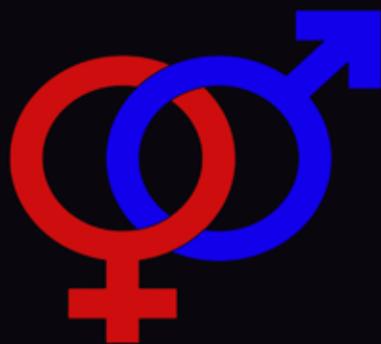




# PUBERTY



**A GUIDE FOR CHILDREN  
& TENNAGERS**

**N I Y A T I   S H A R M A**

# ABOUT PRATISANDHI

## ■ Who are we and What do we do?

Pratisandhi is a youth driven initiative committed to raising awareness about sexual health and education in India. Along with a team of twenty members and volunteers, we work towards creating a society that does not shy away from fundamental topics such as sex.

**P**RATISANDHI began with the recognitions of a need to provide the youth with a safe space in a society that tends to pander to behaviour according to their own morals. We conduct workshops to increase sexual health especially among the lower strata of society, as well as organise drives to make sanitary napkins available to women. In addition to this, the Pratisandhi team is actively involved in conducting awareness events to break the silence on these issues as well as using social media as a channel to further the cause of sexual education by providing bite sized must-know information.

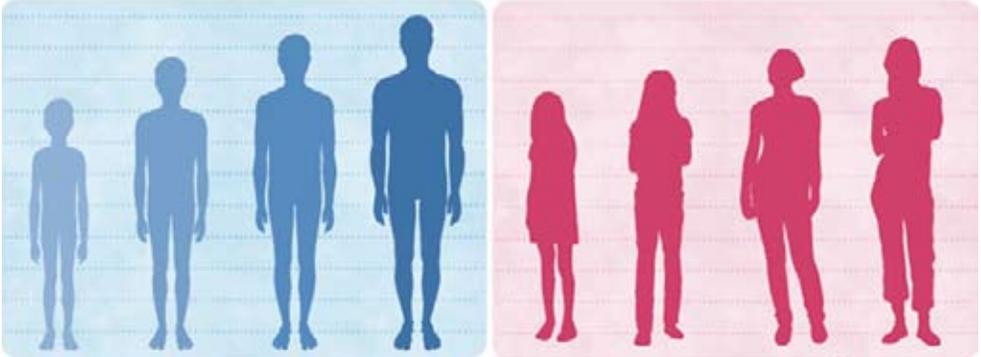
We believe that it is important for adolescents to be able to question the beliefs they are led to believe as children. We want to create a difference through the means of educating our youth in a manner through which they can become self-aware individuals who can make smarter decisions. It is our general belief that being ignorant about sexual education and sex, in general, has more negative implications on our society and lead to a misguided future generation. Hiding behind fake abstinence to avoid the truth of sex is a notion that is not just ridiculous but also dangerous for those who decide not to practice it. Everyone has the right to have access to information free from judgement.

Sex and reproductive health are not only socially repressed topics but are also extremely sensitive in nature. While the internet is filled with a plethora of information, it can become difficult to identify what is true and what is not; therefore, we believe that it is extremely important to have a strong and reliable source of information. We have a network of professionals who answer queries, facilitate our workshop modules, and ensure authenticity of the information being passed on.

Instead of protecting our children from knowledge, how about we give them knowledge about protection?

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# WHAT IS PUBERTY?

Puberty is the time when changes occur in the body that transforms you from a child to an adult. It starts when hormones in your body signal our brain and reproductive system to enable the start the process of maturation of reproductive organs.

Puberty occurs in both boys and girl, through various changes are unique to each gender. It usually occurs between 9-13 years in girls, and between the ages of 12-16 in boys. The series of changes start earlier in girls than in boys.

## ■ Why Does Puberty Happen?

The start of puberty is initiated by the release of a hormone called Gonadotropin-releasing hormone (GnRH) from the brain. This in turn eventually triggers the release of hormones estrogen and progesterone from a girl's ovaries and testosterone from a boys testes. These hormones are responsible for physical and emotional changes in both genders. These can often be first seen in the form of periods in girls and erection in boys. Our genes and our environment play an essential role in determining when we attain puberty.

Puberty can also be impacted by the percentage of body fat, for example, more obese people tend to attain puberty earlier. It may also be affected by the age at which one's parents or grandparents achieved puberty.

## ■ What Happens During Puberty?

A series of changes should be expected physically and emotionally during this time. It is important to know that these changes are regular and a part of growing up!

### Physical changes that happen in girls during puberty:



- Enlargement of breasts
- Hair growth in the pubic area
- Hair growth in the armpits
- The increase of length and thickness of body hair
- Occurrence of acne
- Widening of hips
- External genitals such as vaginal lips and clitoris increase in fullness
- Increase in body height
- The appearance of the first period
- Increase in sweating
- Change in underarm odor

All these changes happen because the ovaries start functioning and start releasing eggs with the result, that child-bearing is now possible.

### Physical changes that happen in boys:



- The sudden increase in height
- Growth in the fullness of sex organs like penis and testicles
- Occurrence of acne
- The growth of body and facial hair
- Development of muscles
- Change in the voice, so it becomes hoarse and deep
- Adam's apple becomes prominent
- Broadening of chest and shoulders
- Higher frequency of erections

All these changes happen due to the production of testosterone in testes and sperms are produced making it possible to impregnate a woman.

### Emotional changes that occur during puberty:

- Increased attention to one's physical appearance
- Developed interest in love and romance
- Increased need for independence
- They may begin to masturbate
- They develop curiosity about their bodies
- Unpredictable changes in mood occur
- They develop a desire to be liked and accepted in their peer group

**Physical changes that happen in girls during puberty:**

- A well-balanced diet can play a critical role in ensuring that your body responds to the various changes occurring in your body adequately. A healthy diet can also help in preventing the occurrence of acne, reducing premenstrual symptoms, and also reflects in the quality of your hair and weight.
- Regular exercise during this time aids the benefits of healthy eating. Staying clean and healthy also improves one's self-confidence.
- Drinking six to eight glasses of water per day.
- To control unwanted odor, one should take baths and change clothes, especially undergarments, on a regular basis. One can also use deodorants to cover up any unwanted smell.
- For girls, it is essential to find the right bra that offers support for growing breasts. The wrong size or a bra that does not provide adequate support could cause problems like back pain or sagging of breasts.
- It is normal for boys to get erections, morning wood, and wet dreams during puberty. They occur as the body becomes accustomed to hormonal changes during adolescence and eventually reduce in frequency.
- Developing romantic interests towards members of the opposite or one's sex is entirely reasonable. Talking to one's friends, siblings, and parents can help cope with these feelings and respond to them adequately.
- Masturbation, i.e. the act of pleasuring oneself is an individual choice. It is normal to indulge in masturbation and equally reasonable to choose not to do so.
- Unpredictable mood changes and a desire for independence are also typical during this time. Talking to someone you trust and learning to identify these feelings and their causes can help tackle them effectively.
- Unpredictable mood changes and a desire for independence are also typical during this time. Talking to someone you trust and learning to identify these feelings and their causes can help tackle them effectively.

# WHAT IS VAGINAL DISCHARGE?



Vaginal discharge is produced by the glands present on the walls of a woman's vagina. The primary function of vaginal discharge is to keep the vaginal moist and prevent infections. It helps regulate and maintain the vagina clean and healthy. This is why cleaning the vagina from inside or 'douching' is not recommended as it interrupts the typical systems of the body.

## ■ What is normal vaginal discharge?

Under normal conditions, vaginal discharge is a thick, sticky, clear, wet fluid without any unpleasant odor. The amount of release may increase if one is sexually active or during ovulation. If you notice any changes in the appearance or consistency of your vaginal discharge, it could be a sign of an underlying medical condition, and you should get it checked at once.

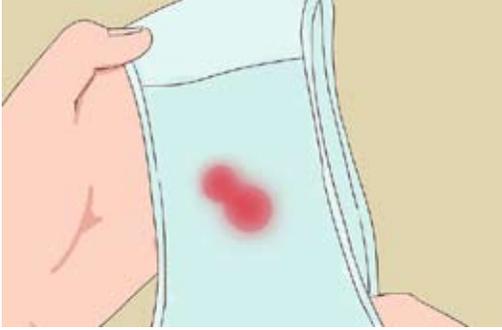
## ■ What is abnormal and what could it mean?

Changes in vaginal discharge can recognize many underlying conditions. A lot of these are due to STDs that may produce symptoms up to three weeks after sexual intercourse. It is essential to seek medical attention if you notice any changes. Some of these include;

Fishy smelling vaginal discharge that is yellow or brown could indicate bacterial vaginosis. It occurs due to the disturbance in the balance of bacteria in the vagina. Smelly or frothy vaginal discharge which is yellow could be due to infection by a parasite called *Trichomonas Vaginalis*. Cloudy and yellow discharge accompanied by lower abdominal pain and bleeding between menstrual cycles could indicate Gonorrhoea. It is a sexually transmitted disease.

Smelly discharge accompanied by pain during urination or intercourse could indicate a sexually transmitted infection called Chlamydia. Thick, white, clumpy vaginal discharge accompanied by pain and itching could indicate a yeast infection caused when yeast overgrows bacteria in the vagina. To prevent such diseases, one should maintain hygiene and cleanliness especially in private areas and use protective measures.

# WHAT IS MENSTRUATION?



Vaginal discharge is produced by the glands present on the walls of a woman's vagina. The primary function of vaginal discharge is to keep the vagina moist and prevent infections. It helps regulate and maintain the vagina clean and healthy. This is why cleaning the vagina from inside or 'douching' is not recommended as it interrupts the typical systems of the body.

## ■ What is normal flow?

The average blood flow can be different for different females depending on various factors. Majority of the women experience a blood flow falling between 10-80 milliliters during two to seven days while the average amount of blood expelled from a female's body during her period is about 35ml. This is around 2-3 tablespoons. It is entirely reasonable to have heavy bleeding during an initial couple of days of one's period.

Majority of girls get their first period between the ages of 11 and 14 years; however, they can occur anytime between the ages of 8 and 16 years.

## ■ How to maintain hygiene during periods?

It is imperative to maintain hygiene during menstruation; the following steps can be followed to ensure cleanliness during this time;

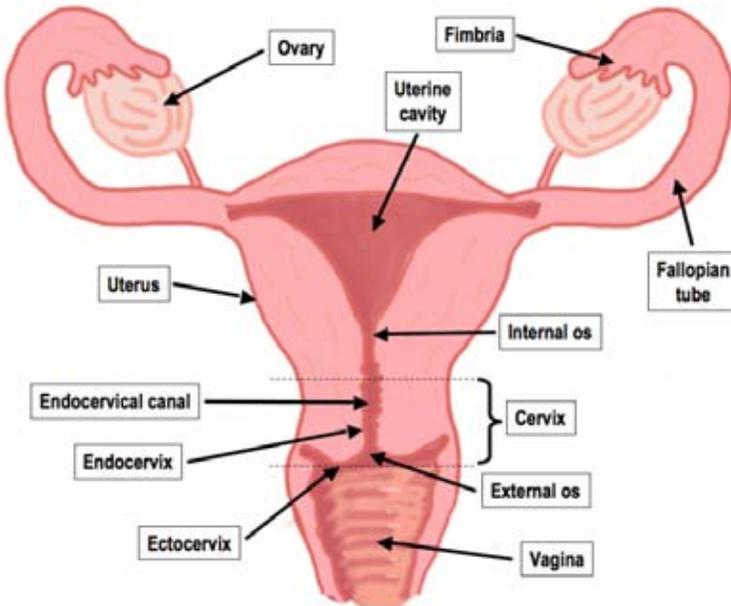
- Choose an appropriate method of sanitation. In India, sanitary napkins are the most popular.
- Change regularly; the standard is to change a pad every 6 hours.
- Wash your private parts regularly.
- Avoid using strong soaps and scented products in the vaginal area.
- Always clean or wash from front to back, i.e. from the vagina to anus and never in the opposite direction.
- Discard used pads properly to avoid the spread of any infections.
- Be aware of any rashes that can be caused due to pads. Stay dry and use ointments to heal any outbreak that may occur.

## ■ Myths and Taboos

- One cannot enter temples while on their period
- One cannot enter a kitchen when on their period
- One cannot have sex during periods
- Using pads is bad for health
- One cannot get pregnant when on their periods

Such myths have no scientific basis and usually stem from religious or cultural beliefs rather than medical facts.

# UNDERSTANDING THE FEMALE REPRODUCTIVE ANATOMY



Starting from what is visible from outside, the external part of the female reproductive system, known as **Vulva**, consists of the following parts;

- The triangular hairy area between our legs is called **Mons Pubis**. This part usually splits into two vaginal lips.

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- These two folds of skin are called **Labia Majora** and **Labia Minora**. They guard the vaginal opening along with the hymen primarily from infections and trauma. The hair present on them acts as filters from bacteria and foreign objects.
- The **clitoris** is a small mound of skin under the Mons Pubis and is covered on both sides by the Labia Minora. It is commonly identified as a woman pleasure center containing over 8000 nerve endings.
- The **vaginal opening** is present at the tip of the vagina. This is the opening meant for sexual intercourse and bleeding that occurs during periods.
- **Urethral Opening** is a smaller opening present just above the vaginal opening; this is the opening from where urine is passed.

**The internal structures of the female reproductive system consist of the following;**

### 📌 Vagina

It is a tube-like passage which starts at the vaginal opening on the outside and merges with the cervix inside.

- The vagina is guarded by a membrane-like structure called the hymen near the opening. This hymen may get torn during strenuous activities such as cycling or during sexual penetration. Tearing of the hymen may or may not lead to bleeding in some women at the time of first intercourse. It is important to note that not all women are born with a hymen and has come to be associated with a woman's virginity. This notion is mainly cultural and has no scientific basis.

### 📌 Cervix

- The cervix is the narrow entry to the uterus. It consists of the glands that contribute to the production of vaginal discharge.

### 📌 Uterus/Womb

- The uterus holds fertilized eggs and provides nutrition to the growing baby.

### 📌 Fallopian tubes

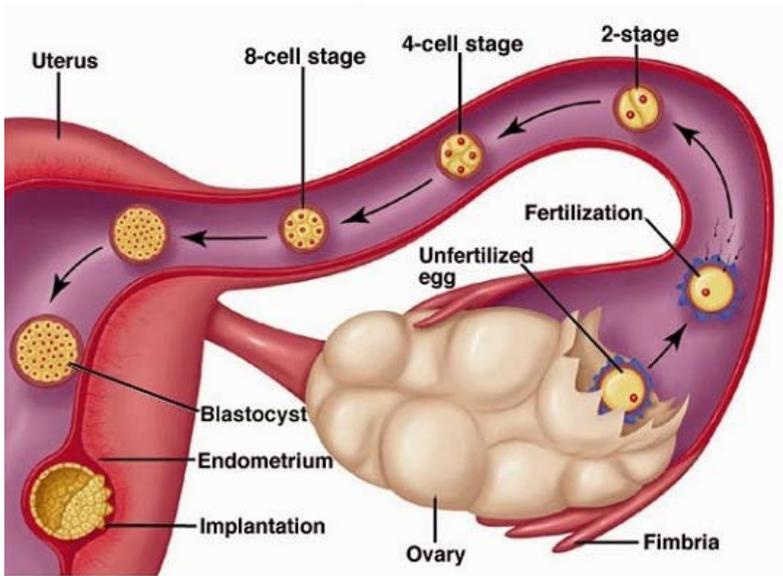
- These are two tubular structures arising from each side of the upper end of the uterus. They pick up the eggs from the ovary and allow it to travel towards the uterus so that it can meet the sperm.

### 📌 Ovaries

- They are almond shaped egg baskets that produce one egg every month which when gets fertilized, results in a pregnancy.

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## ■ How does it work?

Our ovaries are like our egg baskets containing eggs in small immature forms. After puberty is attained, every month one egg out of this basket becomes mature and is released outside the ovary by the process of ovulation.

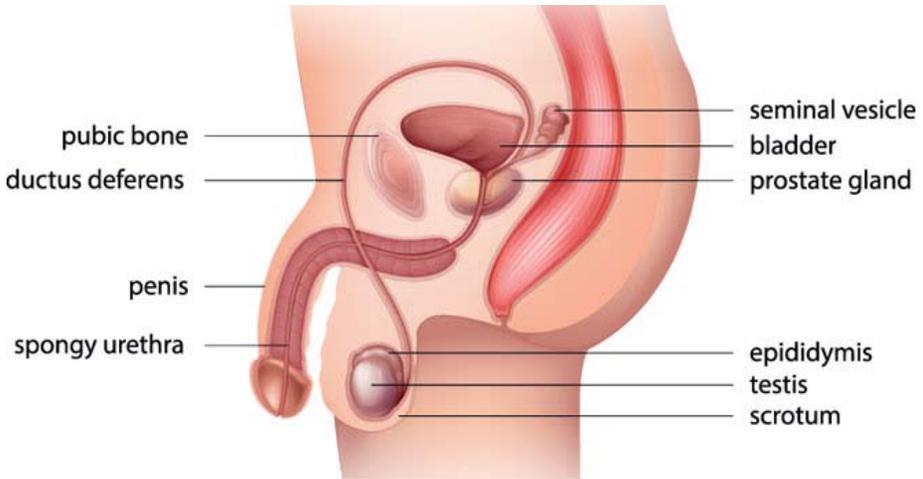
This egg is picked up by fallopian tubes and is transported towards the uterus. Somewhere along the way, sperms released in the vagina during intercourse climb up and meet this mature egg causing fertilization. This creates a nine-month pause in the process of menstruation as the fertilized egg continues to grow and gets embedded in the lining of the uterus if the conditions are right.

There, it continues to grow for nine months until a mature baby is formed. When this baby is ready to come out, the cervix and the vagina open up during the process of labor. Through contractions happening in the uterus, the baby is then delivered.

If this egg is not fertilized with a sperm, the process of menstruation (as explained on pg x) continues.

Menopause is a time when a woman no longer gets her periods, usually around the age of fifty, when ovaries stop producing eggs and stop functioning. After this time, pregnancy is no longer naturally possible.

# UNDERSTANDING MALE REPRODUCTIVE ANATOMY



**Starting from what is visible from outside, the external part of the male reproductive system consists of the following parts;**

## Penis

- This is the part of the male reproductive system that is involved in sexual intercourse. It is hanging outside the body and is attached to the abdomen through its root. The other end of the penis is usually covered by a loose layer of the foreskin. This foreskin can be removed by a surgery called circumcision and is commonly observed in certain religions. In between the two ends is the shaft of the penis that is made up of sponge-like tissue which gets filled with blood and becomes hard and erect when a man is aroused. Semen, usually containing sperms, is ejaculated from the tip of the penis during intercourse.

## Testes

- They are olive-shaped organs which hang on either side of the penis. Every male has a pair of testicles. They are the sperm factories and produce sperms and also release testosterone, which is a male hormone.

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### Scrotum

- It is a bag of skin under the penis which holds the testes. It primarily serves to maintain the temperature of the testes which is necessary for the survival of sperms.

**The internal structures of the male reproductive system consist of the following;**

### Epididymis

- These are coiled tubes present behind each testicle. They help store the sperms and transfer them to the vas deferens during intercourse.

### Vas Deferens

- It is a muscular tube that helps carry the sperm to the urethra to be ejaculated during sexual intercourse.

### Seminal Vesicles

- They are sac-like structures attached to the Vas Deferens. They produce a fluid that is rich in fructose that constitutes most of the male ejaculate. This fluid provides nourishment to the sperm.

### Ejaculatory Ducts

- The vas deferens and seminal vesicles fuse to form the ejaculatory ducts that flow into the urethra.

### Urethra

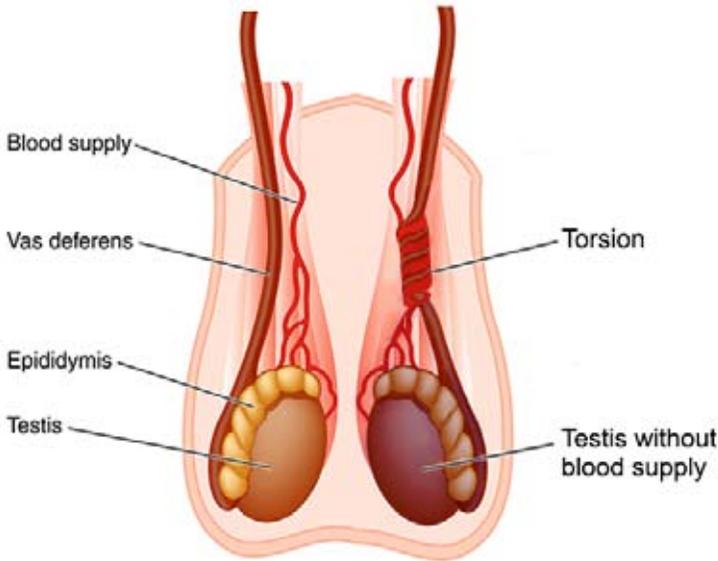
- It is the tube connecting the bladder to the tip of the penis. It carries urine during urination and semen during intercourse.

### Prostate Gland

- It is a walnut-shaped structure present below the urinary bladder. It contributes to the nourishment of the sperms. The urethra passes through the prostate. Sometimes, the enlargement of the prostate constricts the urethra causing loss of stream during urination.

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### ■ How does it work?

The primary function of the male reproductive system is to produce sperm and deposit it into the vagina of the females during intercourse. Testosterone is the hormone that is responsible for most physical changes and working of the reproductive system.

Testes produce immature sperm which then travel to the epididymis and remain there for four to six weeks. During this time in the Epididymis, they undergo a maturation process. These then move to the seminal vesicle via the vas deferens. In the seminal vesicles, sugar and prostatic fluid are added to nourish the sperm further. Sperm stay in the vesicles till they are ready for ejaculation.

When a male is aroused, his penis becomes erect and the muscles of the penis contract to expel and ejaculate the semen outside. Each ejaculate contains approximately 100-200 million sperm, only one of which would fertilize a female egg.

# WHAT IS REPRODUCTION?

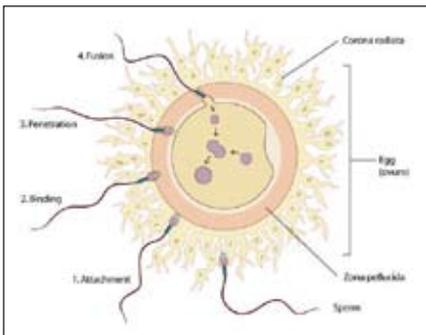
Reproduction is a process that is meant for continuation of a species in the future. Humans are bisexual which means that the male and female mate are required to reproduce.

## ■ Sexual Intercourse

It is the beginning of process of reproduction when a male and female partner engage in sexual mating. During intercourse, the male partner expels or ejaculates a fluid called semen containing sperms into the vagina of a female by inserting his erect penis inside the vagina. The sperms then travel inside the female body through the cervix, the uterus, and finally reaches the fallopian tube. If an egg is present in the fallopian tube around ovulation it has a chance to be fertilised by this sperm.



## ■ Fertilisation

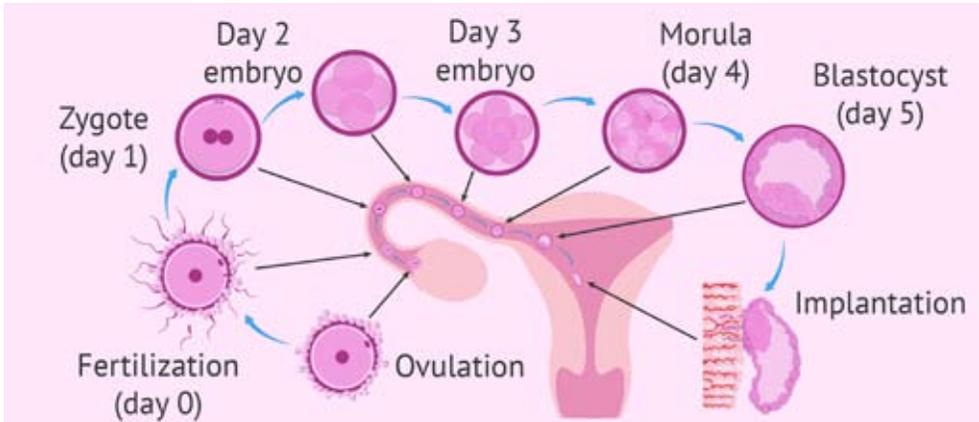


Each act of ejaculation contains millions of sperms, most of these are dead or defective. Of these only a couple of hundred sperms reach the fallopian tubes. The ejaculated sperms usually survive for one to two days and up to seven days in exceptional circumstances inside the female reproductive system. The sperms which reach close to the egg in the fallopian tube then try to penetrate the egg by means of chemical structures called receptors. Once a sperm penetrates an egg, the chemical structure of the surface of

the egg changes to prevent penetration by any other sperm.

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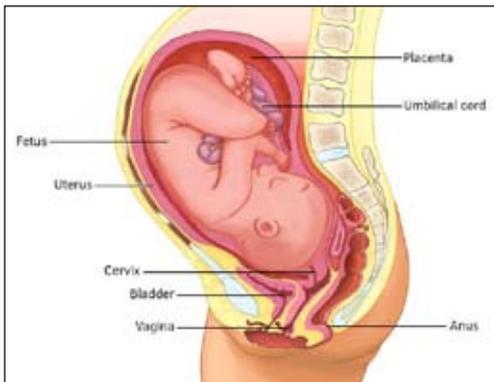


### Journey after Fertilisation

The fertilised egg or zygote then travels through the length of the fallopian tube and reaches the uterus in about five days. During this time, it starts to produce the pregnancy hormone and pregnancy can be detected by the blood tests. The zygote then divides and grows as it continues its journey towards the uterus and becomes a structure known as a blastocyst. This blastocyst burrows into the uterine wall and starts to derive nutrition from the female body. If this process is not complete properly, it can lead to early miscarriages.

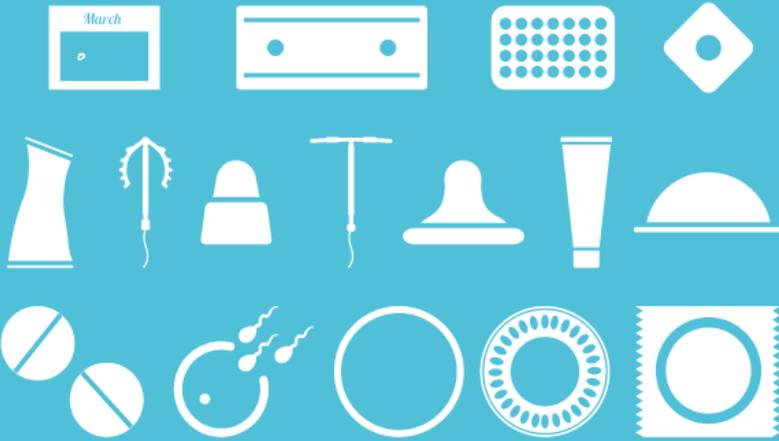
This process of growth continues for nine months resulting in a fully mature baby ready for existence outside the female body.

### Childbirth



The whole duration of pregnancy from the last menstrual period to delivery is approximately 38-40 weeks. When the baby is fully developed, certain chemical changes cause rhythmic contractions of the uterus causing labour pains. At the end of these pains, the mature baby is expelled into the outside world through the vagina. If vaginal birth is not possible, an alternate route of delivery is possible through surgery known as a Cesarean Section. In this surgery, a small cut is made just above the Mons

Pubis to deliver the baby through the tummy.



## WHAT IS CONTRACEPTION?

Contraception is defined as “the use of artificial methods or other techniques to prevent pregnancy as a consequence of sexual intercourse.” There are various types of contraceptive measures available for use, some of these are discussed below:

- **Male and female condoms**  
They are inexpensive, reliable and easiest birth control options. Male condoms are worn over the erect penis of a male, whereas a female condom lines the vaginal cavity of a female. They act as a barrier for semen so that it does not enter a woman’s cervix. A male condom is up to 98% effective whereas a female condom is 90% effective. Apart from providing birth control, both female and male condoms also protect from STDs.
- **Oral contraceptives**  
Oral contraceptives or the pills are available on prescription from a physician and contains hormones that prevent ovulation in a female. This implies that the female will have no egg for fertilization by the sperm. Oral contraceptives have about 95% efficacy in preventing pregnancy; however, they do not protect from STDs. You should talk to the physician about possible adverse effects including bleeding or spotting between periods, weight gain, mood swings, and depression.

- **Intrauterine Device or IUD**

An IUD or intrauterine device is a small device for birth control, which is implanted in your uterus for prevention of pregnancy. A doctor can insert this into your uterus. It is up to 99% effective in preventing pregnancy. It is usually effective and can be left in the uterus for up to 12 years. Two types of IUDs are available; hormonal and copper. Consult your physician regarding which is suitable for you. IUDs do not protect from STDs. Some of the adverse effects of IUDs are irregular periods and cramping. However, these symptoms usually get better after 3-6 months.

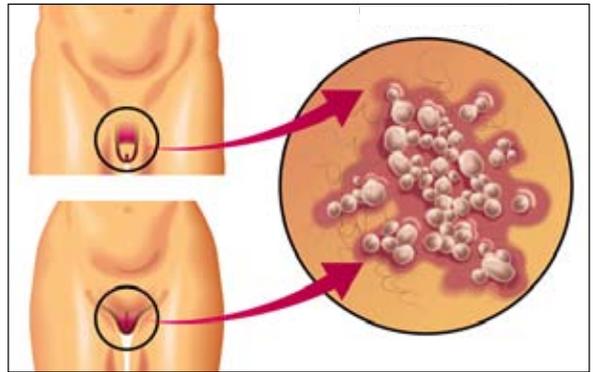
- **Emergency contraception**

Pregnancy can also be prevented by emergency contraception. Emergency contraception is a method to prevent pregnancy by taking contraceptive pills during a limited time after engaging in unprotected sexual intercourse. You should keep in mind that by using emergency contraceptive pills, you can prevent pregnancy and not end a pregnancy. These pills must only be used in case the regular method of birth control has failed, for instance, you have missed your oral contraceptive pills, or there is a breakage of the condom during sex. These pills delay ovulation by preventing the release of eggs from the ovary. Certain medicines prevent the implantation of the fertilized egg into the uterus. These pills usually do not need a prescription and are available at most of the pharmacies.

There are various other methods of contraception available including more permanent methods such as tubectomies or vasectomies. One should always consult a doctor before taking any form of medication.

# WHAT ARE SEXUALLY TRANSMITTED DISEASES?

STDs can affect boys and girls of all ages if they are sexually active since these diseases are most often spread due to sexual intercourse. Some of the most common STDs include:



## Chlamydia

- This is an infection of the genitals caused by bacteria. It usually goes undetected as it may create little to no symptoms especially in earlier stages of the disease.

## Gonorrhoea

- It is also an infection caused due to bacteria. It may also infect the mouth, eyes, anus, and throat.

## HIV/AIDS

- It is a viral infection caused by the Human Immunodeficiency Virus. HIV reduces the ability of the body to fight disease-causing organisms and result in AIDS which is a chronic and life-threatening illness. There is currently no known cure for AIDS.

## Herpes

- It is an infection that can affect the mouth and genitals. One may or may not show symptoms of herpes but still have it. There is currently no known cure for herpes, but its symptoms can be treated.

## Syphilis

- It is caused by bacteria and affects genitals, mucous membranes, and skin. If it is not treated, Syphilis may spread to internal organs leading to organ damage and can become life-threatening.

## ■ How to get tested for STD's?

Since STDs can be potentially life-threatening and affect one's health severely, it is essential to take the necessary precautions to prevent these diseases and get tested regularly.

It is recommended that anyone who is sexually active but in a monogamous relationship get tested at least once a year, whereas if one has multiple sexual partners, they should consider getting tested at an interval of three months. Getting tested every time you have a new sexual partner is also recommended if you are unaware of their status.

STD testing can range from blood tests, urinary checkups, urethral, throat, and even anal swabs. What kind of test required depends on the type of sex one is engaging in.

## ■ How to prevent STDs?

There are many ways one can prevent transmission of STDs, or at least reduce the risk of contracting them. Some of these are:

- Practicing safe sex by using male or female condoms during intercourse
- Using condoms or dental dams during oral sex
- Have an open conversation with sexual partners about your sexual histories
- Get tested on a regular basis
- Avoid engaging in sexual activities under the influence of alcohol or drugs
- Getting vaccinated against HPV and hepatitis B
- Refrain from sharing undergarments or towels
- Ensure hygiene before and after sexual activities
- Practicing Abstinence

# WHAT IS CONSENT?

Sexual consent is an agreement between individuals to engage in any sexual activity or have sex. Having consent is essential in all type of situations including between individuals who are already married or in a relationship. Both males and females can refuse sex.

The age of consent is the minimum age at which an individual can give their consent to get involved in sexual activity. The law on age of consent states that if an individual below the minimum age is engaged in sexual activity, then that individual will be considered a victim and their partner in sexual activity as the offender. The age of consent has appeared in legal statutes. This law has been made to indicate the minimum age of a person below which any other person can't engage in sexual activity with them; otherwise it is considered illegal.

In India, the age of consent is 18 years. A person who is 17 or below 17 is not able to give their consent legally to get engaged in any sexual activity, and any such act is treated as statutory rape.

Consent has various attributes, an easy way to remember them is the word **"CANVAS."**

Continual  
Active  
Non- Coerced  
Verbal and Voluntary  
Ardent  
Sober

Consent is not just crucial with regards to sexual activity but plays a pivotal role in day to day life as well. It is essential to respect the wishes of one's partner and the people around us to create a culture where we are sensitive and respectful of one another. Open and honest communication forms the basis for consent.

We must also learn to recognize cues in another person's body language that may indicate that they are feeling uncomfortable or uninterested, such as being reserved, avoiding eye contact, rapid blinking, crossed arms, etc.

Phrases of consent in everyday life are visible in many forms, some of these are:

- “Does this feel okay?”
- “Can I hug/kiss you?”
- “It’s alright if this doesn’t work for you.”
- “Let me know if you feel uncomfortable.”
- “Do you want to try xyz with me?”
- “How do you feel about xyz?”
- “We don’t have to rush.”

The absence of consent during any sexual activity can lead to serious crimes that are punishable by law. These include harassment, molestation, assault, and in severe cases rape.

## NEED HELP?

There are various helplines one can reach out to if they need assistance. Some of these are given below.

**Police - 100**

**Ambulance - 102**

**Police Helpline - 1944**

**Child Line - 1098**

**Women in distress - 1091**

**Counselling Services for Women in Distress - 3317004**

**Anti Teasing Cell (Crime Branch) - 1096**

**National Commission for women - 01123213419, 23234918, 23222845**

**All India Institute of Medical Sciences (24 hour Ambulance) - 011 26588776**

**Rape Crisis Cell - 23370557**