

# Delayed Childbearing

## Facts for Every Couple



Richardson A. Ajayi



# Delayed Child-Bearing Facts for Every Couple

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# Preface

**T**his third edition of *Delayed Child Bearing* is the most educative and reader friendly yet. The addition of detailed diagrams and an in depth analysis of the real issues makes it a dependable resource in the area of reproduction and infertility.

*Delayed Child Bearing* is a medium to learn more about infertility, how the reproductive system works, the basics of trying to conceive, and other essential information one needs. It also includes information on infertility myths, fertility and sex and the effects of age on infertility.

Most experts define infertility as not being able to get pregnant after at least one year of trying. Infertility can cause a great deal of stress and anxiety, both individually and as a couple. Having the support needed and good coping skills can help a couple get through this difficult challenge.

Efforts to understand the causes of infertility, treatment options, and the eventual resolution of their infertility is all that an infertile couple think about. The importance of knowledge and early detection go a long way in proper fertility management and in improving a couple's chance of conception.

The overall objectives for managing infertility include making a timely, accurate, diagnosis and then using the best science available to help them achieve conception. This booklet aims to provide this knowledge.

The miracle of conception is best achieved in the privacy and comfort of ones bedroom, but where this is not possible other options of achieving Gods miracle must be explored.

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1

# Introduction

**What is delayed child-bearing?**

Most couples experiencing difficulty with child bearing will, with appropriate medical treatment, eventually achieve pregnancy and have their own children so the term is considered more positive than 'infertility'. However, infertility is the commonly used term and will be used for the rest of this booklet.

**What is infertility?**

Infertility is generally defined as the inability to conceive after twelve months of trying to become pregnant.

**Is infertility a woman's problem?**

The central role played by the woman in the child-bearing process means that it is normal to question the woman when a couple is not achieving pregnancy. However, the process of conception requires the interaction of the man and the woman and infertility can be caused by either the man or the woman. Among couples who seek help, infertility is exclusively a problem in the female in about 40% of cases and exclusively in the male in about 40% of cases.

**How common is infertility?**

It is estimated that 1 in 6 couples seek help in achieving pregnancy in the developed world. Although concrete data is lacking, it is thought that the problem is twice as common in developing countries like Nigeria.

**What are the psychological effects of infertility on a couple?**

It is the natural desire of most couples to have their own children. This is particularly so in Nigeria where children are usually necessary to secure the marriage union. Having to deal with infertility can lead to painful and difficult

emotions. It is normal to assume fertility and it is very confusing and painful to learn that you are infertile after trying for so long. Many couples experience frustration and powerlessness in dealing with the situation. Others experience isolation amongst other couples with children. Other emotions commonly described include fear of the future, anger at having to deal with such a situation, guilt that they caused this to themselves, shame, sadness and hopelessness.

How can a couple cope with infertility?

The best thing a couple can do for each other is to try and express the feelings they have about the situation to one another. Men and women usually have different feelings and it is important for the couple to talk things through. Men are not very good at expressing themselves: they tend to focus on things they have more control over such as their work. This does not mean they do not care. They have merely devised their own coping strategy but it is important for the couple to try and work things out together.

How can we cope with pressure from relatives and friends?

Infertility is one of the biggest problems a couple will have to deal with and, although well meaning, family and friends can exert tremendous pressure on a couple. The most important thing any couple can do is to protect and support each other from their own relatives. Make it clear that you understand their concern but that you are better off being left alone.

**What are the effects of infertility on our relationship?**

Infertility can have a significant impact on any relationship. It is sometimes said that infertility is the major test of any couple's relationship and can make or break the relationship. By providing mutual support and working together, infertility can strengthen a relationship as the couple learn to give reassurance and encouragement to one another.

**How can I help my partner cope with infertility?**

Infertility is a couple's problem and is best approached from that perspective. Be there for your partner. Always provide a listening ear. Be sensitive, patient and stay informed. Always carry your partner along with whatever you are doing.

**What are the effects of infertility on sexuality?**

Couples who are experiencing infertility commonly experience difficulties with sex. The process of timed intercourse, temperature charts and medical procedures commonly takes the spontaneity and pleasure out of the sexual experience. It is important for each couple to realize that they can help each other through this difficult experience. Try and keep life in perspective and share your feelings with each other and above all remember that your life as a couple is not defined solely by your ability to conceive.

**When should I seek help?**

It may take up to a year for a couple without infertility problems to achieve conception. In some cases, it may take as long as eighteen months. It is better to wait until the time as suggested that you have a problem. However, there

are exceptions to this. If a couple know that they have a problem; for instance, if a woman has a history of two ectopic pregnancies with no damaged tubes, then there is no point in waiting because there is an age related decline in female fertility. The sooner you start treatment the better.

If she is over 35 years old, we know the pregnancy rate starts to fall at around that time and there is no point waiting a year or eighteen months before seeking help.

### Where should I seek help?

The most important issue is building trust in the relationship with your doctor but then it is also important that the doctor has the required skill to help and assist the couple. All couples must choose a doctor they feel confident in.

It is important that couples seeking solutions to infertility problems realize that they are dealing with issues that can affect their lives forever. Every effort must, therefore, be made to empower themselves on all issues relating to their problem so that they can work with their doctor to find a solution.

### How can infertility be prevented?

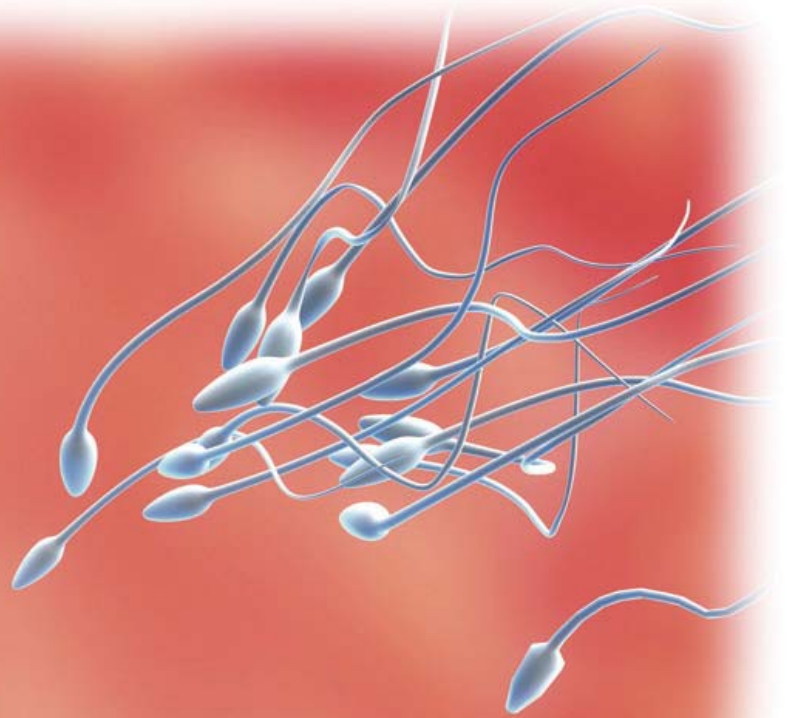
Tubal infertility is usually acquired and can be prevented by keeping to one sex partner. Using contraception, particularly barrier methods, to prevent sexually transmitted infections and unwanted pregnancies is also helpful. Unplanned pregnancies increase the risk of unsafe abortions, which can later lead to difficulty in achieving conception. Prompt and appropriate attention to any episode of pelvic infection is also important.

Sometimes, the process of seeking help for the management of infertility can be the cause of the problem. For example, removal of fibroids or operating on the ovaries and fallopian tubes in young women may lead to adhesion formation and tubal infertility. There must be a very good reason before consenting to these operations.

The inappropriate use of 'fertility drugs' such as *clomid* may lead to an increase in the size of fibroids which, when removed, can cause problems. There are, however, some cases of infertility that people are born with, such as abnormal sperm samples, which cannot be prevented but can, in some cases, be treated.

# 2

## Natural Conception and Causes of Infertility



**How is conception achieved naturally?** Before a couple can achieve conception naturally, they must have intercourse and during this process, the man ejaculates, that is, releases his sperm into the woman's vagina.



**What are the chances of conceiving naturally?**

The sperms swim through the neck of womb (the cervix) into the uterus and down the fallopian tubes where, hopefully, the sperms will meet an egg that has been released from the women's ovaries if intercourse coincides with ovulation. Fertilization may occur with a single sperm and the fertilized egg (the embryo) will continue down the tubes into the uterus where it will hopefully implant and form a foetus.

Couples have a 25% chance of conceiving with every cycle. Studies on fertile couples trying to conceive indicate that 75% get pregnant by 6 months and 90% are pregnant by the end of one year. Between 3 and 5% of the remaining 10% will conceive within the following year.

**What are the factors that can prevent natural conception?**

Four factors are required to achieve natural conception:

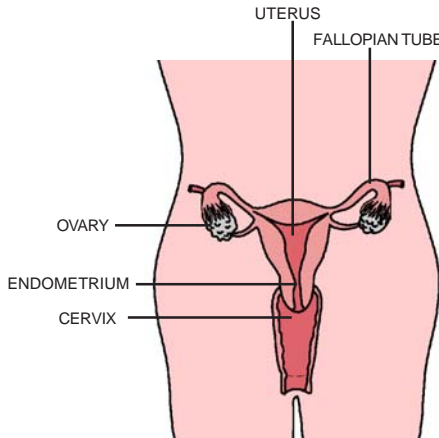
- (a) The man must produce normal sperms.
- (b) The woman must be releasing eggs (ovulating).
- (c) The passages within the women must be intact to allow the sperms and egg to meet.
- (d) The women's uterus must accept the fertilized egg and carry a pregnancy.

With this in mind, infertility can be caused by an abnormality in any of these four factors. Male infertility is where the man is producing abnormal sperm or not producing any sperm and female infertility occurs where the woman is not producing eggs or where she has an abnormality in her tubes so that the sperm and the egg do not meet.

We can have an abnormality with the uterus such that the fertilized egg cannot implant in the uterus. There is also a group of patients with infertility where, after investigation, none of the items mentioned above would have found to be abnormal. These patients are said to have unexplained infertility.

### What is unexplained infertility?

Couples are given this diagnosis when basic investigations reveal that there are no problems with them. These basic investigations are as follows:



*The female reproductive system*

- (a) Semen analysis to test the man's sperm for abnormalities.
- (b) Tubal patency tests to reveal opened or blocked tubes.
- (c) Tests to find out whether the woman is ovulating.
- (d) Tests to find out whether there are any abnormalities with the uterus.

It must be remembered that some results such as the semen test are laboratory specific and also that the skills of the person interpreting the result is important. Furthermore, more sophisticated tests such as fallopscopy to check the lining of the tubes or semen function tests can still be carried out and the more tests that are done, the lower the proportion of couples with this diagnosis.

### What is the relationship between age and infertility in women?

The age range of maximal fertility in women is 20-24 years of age. The incidence of infertility is 15% at this age, increasing to 39% at 35 years and 48% at between 35 and 39 years. This age related decline in female fertility is represented graphically in figure 2.

### What is the cause of this decline in fertility?

The average woman is born with a fixed pool of eggs (approx 1.5 million) and she starts to deplete this pool when she starts having her periods. The pool becomes depleted in quantity and quality over time. This depletion is associated with reduced fertility. Other factors which may be involved include cumulative risks of injury from pelvic infection or exposure to environmental toxins.

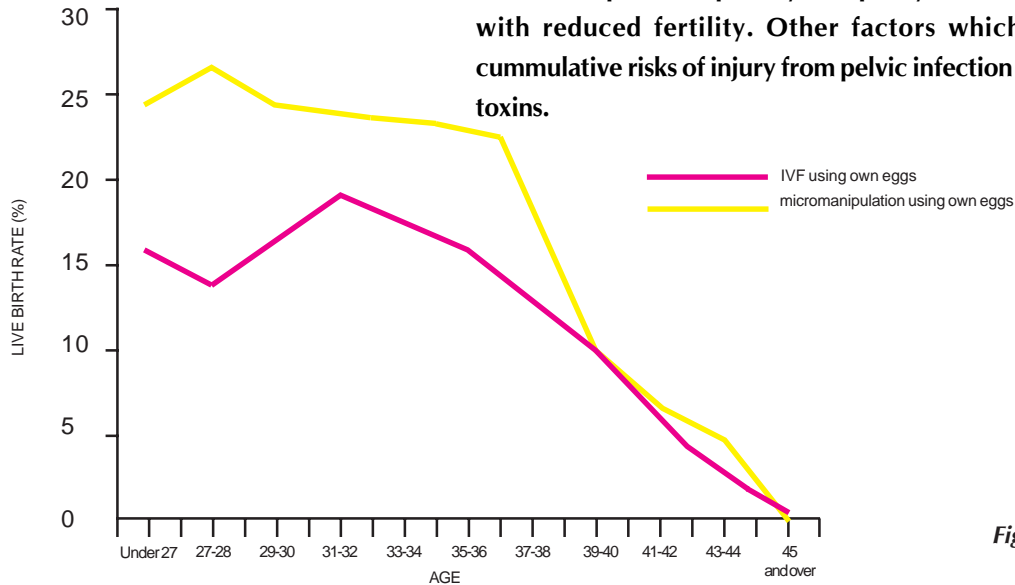
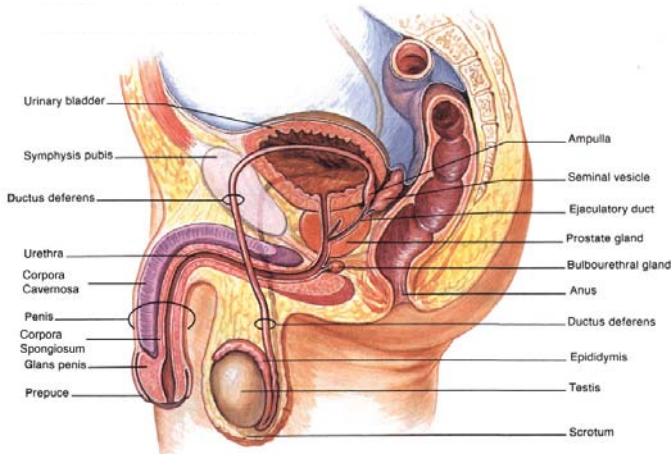


Figure 2. Age related decline in female fertility

**3**

**Male  
Infertility**





*The male reproductive system*

1. **What is male infertility?**

Male infertility can be said to occur when there is failure to conceive after twelve months of having regular unprotected intercourse and tests show that the problem is found in the male. This problem is defined by an abnormal semen analysis.

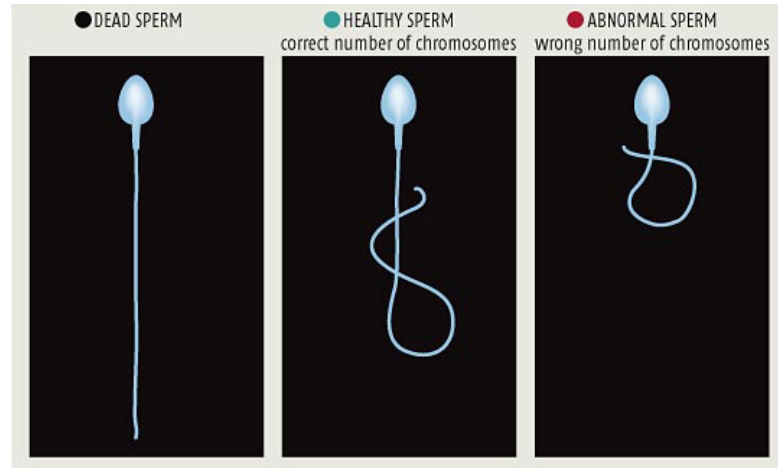
2. **What is a semen analysis?**

Semen analysis is the microscopic examination of the semen to find out whether or not it is normal.

3. **What are the clues that may suggest male infertility?**

The likelihood of male infertility is increased where there is a history of undescended testes as a child or injury to the testes. The likelihood can also be increased by inflammation of the testes, especially after an attack of mumps, surgery such as hernia repair, or an operation for undescended testes.

4. **What is a normal semen analysis?** A normal semen analysis contains a volume of between 1 and 4mls, sperm density of greater than 20 million per ml, motility count of greater than 50% and a percentage of normal forms greater than 15%.



5. **Is it possible not to have any sperm cells in the ejaculate?** There are some men who do not have any sperm cells when they ejaculate. These men are said to have azoospermia.
6. **What are the causes of abnormal semen analysis?** Abnormal semen analysis can be caused by anything that disturbs sperm production. There could be a local cause within the testes such as infection. One commonly quoted cause is mumps. Abnormal semen analysis can also be secondary to sexually transmitted infection and the resulting damage to the testes.

It can also be caused by other factors outside the testes such as an increase in the temperature of the testes.

Abnormal semen analysis may also be caused by an abnormality in hormones required for sperm production. It can also be caused by some drugs. Drugs that are used in the treatment of cancer, for instance, can lead to this condition. For most men with abnormal semen analysis, no cause will be found.

**7. What is low sperm count?**

It is better to discuss abnormal semen analysis rather than low sperm count, because the sperm count is only one aspect of the sperm analysis and you can have a normal sperm count with an abnormal semen analysis. A low sperm count simply means that the number of sperms per ejaculate is less than 20 million per millilitre of ejaculate.

**8. What is 'watery sperm'?**

It is normal for the sperm to liquefy and become watery about 30 minutes after ejaculation and this may be what is referred to as watery sperm. It is best to restrict definitions of abnormality to the conventional definition and terms like 'watery sperm' really do not mean much.

**9. How does a low sperm count result in infertility?**

The man releases the sperm into the vagina from where they pass into the cervix, through the uterus and down the tubes to meet the eggs. Many sperms die along the way and only a very small percentage of the sperm originally released will get to the tubes. Only one sperm fertilizes the egg but it is necessary

for the egg to be surrounded by an optimal number of sperm cells before fertilization can take place. It follows, therefore, that if a man starts off with a low number of sperms in the vagina, the numbers of sperms that get into the tubes are proportionately lower and the chances of the optimal number of sperm cells clustering around the eggs are reduced. A man who has a normal sperm count has a 25% chance of getting his partner pregnant. This chance reduces to 5% with a low sperm count.

10. **Can the sperm count be boosted?** Many drugs have been tried in an attempt to increase the sperm count but no drug has been shown to significantly improve the pregnancy rate in the partners of men who have an abnormal sperm count except in the very few that are deficient in the hormones necessary for sperm production. It is normal, however, to see some oscillation in the sperm count from day to day. Figure 1. illustrates sperm concentrations in the semen of one man collected biweekly over a period of 120 weeks. During this period the man received no medication and experienced no febrile illness. The dotted line indicates  $20 \times 10^6/\text{ml}$ . The data illustrates the marked variations in sperm concentration that can occur in the semen of some men. (Unpublished data from C. A. Paulsen.)
11. **Do I need to abstain from sexual activity for a long time to increase the quality of sperm?** Although the volume of semen increases with abstinence, the sperm count decreases. Sperm motility also decreases. The optimal period of abstinence before producing a semen sample is two to three days.

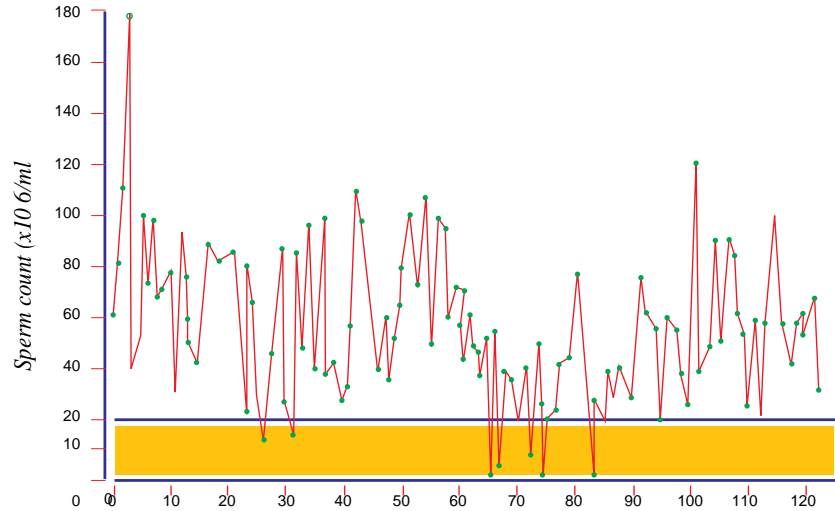


Figure 1. Sperm concentration variations

## 12. What is 'Staph'?

Staph is the shortened name for a group of bacteria called *Staphylococcus*. There are many members of this family of bacteria such as *Staphylococcus Aureus* and *Staphylococcus Epidimedis*. Semen is sometimes cultured in the laboratory to look for evidence of infection and it is not uncommon to isolate *Staphylococcus Aureus* (staph). It is, however, usually a contaminant of the sample and not the cause of any problem identified.

The situation is made worse by the laboratories that report the results who usually suggest antibiotics that will be used to treat the infection. The unfortunate reality is that patients use endless cycles of antibiotics without being able to eradicate the bacteria, which was never a problem to begin with.

13. Does 'Staph' cause infertility? No. *Staphylococcus* or 'Staph' does not cause infertility.
14. When are drugs useful in the treatment of low sperm count? Some men have male infertility because they are deficient in some of the hormones necessary for sperm production. Replacing those deficient hormones can restore sperm production and the chance of paternity. However, there is a small subgroup of men with sperm problems for whom there is no treatment.
15. What are varicoceles? Varicoceles are swellings of the veins around the testes. They are thought to be associated with infertility by increasing the temperature around the testes and hence impairing sperm production.
16. Do varicoceles cause infertility? Varicoceles are probably more common in infertile couples than in the general population and there is evidence that semen quality and pregnancy rates may improve in some men with poor semen quality and varicoceles when they are operated upon. However, the evidence linking varicoceles to infertility is not strong.

17. **Is it possible to concentrate the sperm to improve its quality?** Couples with mild male infertility can benefit from semen preparation and intrauterine insemination with or without controlled ovarian stimulation but the pregnancy rate is low.
18. **What is the treatment of male infertility in couples where no cause is found?** The treatment will depend on how long the couple have been trying to conceive, any associated causes of infertility in the woman and the age of the woman. Where the woman is young and the couple have been trying for a short time, it is probably better to allow the couple to exhaust their chances of natural conception. Bearing in mind that there is no treatment for the condition, the principle of management is to prescribe Intracytoplasmic Sperm Injection (ICSI) when the couple have exhausted their chances of natural conception. The decision can be made earlier in older women or in women with other factors such as blocked fallopian tubes.
19. **What is the treatment of male infertility in men who do not have sperm cells in the ejaculate (azoospermia)?** Some men with azoospermia caused by hormone deficiency may respond to replacing those hormones. But most cases will require surgical sperm collection to retrieve sperm from the testes which can then be injected into the woman's eggs at ICSI.
20. **When should a testicular biopsy be done?** There is no practical advantage to doing a testicular biopsy when the man has sperm cells in his ejaculate. Testicular biopsy to investigate the cause of azoospermia is important but this should be done in conjunction with surgical sperm collection and either using the sperm directly for ICSI or freezing it for ICSI at a later date. Tissue obtained can be used to make a diagnosis.

Fimbria ovarica

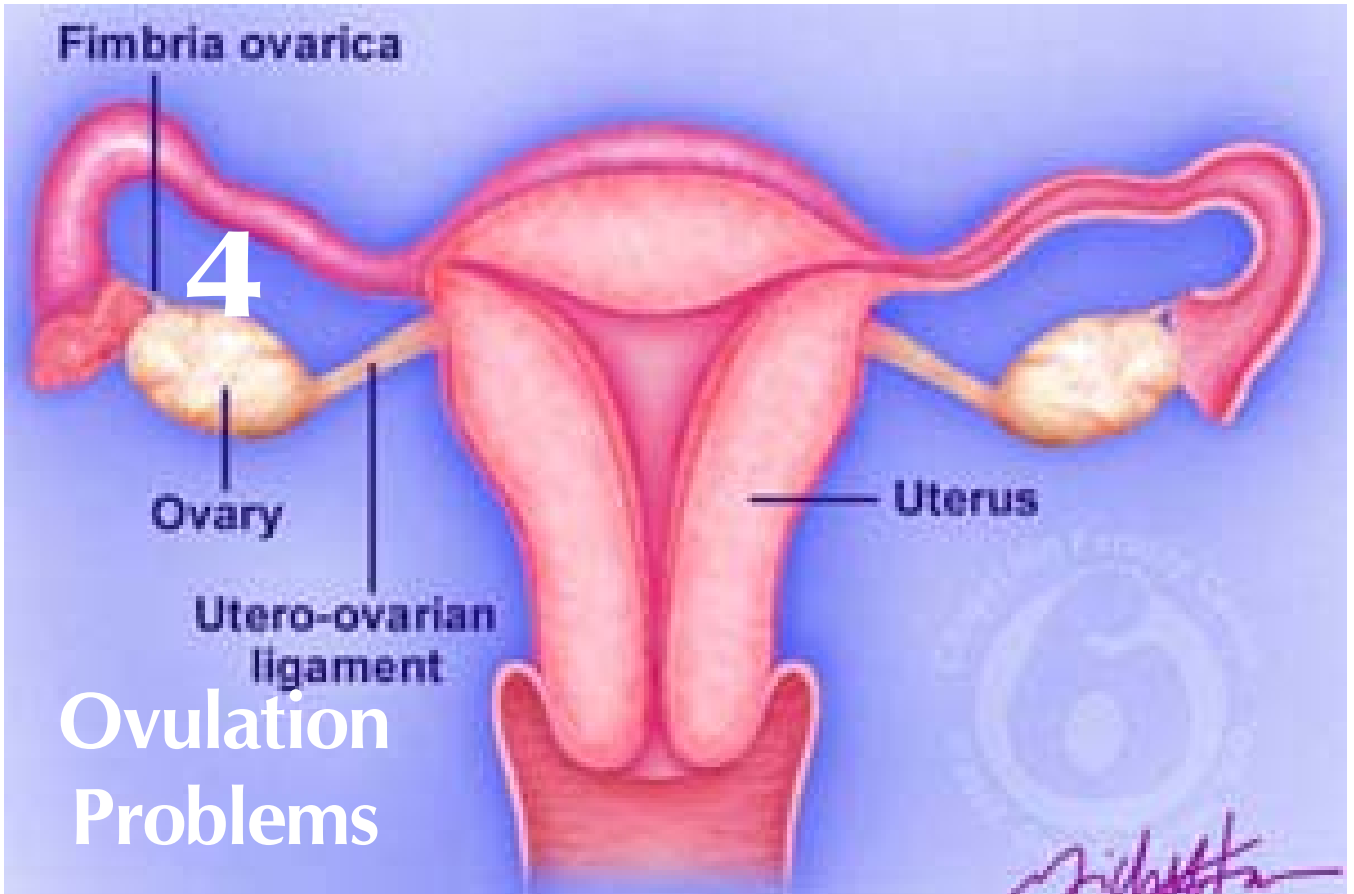
4

Ovary

Utero-ovarian  
ligament

Uterus

Ovulation  
Problems



**1. What are the causes of female infertility?**

Female infertility can be classified into three categories:

- (a) **Ovulation problems:** These are problems that prevent the release of eggs from the ovary.
- (b) **Tubal problems:** These are any problems such as blockage within the fallopian tubes that prevent normally released eggs from meeting the sperm.
- (c) **Uterine problems:** These are problems that stop the fertilized eggs from implanting in the uterus. Conditions that can cause these include fibroids or scar tissue within the cavity of the uterus.

**2. What are the causes of ovulation problems?**

Ovulation problems are either congenital, in which case the woman is born with the problem, or they may be acquired later on in life. Congenital causes are quite rare and include conditions such as Turner's syndrome.

The most common causes of ovulation problems are conditions like polycystic ovarian syndrome, excessive weight loss, excessive thinness, advancing age, menopause and high levels of prolactin.

**3. How can I know if I have an ovulation problem?**

A woman who has her periods every month, irrespective of whatever hormones tests show, is ovulating for all practical considerations. A woman with ovulation problems will have delayed or absent menstruation.

4. **Is it possible to have periods and not be ovulating?**

There are some extremely rare conditions such as the unruptured follicle syndrome (LUF), and the inadequate luteal phase where a woman may not have ovulated but will have regular periods but these are research considerations and all the woman has to be concerned about is whether she is having periods or not.
5. **What are the signs of ovulation?**

The most common sign is slight abdominal pain in the middle of the cycle. This may be associated with an alteration in the cervical mucus from white and thick to thin and drawy. There may also be a slight increase in body temperature.
6. **How can the doctor diagnose ovulation?**

The most common test is to measure the progesterone level on the 21<sup>st</sup> day of a 28 day cycle. Alternatively, ultrasound could be used to track the development of follicles within the ovary. The follicle is a fluid - filled sac within the ovary that contains the egg.
7. **What is hormonal imbalance?**

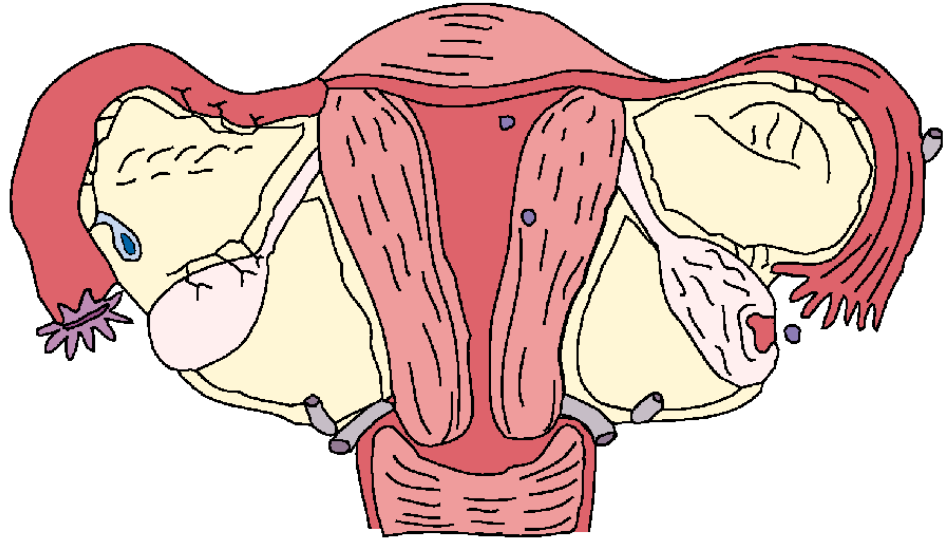
This basically means that the hormone results are not normal. It is important to realize that abnormal hormone results are merely a reflection of abnormalities which will need correction.
8. **My doctor says I have high prolactin. Is this important?**

Prolactin is only important from the fertility point of view if it switches your ovulation off. There is no need to measure prolactin in a woman with regular periods. Prolactin is an extremely unstable hormone commonly elevated even by the process of taking blood.

9. **What is the treatment of ovulation problems?** The treatment will depend on the cause. Weight loss related ovulation problems can be corrected by dietary advice and weight gain. Other women may need ovulation induction drugs like *Clomid*.
10. **Is *Clomid* a fertility drug?** No. *Clomid* has a specific function of causing the release of eggs from the ovaries.
11. **How long should I stay on *Clomid*?** Once *Clomid* is working and the woman is having regular periods, failure to conceive after six months to one year should prompt a search for other causes of infertility.
12. **What is the treatment of high prolactin?** As mentioned earlier, high prolactin causes infertility by switching off ovulation. High prolactin is commonly due to a small tumor at the base of the brain and it is important to exclude this before beginning treatment with drugs such as Bromocriptine (*Parlodel*).
13. **When do I need injections for ovulation induction?** Patients who fail to respond to *Clomid* may need injections of stronger hormones such as *Pergonal*. The problem with injections is that they may stimulate the development of more than one egg and their use carries a high risk of multiple pregnancies. They should only be used under the supervision of a gynaecologist with facilities for ultrasound monitoring.

5

Tubal  
Problems



- 1. What are the tubes and what do they do?**

The fallopian tubes are narrow cylindrical structures that are necessary for the transportation of the eggs from the ovaries into the uterus.
- 2. How is the egg transported into the uterus?**

The egg is transported by a combination of contraction of the tubes and ciliary action. The tubes are lined by hair-like extensions called cilia, which beat in one direction and achieve the effect of 'wafting' the egg towards the uterus.
- 3. What is tubal disease?**

This is tubal damage, usually caused by pelvic infection. The infection may be secondary to sexually transmitted infection, or tuberculosis. It may also be caused by operations in the pelvis such as removal of fibroids or ovarian cysts. The damage is usually due to scar tissue formation on the tubes and the resulting blockage disturbs the normal transport of the egg which prevents the sperm and the eggs from meeting.
- 4. What clues suggest that tubal disease is likely?**

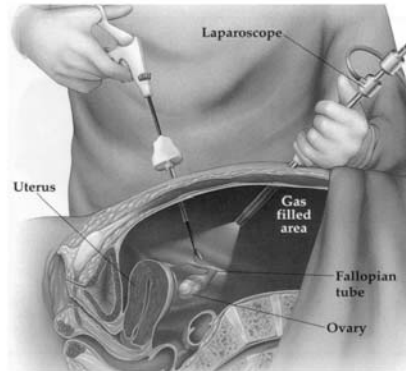
A history of previous ectopic pregnancies, ruptured appendix, tuberculosis, irresponsible intra-uterine contraceptive device use, infection following abortion, or a past history of sexually transmitted conditions such as gonorrhoea and chlamydia may lead to tubal disease. Despite this, over 50% of patients with tubal infertility will have no clues in the history.
- 5. What is tubal flushing?**

This is the traditional method of testing the fallopian tubes, where either gas or fluid is used to flush the tubes by injecting the fluid into the uterus through the

cervix and assessing the resistance to the flow of fluid. This method, although quite simple to carry out, is imprecise and carries a risk of infection.

## 6. What is HSG?

Hysterosalpingography (HSG) is the process where contrast is injected through the cervix and an X-ray film is taken to show the uterine cavity and the passage of the contrast through the tubes and out of the tubes near the ovaries. This method suffers several disadvantages, not least of which is that it can be a painful and unpleasant experience. Tubal spasm may occur in some women creating a false positive result and there is a risk of activating previous infections.



## 7. What is Laparoscopy?

Laparoscopy involves the passage of a small telescope through the belly button while the patient is under general anaesthetic. It allows a full study of the pelvis and the passage of dye out of the tubes can be seen directly.

8. **Should we do laparoscopy or HSG?** HSG has the advantage of being cheaper and simpler. Laparoscopy is more complicated but provides much more information. In summary, patients with no real clues of tubal disease can have HSG as a simple screening test of tubes but both tests are complementary of one another.
9. **Can ultrasound diagnose tubal problems?** An ultrasound scan will not usually help to make a diagnosis of tubal disease but if the tubes are swollen, ultrasound may suggest a diagnosis of tubal disease. In a newer adaptation of ultrasound, water or contrast is injected through the cervix into the uterus and the ultrasound scan is used to monitor its passage through the tubes. This is called hysterosonography.
10. **My tubes are opened and I am still not getting pregnant.** An opened tube is not the same as a normally functioning tube and an opened tube may have damaged cilia (see 2 above) so the eggs are not being passed along the tubes. Sophisticated investigations like falloposcopy have been devised to assist in making this diagnosis.
11. **What is the role of surgery in tubal disease?** The treatment will depend on the site and the extent of damage. Patients with damage to a single part of the tubes can have that part removed and the rest joined together again. However, since the tubes are very narrow, narrower than the tip of a needle, micro surgical techniques are required.  
Another problem with surgery is that the most common cause of tubal disease is infection and where this occurs there are usually multiple sites of

damage. Although some patients may benefit from surgery, the results are often quite poor. Furthermore, if conception is not achieved 12 months after tubal surgery, it is better to progress to *in vitro* fertilization (IVF).

12. I have been told that one tube is blocked and the other is open. What are my chances of pregnancy?

The chances of getting pregnant with one tube are not reduced provided that tube is normal. The reality of tubal disease, however, is that whatever affects one tube affects the other. If a patient with one open tube fails to achieve pregnancy after 18 months of trying and no other problems have been identified, then it should be assumed that the other tube also has a problem.

13. What is the role of hydrotubation?

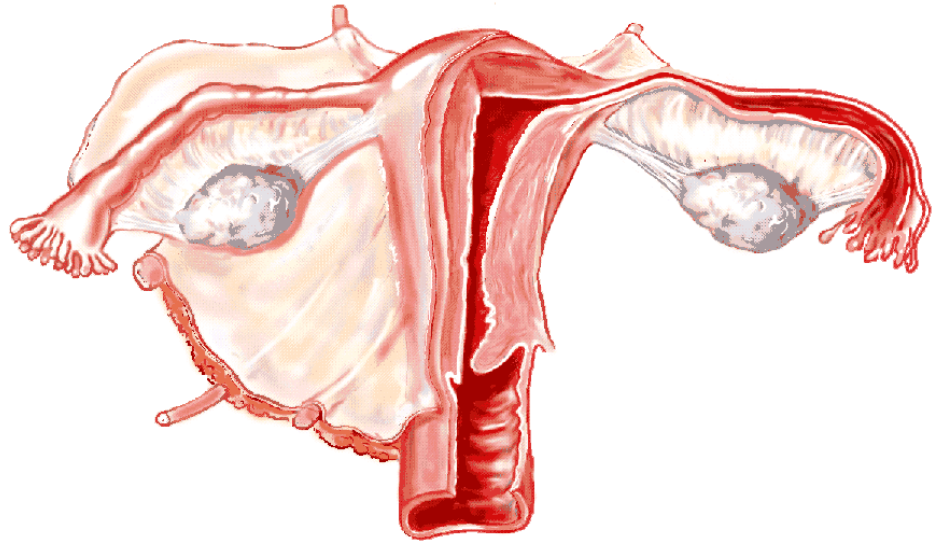
Hydrotubation has no role in the treatment of tubal blockage because tubal blockage is caused by scar tissue within the tubes and as such flushing the tubes with fluid is unlikely to have any positive effect.

14. What is the treatment of tubal disease?

Women who cannot be helped with tubal surgery will need *in-vitro* fertilization (IVF). In this process, eggs are collected from the ovaries and fertilized with the husband's sperm. The fertilized eggs are then transferred into the uterus after 48 hours. This process treats the tubal disease by bypassing the tubes and allowing the sperm and the egg to meet.

# 6

## Uterine Problems



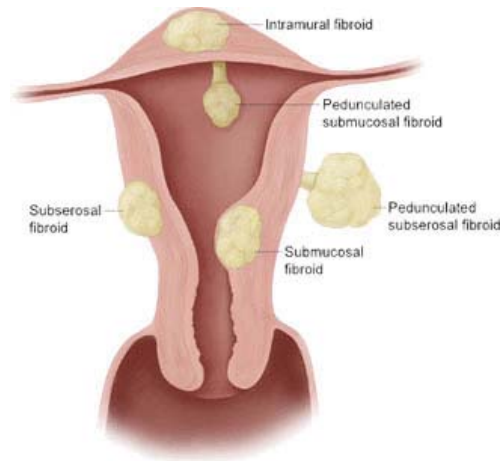
1. **What are the uterine causes of infertility?**

Uterine problems cause infertility by preventing the implantation of the embryo (the fertilized egg). The most common uterine problem is fibroids. Other causes are adhesions or scar tissue within the cavity of the uterus.

2. **What are fibroids?**

Fibroids are tumors of the muscle of the uterus. The uterus has three layers: the outer covering, the body, and the cavity. There are three types of fibroids:

- (a) **Subserous:** Growing on the outer covering of the uterus.
- (b) **Intramural:** Growing within the wall of the uterus.
- (c) **Sub Mucous:** Growing within the cavity of the uterus.

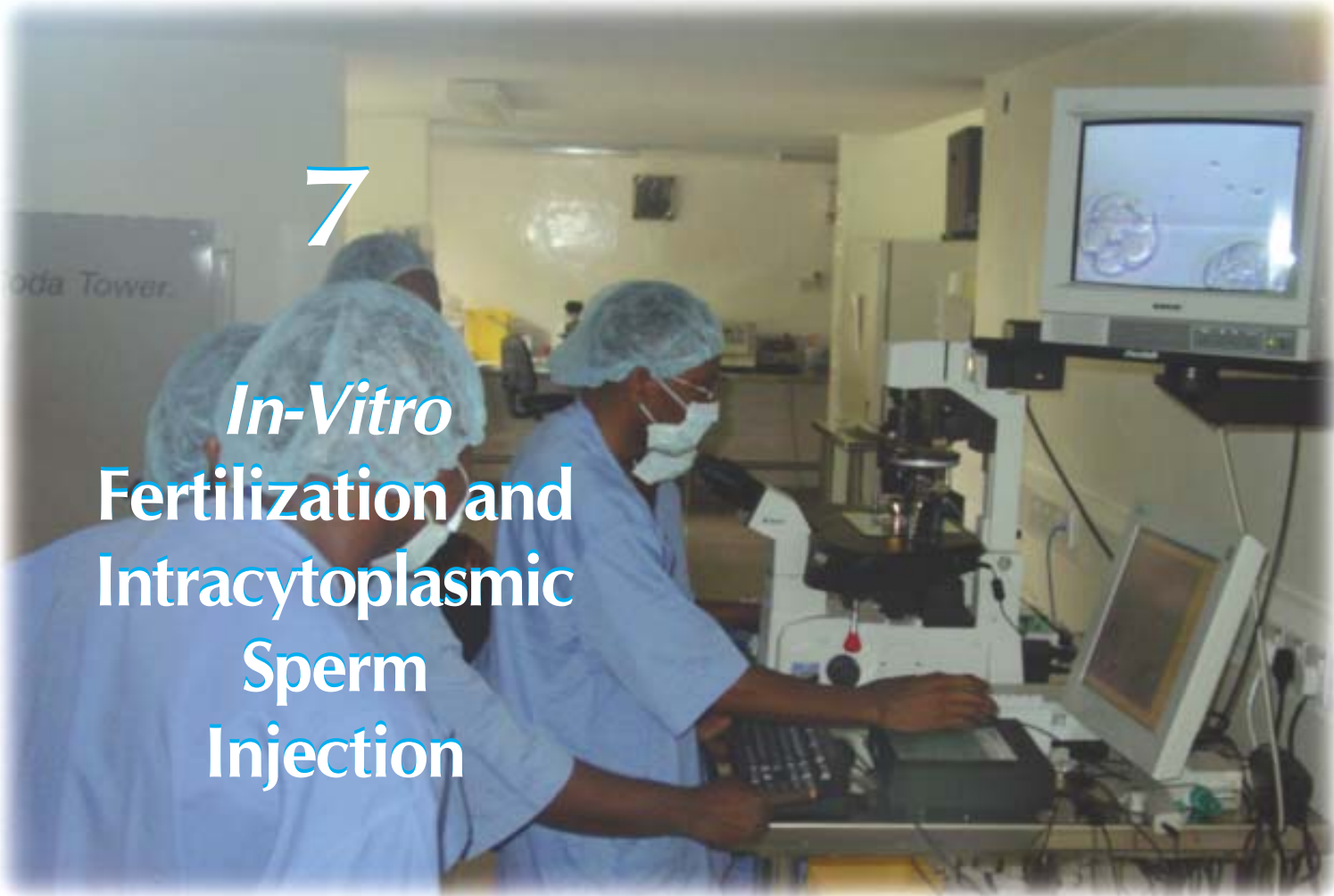


3. **Do fibroids cause infertility?** It would be too simplistic to say fibroids cause infertility because they are very common and a lot of women with fibroids become pregnant and deliver their babies safely.
4. **What is the association of fibroids with infertility?** Submucous fibroids have a strong association with infertility and they have to be removed. Intramural fibroids less than 5cm in diameter, which do not distort the cavity, do not have a strong association with infertility. Subserous fibroids do not cause infertility but, if they grow too large, they can be associated with miscarriage.
5. **How are fibroids diagnosed?** The best way is by transvaginal ultrasound scanning. Submucous fibroids may be suspected on ultrasound scanning but can be better confirmed by hysteroscopy. Hysteroscopy is a special investigation where the woman is put under general anaesthetic and, after distending the cavity with fluid, a small telescope is inserted through the cervix to visualize the inside of the uterus.
6. **Can fibroids be shrunk by drugs?** Fibroids need the hormone oestrogen produced from the ovary to grow and any drug that switches off ovarian function will reduce oestrogen supply to the uterus and the fibroids will shrink. Many drugs can achieve this. Unfortunately, the shrinkage only occurs while the woman is on the drug and there is a rebound growth once the drug is stopped. These drugs can be used to shrink fibroids before surgery to reduce the complexity of the procedure.

7. **Are there other non-surgical methods to shrink fibroids?** The blood supply to fibroids can be selectively blocked off to shrink the fibroids. This procedure, which is called embolisation, is still experimental but holds great promise for the future.
8. **What is the treatment of fibroids?** The treatment of fibroids is to remove them during an operation. The approach is usually by traditional surgery but more recently some fibroids can be removed at laparoscopy and at hysteroscopy.
9. **What is the cause of scar tissue within the uterus?** This is commonly caused as a result of past infection. The scar tissue sticks the wall of the uterus together and, depending on the extent of scar tissue formation, the woman may have no periods, scanty periods or normal periods. This is called Asherman's Syndrome.
10. **How can a diagnosis of Asherman's Syndrome be made?** A history of abnormality in the menstrual flow following an episode of pelvic infection is usually suggestive. Although transvaginal ultrasound scanning may suggest abnormality within the cavity of the uterus, it is better to carry out HSG. The definitive diagnosis can, however, be made at hysteroscopy.
11. **What is the treatment of Asherman's Syndrome?** The treatment will depend on the degree of scar tissue formation and the type of scar tissue. Limited areas can be divided bluntly by dilation and curettage (D and C) with the insertion of an intra uterine contraceptive device (IUD) to prevent reformation. However, more extensive and thick scar tissue formation may require hysteroscopy and division under direct vision.

7

*In-Vitro*  
Fertilization and  
Intracytoplasmic  
Sperm  
Injection



- 1. What is IVF?**

IVF means *In-Vitro* Fertilization which mean fertilisation 'in glass' or outside the body.
- 2. Why is IVF necessary in treating infertility?**

Assisted conception is necessary where other methods of treatment of infertility have failed. Whatever the cause of the problem, it is usually because the sperm and the eggs are not uniting to form an embryo. If there is a sperm problem and the treatment of the cause of the sperm problem has failed, then the couple may require assisted conception. If there is an egg problem and ovulation cannot be induced, the patient may require assisted conception. If the patient has a tube problem which cannot be treated by simple methods, the patient will need assisted conception.
- 3. How is IVF achieved?**

The woman is given drugs to produce a lot of eggs, which are collected using ultrasound to guide a needle into the ovaries. The eggs are fertilized with the man's sperms outside the body. The traditional way of fertilizing the egg is by simply mixing the sperm and eggs together and this is called conventional *In-Vitro* Fertilization. Where there is an associated sperm problem and there is a risk that the sperms may not be able to fertilize the egg by themselves, the sperms are picked up and, with special equipment called a micro manipulator, the sperm is injected into the egg. This is called intracytoplasmic sperm injection.

4. **What is the difference between IVF and Intracytoplasmic Sperm Injection (ISCI)?**

These two processes are the same from the patient's point of view. The difference is in how the fertilization of the eggs is achieved. In IVF, the sperm are simply mixed with the eggs but in ISCI, the sperms are injected into the eggs.



*Figure 1. Intracytoplasmic Sperm Injection (ISCI)*

5. **Who needs to consider IVF/ ISCI?**

- (a) Any couple that has been trying to achieve pregnancy for over three years whatever the cause of infertility.
- (b) Couples with tubal factor infertility.

- (c) Couples where the man has a low sperm count and has failed to achieve pregnancy in over three years of trying. This duration can be shortened to eighteen months where the woman is over the age of 34 years.
- (d) Couples where no abnormality is defined but who have been trying to achieve pregnancy for over 3 years.
- (e) Couples where the woman has ovulation problems and has failed to conceive after 12 months of successful ovulation induction therapy.
- (f) Couples where the man has no sperm cells in his ejaculate (azoospermia)
- (g) Older women who require treatment with donated eggs.

6. Is artificial insemination better than ICSI for the treatment of sperm problems?

The results of insemination with the man's sperm where there is an established sperm problem are poor, but the results of insemination with fresh donor sperm are good. The problem with fresh donor sperm is that there is a risk of Human Immune Deficiency Virus (HIV) infection and it is unacceptable practice to treat a woman with fresh donor sperm. It is necessary to store donor sperm in liquid nitrogen for six months and to use the sample after repeat testing has confirmed that the donor is free of HIV. The results of treatment with frozen donor sperm is about a quarter that seen with fresh donor sperm (20% per treatment cycle). However, the results of ICSI are about 25% per treatment cycle (which gives about the same chance of conception as a normal couple). These factors, including the high cost of ICSI, have to be carefully considered before making a decision.

7. **What are the chances of success with IVF/ ICSI?** Each couple has a 25% chance of success with each treatment cycle of IVF/ ICSI. This compares well with the 25% chance of natural conception in normal fertile couples. This also means that most couples will require more than one treatment cycle to conceive with IVF/ICSI.
8. **Are the babies produced by IVF/ICSI ours?** A baby is the product of sperm from the man and eggs from the woman and where a couple has sperm and eggs, then the child will naturally be theirs.
9. **Are the babies normal?** All the studies carried out so far following up on IVF babies have confirmed that they are normal. There is a theoretical risk with ICSI especially as the sperm being ejaculated may not be normal. The good news is that follow up studies have so far been reassuring.
10. **Does IVF/ICSI cure infertility?** No. These problems only bypass the problem to ensure fertilization of the eggs by the sperm.
11. **If we have one child by IVF/ ICSI, will we need to have other children by the process?** As answered in question 10, the treatment does not cure the problem. Thus, unless spontaneous conception occurs after the child is born, the couple will need another treatment cycle to achieve another pregnancy.

12. What are the side effects of IVF?

The side effects of IVF treatment are basically related to the process. It is a very demanding process in that the patient has to go through taking injections for as long as 3 to 4 weeks. The patient then has to go through an egg collection process, which can be painful, and then an embryo transfer.

There is also a very stressful 2-week period while the patient is waiting for the result of the treatment. Psychologically, it can really take a toll on a couple going through IVF treatment. There are also side effects related to the drugs that are used.

One of the drugs called *Buserelin* is used to render the woman temporarily menopausal and post menopausal. There are many symptoms of oestrogen lack such as dryness of the skin, dryness of the hair, dryness of the vagina, mood swings and irritability. Fortunately, all these symptoms reverse when the drug is stopped.

8

# Prevention of Infertility



## 1. What causes infertility?

Most people with infertility require *In Vitro* Fertilisation to conceive. *In Vitro* Fertilisation is expensive and undesirable and a practical approach to the stoppage of infertility is to look at ways of preventing infertility.

The most common cause of infertility is blocked fallopian tubes in women and blockage of the tubes within the testes in men leading to Azoospermia; both of these are secondary to infections that have been sexually acquired.

## 2. How can infertility be prevented?

Most cases of infection can be prevented. The most important preventive measure is sexual abstinence prior to marriage but we know how difficult this is in our society so it is important to educate people about sexual matters and the implications of pre-marital sex. It is important to take such precautions such as the use of condoms which will prevent Sexually Transmitted Diseases (STDs) as well as pregnancies. Abortion from termination of pregnancies is a very common cause of infection in Nigeria. Abortion is illegal in Nigeria and as such people do go to unregulated places to terminate pregnancies without taking the hygiene in these places into consideration and it is quite common to suffer complications such as infections with unsafe abortions.

The other cause of infection is through removal of fibroids or ovarian cysts. Up to 30% of women who have fibroids removed have significant adhesions. The adhesions will lead to tubal blockage which can lead to infertility.

**It is very important that the fibroids and ovarian cysts are not operated upon without seeking a second opinion and there are clear indications, and if necessary that it is operated on. It is better to use modern technology like endometrial and laparoscopic surgery. Otherwise, there are the chances of developing infertility.**

**There is a big move in healthcare with focus on early detection to test and everybody is already aware of the need to get tested, especially couples about to get married. It is important to get early testing especially when the woman is older at the time of marriage so that any abnormality can be detected, e.g. women who have had surgery need to have their tubes checked. Two major factors requiring early investigation are painful menstruation and pain during intercourse.**

9

**When Treatment Fails**



**I**t is very difficult for a doctor to guarantee that a couple will achieve pregnancy and even with access to sophisticated treatment methods, there are still some couples who will not achieve a pregnancy. It is then the role of the clinic or the doctor to help these couples adjust either to accepting that treatment has not worked and to settle to a life without children or to open up discussions about other methods of achieving parenthood such as adoption.

The decision to stop treatment, whether taken by the doctor or the patient, signifies the end of hope of a biological child. This hope gives meaning to so many people's lives and for some couples the failure of treatment represent a major life crisis. Counselling is available to help the couple work through the grief of their infertility by helping them to find places again in the society as a man as a woman and as a couple.

The grieving phase is important if the patients are able to reinvest in their relationship as a couple. The ability to focus on other projects for the future, the discovery of abandoned activities such as sport, music etc. or the renewal of neglected relationship is crucial for the couple.

Once the reinvestment in the couple's relationship and their social life is made, then other parenting approaches may be explored such as adoption, working as foster parents or on other projects that cater to the needs of children. There is no evidence that childless couples are less happy or less stable than those who have founded a family. In any case it is a question of adjusting to any situation and once a couple can live with it, they can indeed live a very fulfilled life.