (see breast feeding section) no longer applies.
- No client should go away after the second appointment with no idea how the pre-ovulation 'safe' days are identified.

7.0 Teaching Cervical Palpation

Changes in the cervix should be mentioned at the first appointment briefly, particularly as there is a space on our charts for these changes. However in the normal situation it would not be taught at the first appointment, where the priority is to explain the two main indicators clearly. The exception would be clients who come with a particular interest in cervical palpation (CP) or clients who are already familiar with mucus and temperature charting.

The second appointment would be the more appropriate time to teach cervical palpation, if time allows, otherwise it can be left for the third appointment.

Follow the normal teaching approach of getting the client to observe and record, then at the next appointment help them interpret the results.

Generally two or three cycles are needed for a person to become skilled at recognizing changes in the cervix. The cervix in the post-ovulation phase, when there is less change, is recognized more easily. Once that is familiar, changes from that position can be identified.

When to observe

The observation should be made at the same time each day using the same position. Palpation should not be done immediately after rising in the morning or following a bowel motion. Women often find the best time is in the evening, or when showering.

How to observe

Insert one or two fingers into the vagina and up to the cervix. A normal standing position or with one leg raised on a chair - rather like inserting a tampon - is recommended.

What to Observe

- **Position** is the cervix high or low?
- **Consistency** is it hard (like the tip of the nose) or soft (like the lips)?
- **Opening** is it closed or open?
- **Tilt** is it tilted to the back, front or up? (Many find tilt more difficult to recognize, but it is worth mentioning for those who may find it useful).

Note that some women are able to observe all of these changes, others, only some. Tilt is recorded the least. Some women are unable to reach the cervix at certain times of the cycle and a few are never able to reach their cervix.

How to Record

Record what has been observed in the cervix column of the chart.

Reasons for teaching Cervical Palpation

- All clients have the right to be offered as much information as we have about fertility awareness. They will decide whether the knowledge proves useful for them.
- Women who are having difficulty with one of the other indicators, particularly those who cannot recognize mucus changes or see very little mucus, can be helped by changes in the cervix.
- For some clients the more signs they can recognize, the more confident they feel.
- Cervical Palpation adds an extra dimension to observation of fertility as a whole.

Postpartum clients

Women should not begin palpating their cervix until they are at least 3 months post partum. The cervix takes several months to close properly after delivery regardless of whether or not the woman is breastfeeding or her periods have returned.

Effectiveness

Note that Cervical Palpation cannot be regarded as a method in itself, in the way that both temperature and mucus are. However for many women it gives useful back-up information. No guidelines are available for marking pre-ovulatory 'safe' days but post-ovulatory change can be counted in the same way as for mucus, counting 3 days of change.

As Cervical Palpation is not regarded as a separate method there has not, to date, been studies of its effectiveness rate. However there have been evaluations of its use:

- An account by Dr. E Keefe, who first taught about the changes in the cervix.
- A report of a study by John Kippley

Research

From the Newsletter of the NFP Association of Conn. U.S.A., Dr Edward Keefe MD New York

This communication gives the new findings made since I wrote the paper on the cervix in 1962. The FIRST new finding is that the use of the speculum is unnecessary. Palpation (touch) of the cervix tells enough and extra information from inspection through a speculum is not worth the effort. It seems to distract the attention, particularly of doctors, from easier signs which are just as informative. The SECOND new finding is that at the fertile time the cervix is higher in the pelvis than at nonfertile times. Women say "it is harder to reach when I am ovulating". The usual extent of this elevation is about one inch from the lowest to the highest level. Typically, the tip of the cervix is easily accessible to the finger on "infertile" days, and out of reach until pressed down by the hand on the abdomen on "fertile" days. As with other signs of the cervix at the approach of ovulation, the elevation is gradual (4 to 6 days). The descent of the drop, which comes after the peak of the signs at ovulation, is more abrupt (2 or 3 days) - while the temperatures are rising.

About 75% of women detect changes in level of the cervix, about the same frequency with which they observe any other SINGLE cervical sign. Women who have a "dropped" uterus from childbearing most often observe its elevation.

Women who have never had a child, in turn, notice that the opening of the cervix points toward the backbone as well during the greatest elevation and it points to the front otherwise. Elevation is not the major sign - opening of the os is more significant - I have given details here because I have not yet published anything on it. Most women go by one or two favourite signs whichever they find more apparent and consistent.

In the International Review of NFP 1982 No. 3, pp 272-277, John Kippley reports the results of a study on the use of cervical palpation.

Those taking part were asked to observe three characteristics of the cervix - the level (high-low), opening/closing, and consistency (firm-soft).

- Most of the 152 replies were from experienced teaching couples.
- Of the respondents 65% were able to observe all three characteristics.
- The most positive sign for 50% (of the 65%) was opening/closing, for 27% was the level and for 18% was consistency.

A majority found that the cervical changes occurred more slowly prior to ovulation. Over 80% needed 2-6 cycles for the examination to become significant.

Almost three-quarters of the respondents checked the presence of mucus at the cervical os. 88% of these detected mucus at the os one or more days before they found it at the vulva. (There is no mention of vulval sensation on those days). For 75% it was easier to interpret the mucus sign at the os than at the vulva.

8.0 Outline of NFNZ Appointments

Introduction

At NFNZ, we teach the Sympto-Thermal Method (STM) of natural family planning over a minimum of three sessions. These sessions are confidential, taught to couples or individuals and are personalized. We do not generally teach the STM to groups. The first session is 45-60 minutes and the second and third appointments are 20-30 minutes. The timing of the first appointment for couples trying to conceive is ideally made as close to the period starting as possible.

Once you have a clear picture in your mind of the progressive stages of each appointment, and the purpose of each stage, you will be able to plan and carry out your sessions effectively, with less likelihood of losing direction or becoming confused about what to say next.

Appointment 1	Appointment 2	Appointment 3
Welcome	Welcome	Welcome
Contract	Review	Review
Case History	Chart Check	Chart Check
Teaching	Teaching	
Q&A	Summing Up	
Conclusion	Conclusion	Conclusion

Every appointment will be different as individual client's needs and personalities vary, but all will fit within a similar structure.

The following pages outline the stages in each appointment. Further detail relating to the different kinds of clients, either ‘To Conceive’ or ‘Avoiding Conception’, can be found in their corresponding chapters.

9.0 The First Appointment

The first appointment consists of 6 stages, each stage is described below:

Stage 1 Welcome and Introductions

Purpose: During this time you will be establishing a rapport with the clients.

Greet the client, introduce yourself, and engage in some brief conversation while you settle yourselves, (and any children or babies). Showing the clients to a seat ensures you have the seating arrangement you wish. If a couple attends, seat the man between you and the woman, so he is included naturally in the session. Most clients will feel some degree of nervousness.

Stage 2 The Contract

Purpose: To reach a clear agreement with the clients about what our service offers and what is expected from the clients.

Start with an open question such as 'How can I help you?'- which gives the clients an opportunity to let you know at the beginning why they have come (you cannot make assumptions about this) and bring forward any pressing questions or worries.

eg. for a couple who are coming to learn the STM:

"I can explain how you can observe and chart your signs of fertility, and what is involved in using the STM. You will need to fill in your chart on a daily basis and contact me if you have any questions. Completing the three sessions is important so that you can accurately interpret your charts. Is this what you anticipated?"

The words you use will be yours, and will vary, but the message needs to be clear and simple, so that the clients know the process and what is expected of them.

At the end of this stage the clients should be aware that this first appointment has some clear teaching objectives to help them learn about their combined fertility and to observe and record the cycle changes, so that they can make a record which will be used to interpret these cycles at the next and following visits.

Stage 3 Assessment and Background Information (Clients History)

Purpose: To assess the needs of the clients.

This is the time to gather the information you need for a comprehensive health history, to write thorough client case notes and to teach effectively.

Find out what they know about Natural Family Planning already. Clients will often reveal useful information about themselves during this process.

This part of the session needs to be open and relaxed - but a professional approach must be maintained. It may appear fairly unstructured, but the educator needs to have a clear picture of the direction. She/he will feed in the necessary questions, but do more listening than talking. Encourage the clients to share their story.

Observe the client's' level of understanding, language and listening ability, so that you can then direct your teaching to the level most helpful to the clients. .

Stage 4 The Teaching/Learning Stage

Purpose: To teach the concept of combined fertility and how to observe and record signs of fertility

Keep the teaching simple and focused. Cover any relevant questions as they arise, other questions can be deferred to later in the session. It is important to use clear and simple language. It is also important to check clients' understanding at various times throughout the session.

It is always important to tailor your teaching to your clients needs. Be aware and modify your teaching if your client has a disability that could affect their learning i.e. vision, hearing or speech problem. As health professionals we need to be aware of those that come from other cultures, and what their customs may be around fertility and reproduction.

When teaching couples, it is important to involve the man as much as possible. Sperm survival time is just as important as ovulation. Men will appreciate the need to think of 'our fertility' rather than 'her fertility'.

Teaching Considerations

The main points you will need to cover in this first session are:

a. After ovulation the ovum survives for a maximum of 24hrs.

b. Ovulation can be identified by a rise in temperature. We count 3 days of raised temperatures higher than the previous 6 to confirm ovulation.

c. Sperm can survive at least 5 days (but can be up to 7 days) after intercourse if the environment is favourable.

d. Sperm survival is dependent on cervical mucus. A change from 'fertile-type' mucus can (but doesn't always) indicate ovulation has occurred.

e. The time of sperm survival plus ovum survival is the time of combined fertility.

f. The above points can be explained with a diagram showing the vagina, cervix, uterus, fallopian tubes and ovaries. Some educators have a diagram which is laminated, others draw one as they go along.

g. For some clients oestrogen and progesterone can be mentioned as the cause of mucus change and temperature rise. For other clients the introduction of too much detail, especially with scientific terms, can be confusing.

h. The time from ovulation (first temperature rise) to the next period is usually 12-16 days. This is called the luteal phase. The number of days in the luteal phase remains fairly constant from cycle to cycle for each woman (unless returning fertility e.g. post-pill, breastfeeding or miscarriage in which case it can take up to 3 months to re-establish).

   I**t is important to emphasize that this is the unchanging part of the cycle and that once a woman identifies ovulation she can predict the day of her next period. A cycle is long or short because of more or less days before ovulation. So it is not accurate for women to talk about their periods being 'early' or 'late'; it is the ovulation that is early or late.**

i. Explain how to observe and chart mucus and sensation.

j. Explain how to take and record the temperature.

k. Give appropriate information for those trying to conceive or avoiding conception.

SUMMARY OF TEACHING POINTS FOR FIRST APPOINTMENT	
1	**Cycle length**- time in days from first day of period to the day before the next period starts.
2	**Man** - fertile all the time.
3	**Woman** - ovulation, generally once in a cycle. Some cycles can be anovulatory
4	**Next period** - 12 to 16 days after ovulation
5	**Sperm survival –** five days, but can be up to 7
6	**Mucus** - healthy sign
7	**Mucus begins** - sperm survive
8	**Mucus types** - different for each woman; may notice it getting 'thinner', 'wetter', perhaps a slippery sensation.
9	**Last day of 'fertile type' mucus** - has ovulation followed?
10	**Temperature** - rises after ovulation. This confirms that the mucus changes led to ovulation. Record daily, first thing on waking.
11	**Record nightly** - most fertile type of mucus of the day.
12	**Sensation and Mucus Description** - write something in each column, even if the observation is 'dry' or 'nothing'
13	**Appropriate Intercourse Guidelines** given for category of client.

Stage 5 Cover Any Questions Still Remaining

Be sensitive to any questions they may have. Remember to be professional. Summarise what you have done in the interview (one or two sentences) then move into the conclusion.

Stage 6 Conclusion of the Session

It is important to:

a. keep to time

b. finish when the above stages have been completed.

To end the interview, make the next appointment, take the fee and give a receipt.

After the first appointment

Write up your client notes. Your notes should contain a comprehensive health history and outline what you have taught and any resources you may have given the client (i.e. pamphlets, product samples etc). Also document in the notes anything you want to follow up on at the next appointment. Be aware that the clients can ask for a copy of their notes at any time, so try and keep notes legible and objective.

10.0 The Second Appointment

Timing of follow up appointments

Clients need to be seen again for their follow-up appointments at regular intervals until they are completely confident in interpreting their charts. They **should have this explained to them clearly at the first appointment**. This is an important part of setting the contract. Successful use of the method depends on thorough learning. It is usual to schedule 30 minutes for the second and third appointments. There needs to be sufficient time for the clients to talk about any difficulties they may have experienced with their charting, or to ask any questions that have arisen since the first appointment.

- **To-Conceive Clients -** Aim to see them again around the time she would have her next period. If possible, phone the clients the day before their appointment to reconfirm the time and check where the woman is in her cycle. If her period has not arrived there is the possibility that she may be pregnant or she has ovulated late. Reschedule their appointment for the next week.

- **Avoiding Conception Clients -** Aim to see them again in the post-ovulatory phase of that cycle. Contact them the day before their appointment to check that there has been a temperature rise and the mucus/sensation has changed from fertile to infertile. It is more personalised to teach them the pre and post-ovulatory guidelines from their chart rather than having to rely on an example chart. If they are not in their post-ovulatory phase, reschedule their appointment for the following week.

The second appointment consists of 5 stages, each stage is described below:

Stage 1 Welcome

Welcome your clients to this session and use information gathered from the first session to put your clients at ease i.e. started new job, been away on holiday, moved house etc.

Stage 2 Review

Ask the clients how they have found charting during the last few weeks. Listen to what they are saying, pick up on any problems, hesitations. Ask them to expand if you are not sure what they mean e.g. “Could you explain more what you mean when you say you found the sensation part difficult”?

Stage 3 Teaching & Chart Check

Have the client go over the chart and explain it to you, looking at mucus and temperature separately. Do not be in a hurry to interpret it for them. Take it step by step and ask them to interpret if they can, and then if necessary, lead them to see points of change, etc. Clients may need more help initially.

Teaching Considerations

What is taught at the second appointment?

- The start and end of fertility in a cycle for To Conceive Clients
- The Post and Pre Ovulatory Guidelines for Avoiding Conception Clients
- Cervical Palpation.
- Establishing luteal length.

After the second appointment **To Conceive** clients will have an understanding of how to identify the beginning and end of the fertile phase. **Avoiding Conception** clients will be able to draw a line to indicate the beginning and the end.

Important

Remind clients that they must continue recording throughout the whole cycle while they are learning. This includes the time during the period.

THE CHART CHECK AT THE SECOND APPOINTMENT	
1	Do they record each day?
2	Is mucus and sensation recorded in separate boxes?
3	Does the client understand what is meant by "sensation"?
4	Are there descriptions of texture, colour and amount in the mucus box?
5	Has the temperature been taken each morning?
6	Is the temperature chart biphasic?
7	Are the couple marking days of intercourse on their chart? ● For **To Conceive Clients** check that intercourse is timed with fertile mucus and a moist/wet sensation. ● For **Avoiding Conception Clients**, intercourse in the fertile phase needs to be with a barrier method.

Stage 4 Summing Up

At the end of the session, sum up what they have learnt and what they have still to learn. Make sure there have been opportunities for the clients to ask questions.

Clients are to leave the clinic with clear instructions of what they need to do before coming back for their third appointment.

Stage 5 Conclusion

Always ask before concluding what questions they still have (rather than "do you have any questions?").

11.0 The Third Appointment

Stage 1 Welcome

Stage 2 Review

Stage 3 Chart Check

Check the same first seven points as at second appointment plus:

To Conceive Clients

TO CONCEIVE CLIENTS - CHART CHECK AT THE THIRD APPOINTMENT	
1	Are the couple able to tell you where their fertility starts and ends?
2	Are the couple able to tell you what their most fertile mucus and sensation symptoms are?
3	Are the couple able to identify on their chart where their best chance of conceiving would be?
4	Has the woman tried cervical palpation? If so, check her descriptions and the way she is checking this.
5	Are the couple able to work out the length of the luteal phase?

Avoiding Conception Clients

AVOIDING CONCEPTION CLIENTS - CHART CHECK AT THE THIRD APPOINTMENT	
1	Can the couple explain to you the pre-ovulatory guidelines?
2	If they are not post-depo Provera or post-pill clients, check how they are applying these guidelines.
3	What do they consider to be the last fertile sign?
4	Have they numbered 3 days of infertile mucus/sensation after the last fertile mucus/sensation sign?

5	Have they numbered 3 days of raised temperatures?
6	Do they understand how to draw lines to mark the beginning and end of the fertile time?
7	Can they work out this cycles luteal length?

Stage 4 Conclusion

If your clients are able to apply the guidelines correctly and appear to have a good understanding of the method, they become autonomous clients. If the clients or educator feel that another appointment is needed, this can be booked in at the end of the third appointment.

Check that all client contacts have been documented and signed. Complete any other client documentation that is required. Arrange to give them a follow up phone call in approximately 3 months to see how things are going with their chart interpretation and address any issues that have arisen.

12.0 Teaching To Conceive Clients

Introduction

Clients who want to conceive will have many questions about their fertility and what they can do to enhance their chances of conceiving. This section focuses on aspects that a fertility educator needs to be aware of when teaching clients who want to conceive.

The primary focus for clients who wish to conceive is that they can identify the start of their fertility each cycle, their most fertile days, where fertility ends in the cycle and how to work out the luteal length. The focus for 'to conceive' clients is on establishing days of opportunity to conceive and the fertile phase.

12.1 The Clients

You are likely to see clients with various degrees of difficulty in conceiving, but in general they will fit into three groups.

- Those in the early stages of trying to conceive who have not yet approached their doctor, or have not yet had any medical investigation. Some may have stopped the pill expecting to conceive in the next month or two and become anxious when that did not happen. Others may have been trying for longer but approaching us is a first step in doing something about their difficulty.
- Couples who have had some medical investigation are often referred by their doctor, to learn to chart temperature or mucus, to understand when their most fertile time is, or because the doctor thinks it is too soon to move on to the next test. If a friend or family member has suggested they come, obtain the client's consent to send a letter on their behalf to their GP so that they can be informed of what is happening.
- Couples who have tried everything, had all the tests and come to see us as a last resort.

Couples in any of these groups may never have had a child (primary infertility) or may have had a child in the past but be unable to do so again (secondary infertility). Each of these groups will need a different approach and a different emphasis in teaching.

12.2 The Contract

Be clear about what we can offer. We can teach the couple to recognize the most fertile time of their cycle by observing mucus, vaginal sensation and changes in the cervix, whether they are ovulating, look at the timing of intercourse in relation to mucus and sensation symptoms and whether their luteal phase appears to be within the 'medically acceptable' range. We are also able to offer them some basic pre-conception advice with referral on to other health professionals who have expertise in this area as required.

12.3 Taking a History

Establish why the clients have come to clinic, what their expectations are, how long they have been trying to conceive, what family planning methods they have used in the past, whether they are under medical supervision and what tests have been carried out.

You will need to also ask about Rubella immunity, date of last cervical smear, diet, exercise, alcohol, smoking, recreational drug use, prescription drugs, any history of sexually transmitted infections (STIs), previous pregnancies, partner having fathered any children in previous relationships, type of employment, hours worked etc. Some of these questions may seem rather personal in nature, but clients do expect them to be asked and they are all relevant to one's fertility. If you can explain at the beginning of the appointment that you will be filling in a client record card which includes personal health history information, this sets the scene for the questions that will follow.

Be aware that the couple may be going through a very stressful time and may be tense and anxious. They may have been through a series of tests, and be very distressed about the possibility of never having a (another) child.

Listening skills, empathy and an acknowledgement of their situation is required - but don't make assumptions about their feelings; take your cue from them.

Avoid making unrealistic promises about how we can help them.

Emphasize the positive aspects of what they are going to learn about their fertility.

12.4 Teaching Considerations

Adapt your approach to the combined fertility diagrams to the client's situation e.g. an emphasis on long sperm survival would be inappropriate.

Depending on the individual couple, you could suggest alternate days for intercourse in the first cycle in order to help with the identification of mucus without the confusion of seminal fluid.

Temperature should be taught in order to identify that the woman is ovulating and to help identify the type of mucus symptom which precedes the temperature rise. If they have already been given a temperature chart by their doctor, get them to explain their understanding of fertility in relation to a temperature rise. You may need to explain that the most fertile time is before the temperature rise, not after it. After three cycles have been charted and a history of ovulation and luteal length has been established the couple may choose to drop recording their temperature if they are finding this too stressful.

12.5 Further Follow up

NFNZ feels that it is 'best practice' to contact autonomous clients on a three monthly basis until the anniversary of the first face to face appointment. At this anniversary, a final update can be made to the client's records and a plan for further action can be recommended if the couple have not conceived.

At this time, a summary of the client's charts can be made in the form of a letter that the clients can take to their health practitioner. This process may be initiated earlier but is dependent on the client's health history, age etc.

When do we refer clients back to their GP?

This is all dependent on the client's circumstances and history. A minimum of three charts is required to develop a history, although six is better. Within a year of a couple trying to conceive 80% of those couples become pregnant. Within two years, the percentage rises to 94%. For some clients it is a matter of time so rushing into invasive tests and investigations may be unnecessary and put undue stress on a couple.

Current recommendations state that if a woman is under 35, she should try to conceive for a year, and then if unsuccessful consult with her GP about instigating some investigations. Personal and health circumstances may shorten this time interval such as the client who has recently had endometriosis surgery or someone who wants to use a donor for insemination.

If a woman is over 35 years the advice is to try for six months, and then if unsuccessful, seek medical advice. Educators can provide their clients with a summary of their charts which they can take to their GP.

Be aware of local fertility clinics and services in your area. It may be appropriate to give your clients information on the local support networks available for couples who are trying to conceive such as Fertility NZ (Formerly NZ Infertility Society). Fertility NZ offers information, support and advocacy for those having difficulty in conceiving. www.fertilitynz.org.nz or phone 0800 333 306.

13.0 Teaching Avoiding Conception Clients

Introduction

Clients who choose to avoid pregnancy can either use NFP or fertility awareness with barriers as their contraceptive method. This section outlines what the difference is and covers specific teaching points relevant to this category of client.

13.1 NFP versus fertility awareness with barriers

Many of our clients choose to avoid pregnancy and they generally fall into two categories:

a. Those who use NFP methods and abstain from any sexual intercourse during the fertile time of their cycle.
b. Those who use fertility awareness (FA) knowledge, gained from STM charting, in conjunction with a barrier method of contraception (condom or diaphragm) during the fertile time of their cycle.

The basic fertility teaching will be the same for both groups, but some special teaching points need to be covered for those using FA with barriers.

There is an internationally recognised definition of NFP:

Definition of NFP

Natural Family Planning Methods are methods of family planning based on the timing of sexual intercourse with reference to the physiological manifestations of the fertile and infertile phases of the menstrual cycle, according to the intentions of the couple to achieve or avoid pregnancy.

It is implicit in the definition of NFP that there is abstinence from sexual intercourse during the fertile phase of the menstrual cycle, if it is the intention of the couple to avoid pregnancy.

World Health Organisation. November 1976

13.2 Further Follow up

NFNZ feels that it is 'best practice' to contact autonomous clients on a three monthly basis until the anniversary of the first face to face appointment.

Circumstances change, and the clients may at some time during your contact with them indicate that they would like to start trying to conceive. You can then encourage them to book an appointment with you for some preconception advice and review their charting from a 'to conceive' perspective.

13.3 Teaching Considerations

1. The educator must be clear in her/his own mind about the method of family planning being used.

You will teach more clearly if you take care to be accurate in your own expressions. Never refer to clients as using NFP and condoms; they are using FA and condoms.

2. Find out at the first appointment why clients have come to clinic.

The information that the clients plan to use FA and a barrier method should emerge naturally in the first stage of the interview. The 'How can I help you?' type of question usually gets a client talking. Other possible openings are "What method of family planning are you using at present?' and 'Why did you decide to make a change?' This conversational way of gathering background information can also eliminate a lot of form-filling, making it possible for you to complete much of the client interview form after the client has left.

If the clients do not share with the educator at the beginning of the interview of their intention to use a barrier method, the opportunity will arise again when discussing the fertile time and abstinence. Never just tell the clients to abstain, or assume that they are accepting the advice to abstain. Let them tell you what they intend/prefer.

Sometimes clients may not inform the educator at the first interview that they intend to use condoms, so checking at follow-up interviews needs to be fairly direct. 'Did you take any risks during the fertile time?' is ambiguous: they may not consider a condom a risk. “Did you have intercourse?” or “On which days during the cycle did you have intercourse?” are better questions.

3. Make sure that the clients understand that condoms or a diaphragm will be their method of contraception not NFP.

Educators need to be relaxed with the right words. Explain in a positive, not negative way, choosing your own words. For example you might say “So you will be using a condom/diaphragm for contraception but you would also like to learn to recognise when you're fertile?” rather than making a statement such as “That's not NFP”.

4. State what we can offer and check that this fits with what the client wants.

Be specific in the contract. Restate what they want to learn and you have to offer. Clarify that the clients are clear about which stage of the cycle they will be using a condom.

This contract is an important part of the first appointment, coming after the preliminaries of discovering what the client has come for, and before beginning the actual teaching.

For barrier users you would sum up by restating their intention to use a condom/diaphragm for contraception and also to learn to understand their fertility. Then explain what we can offer. “I can teach you how to observe and record your signs of fertility, then how to understand what they mean. etc..... You will need to ..... Is that what you would like?”

5. Ask clients to mark days of unprotected intercourse on their chart. Some educators suggest marking these days with an 'I'. Any intercourse with a barrier method is marked differently on their chart ie 'C' for condom or 'D' for diaphragm.

Experience shows that many clients who intend using a condom do so erratically. This is another reason for checking on use at follow-up interviews to help the clients understand if they are taking risks.

6. Be aware that mucus symptoms may be confused by the use of spermicides, arousal, or seminal fluid.

When helping interpret charts at follow-up visits discuss this possibility with clients. Marking of intercourse, as in (5) above will make it clear whether intercourse has an effect on mucus the following day.

7. Stress the need for clear charting and decision-making.

Reliance on barriers may reduce motivation to recognize clearly the change from fertile to infertile mucus and to make clear decisions. If some vagueness in use, or risk-taking, becomes apparent at follow up visits, discuss with the clients their reasons for this.

At times educators are not firm enough with clients about clear charting, thinking 'Oh well, it doesn't matter because they are using condoms'. It is equally important for these clients to be very specific in their charting and understanding.

8. Remember we are not qualified to instruct clients in the use of other methods. Refer to other health professionals when necessary.

Our educators are required to have a general knowledge of how other contraceptive methods work. It is appropriate to pass on this information if requested. In the unlikely event that clients require more detailed instruction in the use of any other method, we suggest they consult an agency such as Family Planning or their G.P. Find out what services are available in your area.

9. Give accurate information if asked about effectiveness.

It is obvious that use of a barrier in the fertile time is more risky than abstaining during the fertile time. It is appropriate to point out that in the fertile time clients need to use their barrier method correctly and carefully.

10. Avoid criticizing other methods of family planning to clients.

This applies in any teaching situation in regard to any method. For example, clients sometimes ask educators for opinions about the safety of the oral contraceptive. This is not our area of expertise and we need only talk about this in very general terms and refer them to Family Planning or their own doctor for further information.

14 Unplanned Pregnancies

Unplanned Pregnancy Investigations

Pregnancy report forms should be completed whenever an unplanned pregnancy occurs among our clients. If a client presents in clinic with the information that she is pregnant, or with a chart that suggests very strongly that she has conceived, a pregnancy form should be completed.

If the charts indicate a possibility of pregnancy, the Educator should talk about filling in a pregnancy report if the pregnancy is confirmed, or if clients ring to report a pregnancy suggest that they make an appointment to discuss how the pregnancy occurred. There should be no cost to the client for this appointment.

The benefits of doing a pregnancy investigation are that it can:

- help us to improve our teaching service.
- help clients understand what led to the unplanned pregnancy.
- help clients come to terms with the pregnancy.
- help clients decide whether they wish to use NFP in the future.

The reasons for the pregnancy may be straightforward e.g. an obvious risk, acknowledged by the clients. Even so, we can all learn from a report. In other cases the educator and client are unable to see a reason for the pregnancy when they look at the chart. In this case, the client will find it helpful if you explain that the report is sent (with a code number only to identify it to safeguard confidentiality) to the National Clinical Supervisor of NFNZ, who consults if necessary with a member of the Medical Scientific Advisory Board. Any comments are sent back to the educator and can be passed on to the client. It may be that the pregnancy in question is a method failure and so cannot be explained, but either way it is often helpful to the clients to know that they are receiving the best information available.

Notes to Assist You in Completing the Pregnancy Reporting Forms

Form 1 Case History

Form 1 is filled in before the interview from the client's notes. Occasionally, if for some reason these case notes are not available, you may need to get information at the pregnancy interview. If so, please indicate this on the form.

Form 2 Interview with client(s)

This is usually the only form produced at the interview. It is important to avoid turning the interview into an interrogation, and adding to client stress. This can be avoided if the Educator takes time to become familiar with the form before the interview. This is a time when the clients may express emotions about the pregnancy such as anger or fear. A sympathetic ear is essential, as is the ability to discuss ways of coping e.g. assistance from family, Pregnancy Help etc. may be appropriate.

Form 3 Educator's Assessment

Form 3 is filled in after the interview when the Educator should have enough information to make an objective assessment.

Charts

Pregnancy report forms must be accompanied by a copy of the pregnancy chart and any preceding charts. Make sure charts are completed with dates and that it is clear whether markings on them have been made by the client or Educator. Forms and charts should be sent in as soon as possible to the Clinical Supervisor, who will review the data and provide a report.

Pregnancy Report Forms

Samples of the three Pregnancy Report Forms presently in use are in moodle, and on the NFNZ Educator Portal..

15.0 Post Hormonal Contraception

Introduction

This section how to teach clients who have recently ceased taking either the Oral Contraceptive Pill or the Depo-provera injection. It also looks into the issues surrounding returning fertility and how this affects natural family planning guidelines.

15.1 Return of Fertility after Ceasing Oral Contraceptive Use

The rate of the return of fertility after stopping the oral contraceptive varies from woman to woman, as does the process of the return. It is not possible to predict exactly what will happen in individual cases.

With the present low dose hormone pills, experience shows that most women ovulate within the first post-pill cycle.

Some cycle variations which are common to post-pill clients are:

- The luteal phase may be shorter than normal in the first few cycles. This often does not affect the overall cycle length. In many cases the return to a normal length luteal phase goes along with a shortening of the pre-ovulatory phase, rather than a lengthening of the cycle.
- There is often an influence on the mucus pattern, even for women who begin to ovulate immediately. This is a carry-over effect from the pill, which suppresses mucus production and it can take a while for the cervix to re-establish this. In such cases the mucus could be scant, or continuous and unchanging, or patchy and without a clear pattern. Meanwhile the woman can be taught to recognize ovulation from the temperature pattern. **If the mucus does not show any obvious pattern add an extra day of high temperature for added safety (i.e. four high temperatures instead of the usual three post-ovulatory).**
- Some women will take a few cycles for things to "settle down". Some may have a normal ovulatory first cycle, then a disturbed second or third cycle, which could be longer or anovulatory.
- Women tend to return to the type of cycles they had before beginning the pill, though this is not universal. Women who had long, irregular or anovulatory cycles before the pill may return to the same pattern. In these cases the cycles are not an effect of the pill, but a return to what is normal for those particular women.
- A small number of women can take several months to return to fertility. If they want to conceive immediately, you will need to discuss basic preconception care at the first appointment.
- In general any effect on the cycle resulting from the pill can be expected to have disappeared after 3-4 cycles.
- There appears to be no relationship between the age of the woman or length of time on the pill and her return to fertility.

Teaching Clients who have Ceased using the Pill

First Appointment

a. The first appointment follows the same pattern as for all clients learning the Sympto-Thermal Method (STM) to avoid pregnancy. Take a client history, establish a clear contract, review anatomy and physiology, teach combined fertility and how to fill in a Sympto-Thermal chart.
b. When taking the client history it is important to clarify the reason that the clients are changing to NFP and in particular any plans they have for a future pregnancy. Many post-pill clients stop the pill in order to have a few months free of drugs before starting a family. This is of relevance to their motivation and may influence the way they choose to follow the guidelines during the time they are avoiding a pregnancy.
c. Clients should be reassured with the information that most women return to fertility straight away, but also that there may be some influence from the pill on their bodies for approximately three cycles.
d. For couples using the STM, advise restricting intercourse to the post-ovulatory time for at least the first three cycles but preferably 6. If the first three charted cycles are ovulatory and the luteal phase is established, consideration can then be given to using the pre-ovulatory safe time.
e. Day one of the first cycle is counted from the first day of the post-pill withdrawal bleed and clients should be advised that they are at risk of pregnancy from the beginning of this bleed.

Follow-up Appointments

Advice is the same as in any STM teaching, but with the extra information on restricting intercourse to the post-ovulatory time for the first three cycles. However teaching of the pre-ovulatory guidelines should begin from the second appointment. Particular care needs to be taken to ensure that couples who are using fertility awareness and condoms are aware of the guidelines, chart carefully and use condoms appropriately.

In the case of clients who have a biphasic temperature pattern but unclear mucus, temperature can be used alone to define the post-ovulatory time, but a fourth raised temperature should be counted as an extra precaution.

If the mucus pattern is unclear, cervical palpation is useful in providing another check to determine the infertile and fertile phases.

Clients with short luteal phases may find the STM frustrating at first. Reassure them that the luteal phases should lengthen, and also warn them that when this happens, the pre-ovulatory time may shorten, so that they could be potentially fertile at an earlier time in their cycle than they have been accustomed to. This is why intercourse is restricted to the post-ovulatory phase of the cycle for the first three cycles.

15.2 Depo-Provera

The only injectable contraceptive available in New Zealand, is a synthetic progesterone, known as Depo-Provera. Its full name is depot medroxyprogesterone acetate (DMPA). DMPA is injected three monthly.

How does Depo-Provera work?

The primary effect is to **suppress ovulation.** Like other progestagens it also:

a. Increases the viscosity of cervical mucus causing a barrier to sperm.
b. Changes the rate of ovum transport through the fallopian tubes.
c. Makes the endometrium less suitable for implantation.

What side effects do women experience?

- For most women periods stop. Amenorrhoea becomes more likely with longer usage.
- Some women experience irregular periods.
- Some have spotting or irregular bleeding.
- For some women there is very heavy or continuous bleeding to the extent that they require medical attention.
- Weight gain and depression, nausea and other side effects experienced by users of oral contraceptives are reported by women using Depo-Provera.

15.3 Return of fertility after Ceasing Depo-Provera

After ceasing Depo-Provera, there can be a considerable delay in the return of fertility. This is partly due to the residue of DMPA remaining in the body and also the pattern of inactivity established by the ovary and hypothalamus. Studies show that by 18 months (after discontinuation of Depo-Provera) conception rates are back to normal levels. A small number of women may resume ovulation within a few weeks after the injection was due. For some, continuous bleeding develops some weeks after their injection was due and they will need to be referred to a doctor for assessment and treatment.

Teaching clients who have Ceased using Depo-Provera

It is most likely that women will present with complete dryness or an unchanging mucus pattern. No signs of fertility may appear for up to a year, after which mucus symptoms may appear gradually.

First Appointment

a. The first appointment follows the same pattern as for all clients learning the Sympto-Thermal Method (STM) to avoid pregnancy. Take a client history, establish a clear contract, review anatomy and physiology, teach combined fertility and how to fill in a Sympto-Thermal chart.
b. You need to explain that return of fertility may be delayed, and that at this stage the time involved cannot be predicted.
c. Reassure that fertility will return and that meanwhile recognition of infertility can provide a reliable method of natural family planning.
d. Begin by charting temperature and mucus for three weeks. Book the clients in for a follow- up appointment in three weeks time.

Second Appointment

If dryness or an unchanging pattern is observed, temperature can be omitted and mucus only charted. Teach the client how to identify the basic infertile pattern (BIP) and how to apply the BIP guidelines. If the client needs reassurance she is not pregnant, she can continue taking her temperature. The client could also be taught cervical palpation as an extra confirmation that she is in an infertile phase.

Further follow-up appointments

At the first sign of bleeding or changing mucus patches (where BIP cannot be used), request that the client reintroduce temperature. Book them in for a further appointment once they have four weeks of temperature recordings.

It is important to recognize and acknowledge the insecurity contraceptive clients may feel without menstruation and to reassure them that pregnancy has not occurred.

The educator needs to be confident herself in what she is teaching, as this attitude will transmit itself to the clients.

For those clients who want to conceive, the delay in return to fertility can be extremely frustrating. Many will express at their first or second appointment that they were not informed when they started using Depo-Provera that their fertility would be affected in this way.

As fertility educators we must be prepared with both categories of clients to listen, allow the clients to express any fears or anxieties, and provide the support they need.

Once the first period has occurred, all clients will be Sympto-Thermal charting. Safe time is restricted to the post-ovulatory phase only, for at least the first three cycles but preferably six. To include these cycles in the history they must have been ovulatory.

For clients with returning fertility, cycle lengths can vary greatly as can the day of ovulation and luteal phase length. This guideline is put in place to protect couples from an unplanned pregnancy during the time of returning fertility and variable cycles.

15.4

Basic Infertile Pattern (BIP)

This pattern should be recognised with 3 weeks of charting. There are two types of pattern:

- Dryness, i.e. a dry sensation and no mucus seen.
- Unchanging mucus and sensation. The mucus and sensation may be of any description; the significant point is that the woman describes the same pattern day after day.

Rules for (BIP)

1. Intercourse is considered safe on alternate evenings during BIP (alternate to avoid confusion caused by seminal fluid on the day after intercourse).

2. If there is any change in the BIP even for one day, the rule to apply is: avoid intercourse until the fourth day past the change, then continue to apply the alternate day rule. If the change does not revert back to the previous BIP, avoid intercourse for two weeks to see if a new BIP is established. If it has, this now becomes the client's new BIP and the rules explained earlier are applied.

3. Any bleeding or spotting must be considered a change and four days left before resuming intercourse.

4. If the woman considers the bleed to be a period she needs to commence Sympto-Thermal charting under the guidance of her fertility educator.

5. BIP guidelines no longer apply. For the first three cycles following the first period it is important to avoid intercourse until the post-ovulatory phase of the cycle. This is a time of returning fertility and cycle lengths and luteal phases can vary.

If the mucus pattern is erratic, continue with Sympto-Thermal charting and book the client in for a further follow-up appointment in 4 weeks time. They will need to either abstain, or use a barrier form of contraception until it can be determined that ovulation has occurred. (This scenario is extremely rare).

For those charting temperature, the basal body temperature is generally at a higher baseline initially. This is due to the residual effects of progesterone. Over many months, the temperature will gradually fall and establish a lower baseline. As you see this occurring on your clients chart you can offer them reassurance that fertility is returning.

One month after their follow up appointment, call the client to follow up on how there charting is going. If they are using BIP, check their understanding and application of the guidelines. Provide reassurance as necessary. Some clients may prefer to do this in a face to face consultation.

16.0 Legislation

Fertility educators need to be aware of the current acts and codes in New Zealand surrounding health, education, and health practitioners practice. The following is a list of some of these acts and codes. You can find out more about the acts by visiting www.legislation.govt.nz

If you have a health professional registration you will also be governed by the code of practice of your professional body.

Privacy Act 1993

This act has 12 information privacy principles which include: purpose of collection of personal information, source of personal information, collection of information from subject, manner of collection of personal information, storage and security of personal information, access to personal information, correction of personal information, accuracy of personal information etc to be checked before use, agency not to keep personal information longer than necessary and limits on use of personal information. We advise you to be familiar with the legal requirements of this act. www.legislation.govt.nz/act/public/1993/0028/latest/DLM296639.html

From the Privacy Act, a code of practice was developed to take account of the special nature surrounding the privacy of health information:

Health Information Privacy Code 1994

This code consists of 12 rules in regards to health information

- **Rule 1**: Purpose of collection of health information
- **Rule 2**: Source of health information
- **Rule 3**: Collection of health information from individual
- **Rule 4**: Manner of collection of health information
- **Rule 5**: Storage and security of health information
- **Rule 6**: Access to personal health information
- **Rule 7**: Correction of health information
- **Rule 8**: Accuracy etc of health information to be checked before use
- **Rule 9**: Retention of health information
- **Rule 10**: Limits on use of health information
- **Rule 11**: Limits on disclosure of health information
- **Rule 2**: Unique identifiers

We suggest that you read this code and be familiar with the rules so that you can apply them to your practice.

https://www.privacy.org.nz/the-privacy-act-and-codes/codes-of-practice/health-information-privacy-code-1994/

Health and Disability Commissioner Act 1994

"The purpose of this Act is to promote and protect the rights of health consumers and disability services consumers, and, to that end, to facilitate the fair, simple, speedy, and efficient resolution of complaints relating to infringements of those rights" (www.hdcorg.nz).

From the act, a code was produced in 1996 with reviews in 1999 and 2004.

The Code of Health and Disability Services Consumers' Rights

The Code stipulates ten rights of health and disability consumers in New Zealand and places corresponding obligations on providers of those services:

- Right 1: the right to be treated with respect
- Right 2: the right to freedom from discrimination, coercion, harassment, and exploitation
- Right 3: the right to dignity and independence
- Right 4: the right to services of an appropriate standard
- Right 5: the right to effective communication
- Right 6: the right to be fully informed
- Right 7: the right to make an informed choice and give informed consent
- Right 8: the right to support
- Right 9: rights in respect of teaching or research
- Right 10: the right to complain

Service providers are obligated to comply with the Code, promote awareness of the Code to clients and enable clients to exercise their rights.
The Code applies to any person or organization that provides a health service to the public, whether paid for or not.
The Code covers all registered health professionals, such as doctors, nurses, dentists, naturopaths, homeopaths, acupuncturists etc. As well as applying to individual providers, the Code also applies to hospitals and other health and disability institutions and allows the Commissioner to enquire into systems issues across professional boundaries.

Health Practitioners Competence Assurance Act 2003

The primary purpose of this act is to protect the health and safety of the public by providing mechanisms to ensure that health practitioners are competent and fit to practise their profession. This includes working within one's scope of practice and requirements for training and continuing education.

www.legislation.govt.nz/act/public/2003/0048/latest/DLM203312.html?search=ts_act_Health+Practitioners+Competence+Assurance+Act&sr=1

Human Rights Act 1993

This act explains unlawful discrimination. Of particular interest are the sections: Part 2, point 22 Discrimination in provision of goods and services and points 61-69 encompassing racial disharmony, sexual harassment, racial harassment, indirect discrimination, victimisation, sexual or racial harassment in employment. We advise educators to read this act thoroughly and be aware of your responsibilities under the act.

www.legislation.govt.nz/act/public/1993/0082/latest/DLM304212.html?search=ts_act_Human+Rights+Act&sr=1

Contraception, Sterilisation and Abortion Act 1977 (CS&A Act). CS&A Amendment 1978, 1990

The relevant section of this act is the information on abortion – see points 18, 29 and 46. Fertility educators need to be aware that women requesting an abortion must meet specific criteria; the abortion must be authorised by two certified consultants; if a doctor has a conscientious objection to abortion, he/she must refer their female patient to a certified consultant for consideration of an abortion.

www.legislation.govt.nz/act/results.aspx?search=ts_act_Contraception%2c+Sterilisation+and+Abortion+Act

The Education Act 1989

Relevant sections are: Part 3 Enrolment and attendance of students – point 25a Release from tuition on religious or cultural grounds and point 25aa Release from tuition in specified parts of health curriculum. The parent of a student enrolled at any state school may ask the principal in writing that their child is excluded from tuition in specified parts of the health curriculum related to sexuality education; Part 7 Control and management of state schools – point 60b Consultation about treatment of health curriculum – school boards must consult the school community at least every two years and adopt a statement on the delivery of the health curriculum.

www.legislation.govt.nz/act/public/1989/0080/latest/DLM175959.html?search=ts_act_Education+Act&sr=1

Education Standards Act 2001

Part 1 - point 60b Consultation about treatment of health curriculum – school boards must consult the school community at least every two years and adopt a statement on the delivery of the health curriculum.

www.legislation.govt.nz/act/results.aspx?search=ts_act_Education+Standards+Act

Human Assisted Reproductive Technology Act (HART) 2004

This act deals with issues surrounding assisted reproductive technology. The act should be read in its entirety, and specific attention paid to: purposes, principles, prohibited and regulated activities, information about donors of donated embryos or donated cells and donor offspring.

www.legislation.govt.nz/act/results.aspx?search=ts_act_Human+Assisted+Reproductive+Technology+Act

Health and Safety In Employment Act 1992

The purpose of this act is to promote the prevention of harm to all persons at work and other people in, or in the vicinity of a place of work.

It focuses on the identification of significant hazards and how the employee and employer can eliminate, isolate or reduce these.

www.legislation.govt.nz/act/results.aspx?search=ts_act_Health+and+Safety+in+Employment+Act

Crimes Act, 1961, Crimes Amendment Act 2005

This act describes criminal acts that are punishable in NZ law. Relevant sections include: Part 3, Matters of justification or excuse - point 48 Self defence and defence of another; Part 6, Crimes affecting the administration of law and justice – point 105a Corrupt use of official information and point 105b Use or disclosure of personal information disclosed in breach of section 105a; Part 7, Crimes against religion, morality and public welfare – point 134 Sexual conduct with young person under 16; Part 8, Crimes against the person – point 182a Miscarriage defined and point 204a Female genital mutilation.

www.legislation.govt.nz/act/public/1961/0043/latest/DLM327382.html?search=ts_act_Crimes+Act&sr=1

Treaty of Waitangi

The Treaty of Waitangi is New Zealand's founding document, signed at Waitangi, 6th February 1840. The Treaty is a broad statement of principles on which the British and Maori made a political agreement to found a nation state and build a government in New Zealand. It is common now to refer to the intention, spirit or principles of the Treaty. The Treaty of Waitangi is not considered part of New Zealand domestic law, except where its principles are referred to in several Acts of Parliament. The exclusive right to determine the meaning of the Treaty rests with the Waitangi Tribunal, a commission of inquiry created in 1975 to investigate the Crown's alleged breaches of the Treaty.

Educators need to be aware of the principles of the Treaty and how this impacts on their practice.

www.nzhistory.net.nz/politics/treaty

17.0 Scope of Practice for NFNZ Educators

The Scope of Practice is currently in the process of being formalised.