



Fertility

What you need to know



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INTRODUCTION

It appears that everybody around you is falling pregnant; however as each month goes by your period comes again! This lead to disappointment, doubt and frustration. You find you are asking yourself the same questions again and again "Why is it so difficult for me to fall pregnant?" "What is wrong with me?"

You search for answers. You confide in your friends and relatives. You get conflicting and at times, negative information. To add "fuel to fire", you discover that some of your friends are now pregnant and they're not even trying. The end result is a feeling of despair, hopelessness and even self pity.

Now, you have decided to do something about this. This is the reason you are here today. **You have taken your first positive step!** In order to help you to understand the many aspects of infertility, I have written this booklet. It will provide you with factual information and will help you and your partner understand the nature and extent of the underlying problem.

But first a few ground rules:

- We must develop a plan of action and apply it in a logical manner to achieve our goals.
- We must develop a positive mental attitude. A positive mental attitude is the right mental attitude - in any given situation. It is often composed of the "plus" characteristics. Symbolised by such words as "faith", "hope", "optimism", and good common sense.
- Remember, that every thought you release will come back to you multiplied by its effect. Positive thoughts will generate positive reactions in your body, while negative thoughts will have an opposite effect.
- Concentrate your mind on the "can-do" portion of the task you face. Don't worry about the "cannot-do" portion unless and until you meet it face to face. By that time the "can-do" portion will prevail and will lead you to success.
- Finally, avoid associates with negative mental attitudes. Their attitudes will rub off on you and poison every effort you engage in.

SO LET US BEGIN

DEFINITION

Infertility (difficulty in falling pregnant) affects approximately **10%** of all couples. It is when and if a couple has not been able to fall pregnant after 12 months of seriously trying. Although it is natural to feel discouraged and confused about infertility, there is good reason to be optimistic. In the majority of cases, with treatment, most couples are able to conceive. Obviously this is an anxious time for you and your partner, but don't worry, I will guide you through this difficult time and with perseverance you have a high chance of falling pregnant.

CAUSES OF INFERTILITY

- | | | |
|------------------|-------|---|
| 1. Anovulation | (20%) | The ovaries are not releasing eggs |
| 2. Tubal factors | (20%) | The fallopian tubes are blocked |
| 3. Endometriosis | (10%) | This is a condition where the lining of the uterus grows outside, in the pelvis, causing scarring and inflammation. |
| 4. Male factors | (30%) | e.g. low sperm count |
| 5. Others | (20%) | e.g. uterine factors (submucous fibroids or polyps), cervical and unexplained reasons. |

The most important factors determining your chances of falling pregnant are:

1. **Age.** Unfortunately as you get older there is increasing difficulty in falling pregnant. Therefore if you are >35, there will be greater urgency for treatment.
2. **Duration of infertility.**
Obviously the longer you have been trying to fall pregnant and have not been able to, the less your chances are. Certainly the outlook is best for couples who have had a duration of infertility of less than 3 years.
3. **The cause of infertility.**
Usually couples with anovulation, mild endometriosis are easier to treat than severe male factor problems.

HOW PREGNANCY OCCURS

The most important factors in trying to fall pregnant are **time and timing**. Remember that at best with normal couples there is only a 20% chance of falling pregnant every month (1 in 5). Therefore it is important to be patient and with time successful pregnancy can be achieved.

There are four factors that lead to a successful pregnancy:

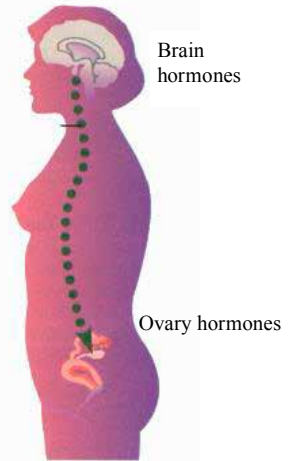
1. **Ovulation** or releasing of an egg. The woman needs to be able to release an egg on a regular basis to achieve pregnancy. Ovulation is a final result of a complex interaction between the hormones from the brain, the ovary as well as the uterus/womb. Having a regular period gives some indication that your hormones are in balance and that you are ovulating regularly, however, it is not always the case.

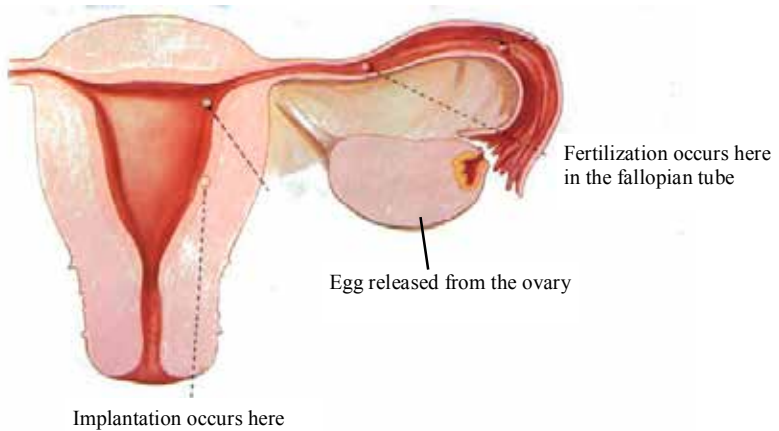
Generally, if you have a regular menstrual cycle of 28 days, **you will ovulate in the middle of your cycle, i.e. day 14**. This is the best time to conceive

2. **Sperm production**. Obviously sperm are required for successful conception. This is why it is very important to get your partner checked out. Often this involves only a sperm test on your partner. Your partner may not feel it is necessary to have the procedure, particularly if he has fathered children before. I would emphasise however it is **important to get a sperm count done on him** because minor problems can contribute to infertility.

3. **Normal female anatomy**. The egg and sperm need to be able to meet and this requires not only having regular intercourse at the appropriate times, but also the cervix, the womb and the tubes need to provide the appropriate environment for fertilisation of the egg and the sperm. Tests will be performed to check that these areas are healthy.

4. **Implantation**. Once fertilisation has occurred, the embryo (baby) needs to implant successfully in the womb. Occasionally conditions that prevent this will lead to infertility.

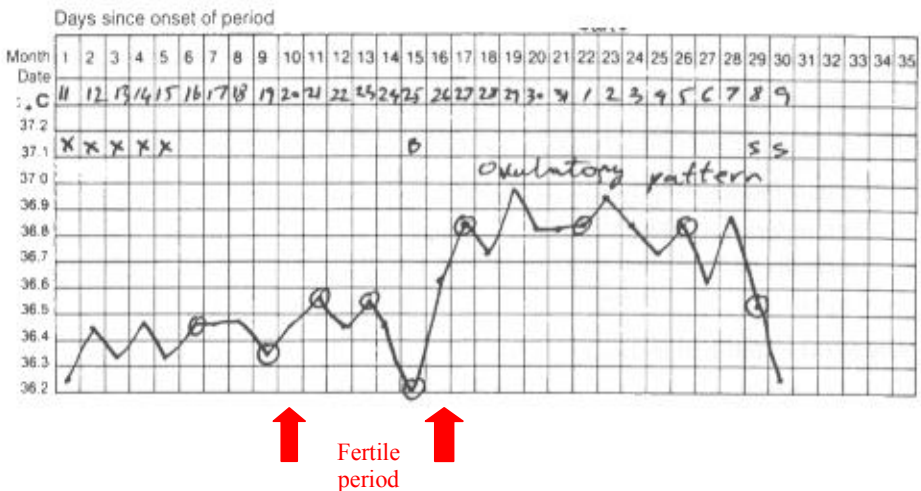




IMPROVING YOUR CHANCES OF PREGNANCY

Timing

If you have a regular menstrual cycle of 28 days, usually ovulation occurs on day 14. Generally the egg survives 48 hours, and the sperm survive 72 hours, therefore the best time to have intercourse is between **day 11 and day 16 (this is the 5 day window each month when you are able to fall pregnant)** of your menstrual cycle. You may also notice that around the time of ovulation your mucous and vaginal secretions are more copious and runny. After ovulation your temperature will go up approximately



Smoking & alcohol

It is important that you cut down on smoking and alcohol as these have been found to be detrimental to conception. Also drugs such as marijuana and cocaine can also affect your fertility and these should be cut out.

Weight

Women who are significantly overweight or underweight often have difficulties falling pregnant. Therefore it is important to attain your ideal body weight.

Strenuous exercise

Frequent strenuous exercise such as long distance daily running can decrease hormone production in women can occur and also create irregular menstruation as well as ovulation, causing fertility problems.

Testicular heat

A man's testicles are normally several degrees cooler than the rest of his body. When testicles are too warm sperm production decreases. High fever, hot working environments, hot tubs, saunas and tight pants may raise testicular temperature and decrease fertility.

YOUR EVALUATION

It is ideal if you and your partner are seen some time together as the problem of infertility involves both of you. The course of your evaluation will include the following:

The first visit generally involves a detailed history of both you and your partner. I will ask you about your menstrual history as well as how long you have been attempting to fall pregnant. Please do mention if you have had any previous medical problems and are on any medications, whether they be self prescribed or prescribed by the doctor. (Do not forget herbal medications).

During the visit you will undergo a full physical examination and with your permission, a pelvic examination, to determine if there are any obvious abnormalities. This will also include a Pap smear unless you had one within the last 12 months and **the results are available to me.**

TESTS

Infertility tests will involve both you and your partner.

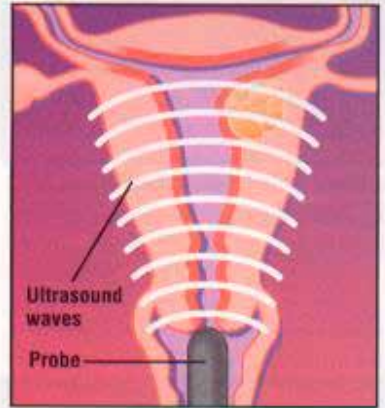
TESTS ON YOU

1. HORMONE TESTS

At your first visit arrangements will be made to have a number of hormone tests to assess your ovaries as well as brain hormones. I may also request an egg test on you (AMH), which will give me some idea of the number of eggs you may have.

2. ULTRASOUND

I will also arrange for you to have an ultrasound to check your pelvic organs. The ultrasound will also include an internal component which requires a small instrument "or probe" to be inserted in your vagina. Research has shown that an internal ultrasound is more accurate than one performed just on your tummy. This will provide more accurate information about the state of your uterus and ovaries. I may refer you to a specialist trained in female ultrasound, which may give me a more accurate results.



3. ASSESSMENT of TUBES (Hy-Co-Sy)

This is a test which involves instilling a fluid via your cervix into the uterus. The aim of this test is to determine whether the shape of your uterus cavity is normal and also to check to see if there is any blockage in the tubes. The test is performed just after your periods are finished to ensure you are not pregnant. The test involves inserting a speculum in your vagina (just like when you have a Pap smear) and the fluid is injected by a specialist. The test may cause discomfort during the procedure. You will be awake throughout the procedure. Unless you are an asthmatic or prone to asthma, you can minimise the discomfort by taking 2 tablets of Neurofen or Ponstan 1 hour prior to the procedure. Be sure to take these medications with some milk or a little food. DO NOT take these medications on an empty stomach. Studies have shown, that your fertility may improve after this test, as your tubes have been flushed.

Hy-Co-Sy is a non invasive way to assess your uterus and tubes.

4. ENDOSCOPY

This is a general medical term to designate those tests that involve inserting a telescope into the body. **This is the most accurate way to determine the anatomy of your pelvic organs.** In evaluation of infertility Endoscopy involves two procedures (done simultaneously under General anaesthesia). These procedures are:

- **Laparoscopy.**
- **Hysteroscopy**

I shall provide you with separate booklets explaining these procedures. Please do remind me if I forget to give you these information booklets. Ideally these procedures are done just after your period. This timing provides us with a much better view of your internal organs and furthermore ensures that you are not pregnant. At the time of laparoscopy, your tubes will also be checked, to see they are not blocked, by injecting a dye into your uterus.

I will often recommend this earlier, if you have significant pain with your periods, to assess for endometriosis

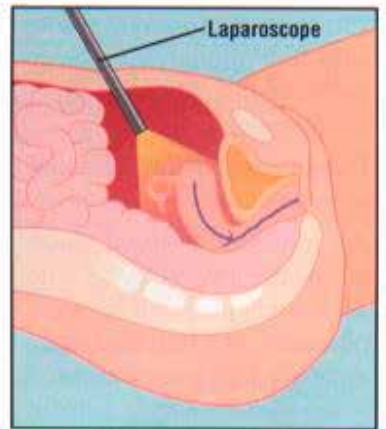
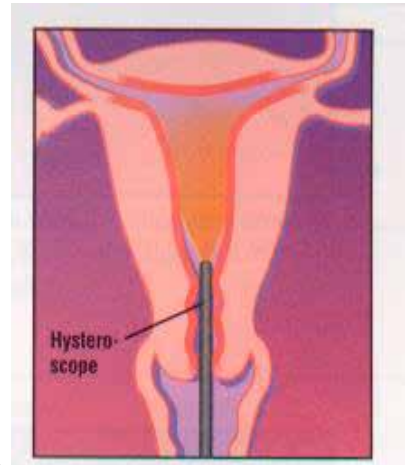
TESTS ON YOUR PARTNER

Your partner is lucky. He has to undergo only one painless test! This test involves a check on his semen.

Semen Analysis

This is often the only test required to check the health of your partner's sperm. Your partner will need to collect a sample of semen in a sterile specimen container that I shall provide to you. There is no need to feel embarrassed about the collection and delivery of his sample. He can collect the sample in the privacy of his home and have it delivered to the Laboratory within one hour of collection or he can come to the lab and provide the sample.

Your partner may have had a semen test done elsewhere but I will need to repeat the test as many pathology services do not have the expertise to correctly interpret the semen sample. Also semen samples may vary considerably, therefore a recent analysis is important.



Often I may also request a **trial wash** of your partner's semen. This is where the semen is spun down and more accurately predicts the fertilization potential of the sperm. Particularly if IVF is contemplated, a recent trial wash is mandatory.

I may also request for a DNA damage test (SCIT test), particularly if IVF is contemplated, or there is a history of recurrent miscarriages or IVF failures

TREATMENT

Once all these investigations have been performed and the cause of your infertility has been determined, then treatment can begin. Remember the treatment of infertility requires commitment from both you and your partner, and this will often involve some inconvenience e.g. having blood tests performed often, having to have sexual intercourse at specific times etc.

Anovulation, (not releasing an egg regularly)

This is often associated with polycystic ovary syndrome (PCOS) or often weight changes and stress. The treatment involves giving you fertility drugs (clomiphene).

You should take clomiphene from day **2 to day 6** your next menstrual cycle. You will also take some oestrogen hormone (Premarin) from day 7 to 14 of the cycle to improve the uterine lining. When taking fertility drugs, I will be monitoring you with blood tests and ultrasounds, to ensure:

- You are responding to fertility drugs
- You are NOT producing excessives eggs (we do NOT want to have triplets or quads!)

You will also need to have a blood test approximately one week after ovulation to confirm you have ovulated. If your next period does not come 3 weeks after ovulation, then you should have a pregnancy test to determine if the cycle has been successful or not.

Generally I will liaise with you every month after a period to check your progress. Clomiphene is given for up to 6 ovulatory cycles. You will have approximately 50% chance of falling pregnant during this time. If, after a maximum of 6 cycles you have not fallen pregnant, then we shall move on to other treatment options. Often this involves having injections and more complex tests and ultrasound monitoring to make you ovulate. This may also mean having IVF. I will discuss this with you if this is required.

Male factor infertility

Remember in one third of couples, your partner is the cause or has problems contributing to infertility. If these problems are mild I may treat you with fertility drugs to improve your ovulation. If the sperm tests are very abnormal then I may refer you off to see a male infertility specialist for more complex treatment of this. Often sperm abnormalities may be overcome with a specialised form of IVF called ICSI, where the sperm is directly injected into the egg.

Endometriosis

Endometriosis is a condition where the lining of your womb grows internally, therefore with each period you have internal bleeding as well. Often this can cause scarring and the endometriosis is toxic to sperm and causes infertility. Endometriosis is diagnosed at the time of laparoscopy and generally I will excise and treat most of this at the time of surgery. If the endometriosis is only **mild** often surgical treatment and fertility drugs will enable you to conceive.

If the endometriosis is **severe** then I will need to discuss with you how to further best treat this. This may be either performing much bigger surgery to try and excise all the endometriosis or undergoing IVF (test tube) fertilisation.

Tubal disease

Another reason for infertility is that your tubes are blocked, often because of previous infection or previous surgery. If this is mild then I will treat this at the time of your initial laparoscopy. If this is severe however, then I will need to discuss with you further options to manage this.

Unexplained Infertility.

In approximately 10% of couples, doctors are unable to determine the cause of infertility i.e. it is unexplained. Often under these circumstances a 3 month course of fertility drugs may be successful in achieving pregnancy. If this proves to be unsuccessful then we will move onto further management and treatment options, which often involves IVF.

Uterine factors.

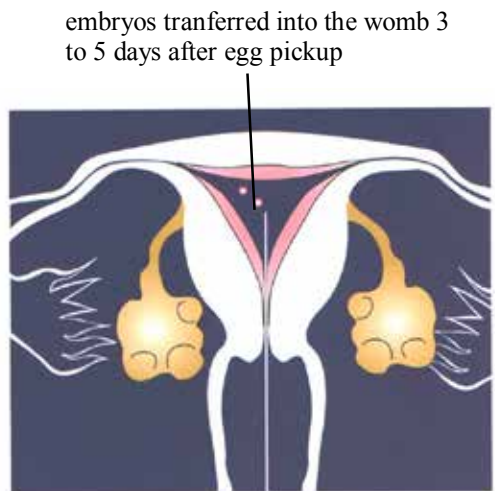
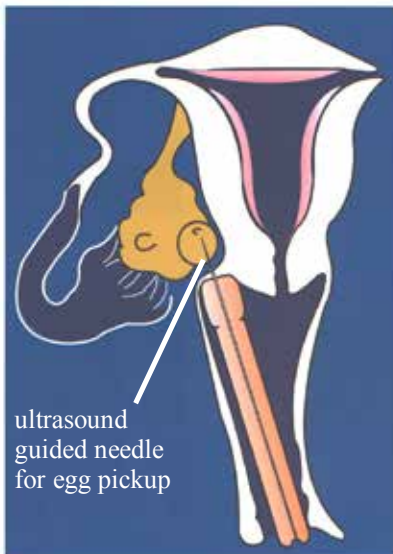
Occasionally at the time of hysteroscopy you will have fibroids (benign tumour) of the muscle of the womb or a septum (a congenital abnormality inside your womb) that is causing your infertility. This may require further surgery which is much bigger than the initial surgery that I have performed. In this case I will discuss with you what further needs to be done.

FURTHER TREATMENT OPTIONS WITH ART

There are times when I may suggest that you need assisted reproductive techniques (ART) to conceive. If you are older, or have long standing infertility or other treatments have been unsuccessful then I will recommend some form of ART to conceive. ART treatments are very involved and require complex blood tests, ultrasound as well as expertise. More importantly pregnancy with ART is improving all the time and currently >70% of couples referred are able to achieve pregnancy. If you require ART I will, I will organise for you to go to an IVF unit, under my care. Referral to an IVF unit is suggested if you need any of the following treatment options.

1. Uterine insemination with ovarian stimulation. This involves giving you fertility drugs to improve your ovulation and at the appropriate time your partner's washed sperm will be injected into you.

2. IVF or ICSI (injection of sperm in to the egg to cause fertilisation). This involves stimulation of your ovaries and collecting the eggs (often multiple eggs) by ultrasound. These are then artificially fertilised with your partner's sperm in a test tube and then replaced inside your womb at the appropriate time.



CONCLUSION

I understand this is a trying time for you and your partner but be reassured that with time, timing and patience and the appropriate treatment, most couples will be able to achieve success. I will try and guide you through this process and remember that although this is a difficult time you should not lose track of the fact that making a baby is a wonderful experience. GOOD LUCK



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