# Pregnancy Miracle Infertility No More

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#### Introduction



A dream for many couples is having their children and making a one, big, happy family. But while this is an easy feat for many, it is difficult for some.

While infertility is a common and vague term, most experts agree to the simple definition that it is "the inability to conceive after 12 months of unprotected intercourse." Words like infecundity, or the inability to give birth to a child, and subfertility, or delay in conceiving a child, are also considered related sub-terms.

According to the study conducted by a team of reproductive health experts in 2002, around 15% of couples around the world are infertile. This data explicitly portrays infertility as a widespread worldwide problem.

This issue puts pressure on infertile couples in the physical, psychological, social, and emotional sense. Couples are distressed about their inability, and society usually treats them with pity and disdain, especially women.

What's more difficult is that there are confusing, conflicting, and fallacious statements regarding infertility solutions. There is a wide variety of suggestions for a cure, but a lot are also dubious.

#### However, this book will solve that for you!

From defining infertility to finding its causes and solving them, we will discuss them one by one. As a bonus, we will also talk about the common misconceptions about fertility.

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## Chapter 1 Infertility



#### **Definition of Infertility**

The World Health Organization (WHO) accepts two definitions of the term "infertility".

According to WHO's International Committee for Monitoring Assisted Reproductive Technology (ICMART), it is defined as "a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse."

Meanwhile, their Department of Reproductive Health and Research simplifies this to "the inability of a sexually active, noncontracepting couple to achieve pregnancy in one year." As stated in the introduction, there are also related sub-terms to infertility that are commonly confused with it. It includes infecundity, or the inability to give birth to a child, and subfertility, or delay in conceiving a child.

#### Symptoms of Infertility

As the definition states, the most obvious sign of being infertile is the inability to conceive or bear a child. However, there are also other symptoms, both for men and women, that might signal the possibility of infertility.

For females, this might consist of irregular menstruation cycles or the inconsistent recurrence of menstruation. Note that a gap of at least three days in each period is not considered irregular. Instead, it is the case where the arrival of the next menses cannot be estimated anymore due to huge gaps between each occurrence.

If irregular menstruation is a red flag, then totally not having one is a much worrying sign not just of infertility but other reproductive illnesses as well.

Other perceivable symptoms can be heavy pain during menstruation or sex.

For males, difficulties in ejaculation and erection are alerts that should be monitored. Swelling or small and firm testicles are the potential hints of infertility.

Meanwhile, hormonal changes for both partners are driving factors, too. This can be observed in loss of sexual drive, hair and skin issues, low sperm count, and breast oddities.

## Chapter 2 Causes Of Female Infertility



There are various conditions that can be pointed out to be the possible causes that affect fertility in women. In this chapter, we will visit them one by one and discuss their nature, origins, types, and implications for reproducing women.

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#### Polycystic Ovary Syndrome (PCOS)

Polycystic Ovary Syndrome (PCOS) is a hormonal disorder that is estimated to affect 1 out of 10 women on reproductive age, making it the most common reproductive illness in girls. This triggers an unusual menstrual cycle described as heavy but infrequent.



There are four types of PCOS: Insulin-resistant PCOS (which is the most common), Pill-induced PCOS, Inflammatory PCOS, and Hidden PCOS.

Mayo Clinic specifies three main deciding factors for diagnosing PCOS. abnormal mentioned before, menstruation is a sign. The follicle-coated ovary is another, from which the term ovary is derived from. polycystic Additionally, androgen or male hormones is also prominent with PCOS-inflicted women, and its physical manifestations are severe acne, excessive facial and body hair, and male-patterned baldness.

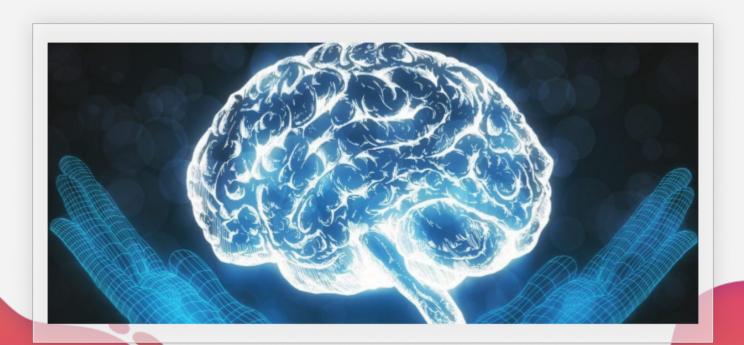
And the last factor is what affects pregnancy the most. High androgen levels disrupt the normal hormonal processes within the ovary. This makes it challenging to release an ovum (mature egg cell), which should be fertilized by the sperm cell to form a zygote.

#### **Hypothalamic Dysfunction**

Hypothalamic Dysfunction is a chaotic domino-effect disease, to say the least.

Hypothalamus, is a part of the brain, produces takes part in female reproduction by releasing a compound called gonadotropin-releasing hormone (GnRH). GnRH then signals the production of two other hormones in the pituitary gland, which are follicle-stimulating hormone (FSH) and luteinizing hormone (LH). Consequently, these two signals the production of estrogen, which helps in ovulation and preparation of uterine lining for the possible implantation of a zygote.

In Hypothalamic Dysfunction, the brain stops the production of GnRH, which lessens the levels of FSH and LH, and eventually, estrogen. All of these interconnected processes make pregnancy harder to achieve.



#### **Unexplained Infertility**

There is a considerable number of cases that do not point to any specific cause. This can be caused by a combination of multiple and minor abnormalities, unfavorable conditions during sexual intercourse, problems that are rooted to the other partner (the male one), or caused by several risk factors.



However, even in these situations, there are therapies and medicines available to address these infertility complications.

## Chapter 3 Causes Of Male Infertility



Of course, infertility is not only exclusive to women. In some circumstances, men can be infertile, too. In this chapter, we will also visit these circumstances one by one and discuss their nature, origins, types, and implications to reproducing men.

#### Varicocele

Similar to how varicose veins happen in human legs, a varicocele is the expansion of the veins in a man's scrotum (skin that holds the testes), which is usually on the left side. This condition is estimated to afflict around 15% of the world's post-puberty male population.

The majority of experts theorize that varicoceles form as compensation for constricted blood flow around the testicles. However, this is not yet backed by any internationally-recognized or peer-reviewed study as of the moment.

There are also no explicit findings of the complications brought by varicoceles and their reason. Still, most hypotheses connect these enlarged veins to shrinkage of the testicle's size and a decrease in fertility rates. This is primarily because of tissue damages around the area and the increased temperature brought by the blood flow around the testes.



#### Hyperprolactinemia

Even though it might sound absurd, Hyperprolactinemia can also affect men.

Like in females, it is also a hormonal problem that increases the levels of prolactin in the blood is observed, which then reduces luteinizing hormones (LH) and follicle-stimulating hormone (FSH). Finally, it disrupts the normal testosterone levels in the body.

In a 2003 study, it was said that the reduction in amounts of testosterone, the main male reproductive hormones, can lead to spermatogenic arrest, impaired motility and diminished quality of sperms. Benign tumors can also appear in your body in the pituitary gland, and this illness is called macroadenoma.

Common symptoms include galactorrhea, or the presence of breastmilk, even if they are men. This is manifested through breast enlargement. Hypogonadism or the weakening of the male reproductive organs can also be observed, and this manifests through lower sex drive and poor ejaculation.

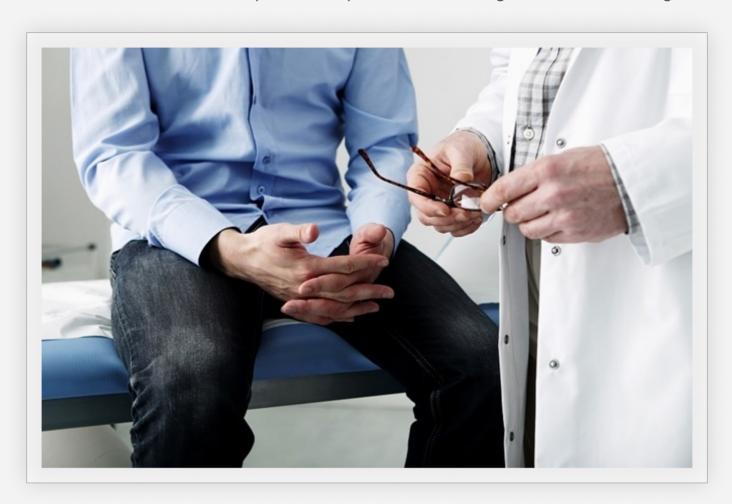
#### Cryptorchidism

Colloquially called Undescended Testicle, this is the scientific term for a testis that did not move inside the scrotum and remained in the groin. Although this usually involves one testis (unilateral cryptorchidism), some cases might have both of their testes undescended (bilateral cryptorchidism). Cryptorchidism is first diagnosed with infants and estimated to inflict up to 5% of all newborns.

For adolescent and mature males who have descended testes previously but retracted might indicate either a retractile testicle (temporary ascendance) and ascending testicle (permanent ascendance), In a study, a 50% decrease in sperm density was recorded from men diagnosed with bilateral cryptorchidism than those who are not. It can also lead to azoospermia (stop in sperm production). One theory is that because an undescended testis is much exposed to a higher, non-optimal temperature that reduces the quality of sperms.

#### Hypospadias

A congenital disability, Hypospadias is an abnormal urethra, with the opening found under the penis instead of on the tip. This makes the shape of the urethra slightly curved and the foreskin underdeveloped to compensate for the angle of excretion changed.



And due to this abnormality in the penis' shape, ejaculation and intercourse can be difficult or painful. Besides that, hypospadias does not have a severe effect on fertility.

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#### Male Genitalia Inflammations

There are various types of inflammation involving the male reproductive system.

Orchitis is the inflammation of a testis or both testes either due to bacteria from sexually transmitted diseases (STDs) or viral vectors such as mumps. Orchitis can also lead to Epididymitis or the inflammation of the epididymis.

Lastly, there is Prostatitis or the inflammation of the prostate glands, which is generally caused by a bacterial infection, too.

Aside from the pain that can be felt during urination or sexual intercourse, these swellings can reduce testosterone levels in a man's body and lead to hypogonadism.

#### **Ejaculatory Duct Obstruction (EDO)**

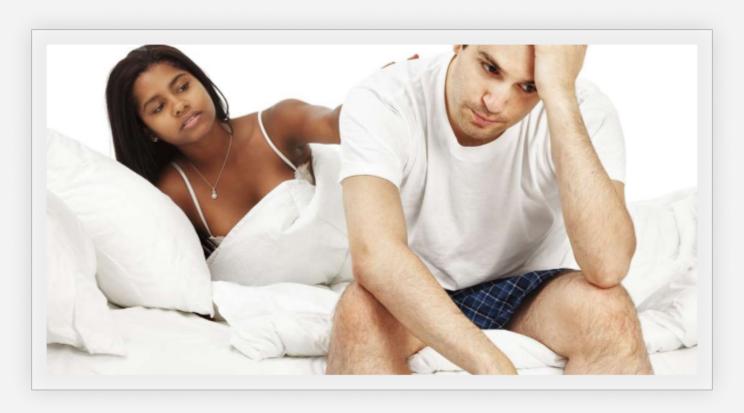
Ejaculatory Duct Obstruction (EDO) is as simple as its name implies.

It is the blockage of one of the male's reproductive passageways, primarily the ureter or the vas deferens, stopping the sperms from passing through. An obstructed duct might delay or halt the production of semen, which can alter the number of sperms to be implanted into the female's vagina.

#### **Erectile Dysfunction (ED)**

Also known as Impotence, it is the inability or difficulty to have and maintain an erection for continuous sexual intercourse. In this case, a man's libido and his high-quality sperm cells are reduced. This is a relatively common condition that plagues up to 15% of the reproductive male around the world.

#### There is a wide variety of potential causes of erectile dysfunction.



Usually, impotence is attributed to common chronic diseases like diabetes, cardiovascular ailments, and hypertension. Other debilitating illnesses like multiple sclerosis, prostate cancer, and Parkinson's disease can also come into play. Hormones' interference is also possible, like how fluctuating levels of testosterone disturb body processes.

However, intangible causes are now considered as additional potential reasons for erectile dysfunction, chiefly due to either the loss of sexual satisfaction. Alcoholism, substance addiction, depression, anxiety, insomnia, and stress can all affect the quality of a man's erection and ejaculated semen.