



What is?

# Puberty

Facts, feelings, and what happens to the body

By

**Dr. Varshali Mali**

MBBS, DNB (Obstetrics & Gynecology)

Diploma in Gynecological Endoscopy – Germany

[www.drvarshaliclinic.com](http://www.drvarshaliclinic.com)

© Copyrights: 2018 - Current. All material in this document is, unless otherwise stated, the property of Dr. **Varshali's Gynecology Clinic**. Copyright and other intellectual property laws protect these materials. Reproduction or retransmission of the materials, in whole or in part, in any manner, without the prior written consent of the copyright holder, is a violation of copyright law.

Copies of the document are made available for review. Individuals must preserve any copyright or other notices contained in or associated with them. Users may not distribute such copies to others, whether in electronic form, whether for a charge or other consideration, without prior written consent of the copyright holder of the materials. Contact information for requests for permission to reproduce or distribute materials available through this document is listed below:

**Dr. Varshali's Gynecology Clinic**

[www.drvarshaliclinic.com/contact-us](http://www.drvarshaliclinic.com/contact-us)



Growing from a kid to an adult is probably the most emotionally and physically involved stage of our growth. Maturation of thoughts, substantial psychosocial development, and many physical changes happen during this "puberty" period. This is the crucial stage in the transition from childhood to adulthood. Although it's a normal part of growing up, each girl's experience is unique, and many times challenging, and confusing. Knowing what puberty meaning is, what is puberty age, what to expect, and what is happening emotionally and physically will help you deal with it. This article gives details about puberty and related questions you might have about it.

## What is puberty meaning?

Puberty is the process of physical changes through which a child's body matures into an adult body. During puberty, the body goes through many internal and external changes. A series of physical and biological changes happen to a body during this period to make it mature. These changes are initiated by hormonal signals from the brain. The body undergoes many changes to your skin, hair, breast, and sex organs in response to these signals. The height and weight growth accelerates in the first half of puberty and completes when the adult body is developed. Secondary sex characteristics get developed, which further distinguish a boy from a girl.

So, puberty meaning is the period during which a boy or a girl undergoes series of changes to become mature.

## Puberty age

Puberty is the process of body transformation, and it does not happen all at once. Puberty comes in stages and takes many years to complete.

The time when puberty age begins varies and depends on many factors. But the average girls start puberty at the age of 11 years. Many body changes occur over 8 to 17 years of age, and the process can take 6 to 7 years to complete.

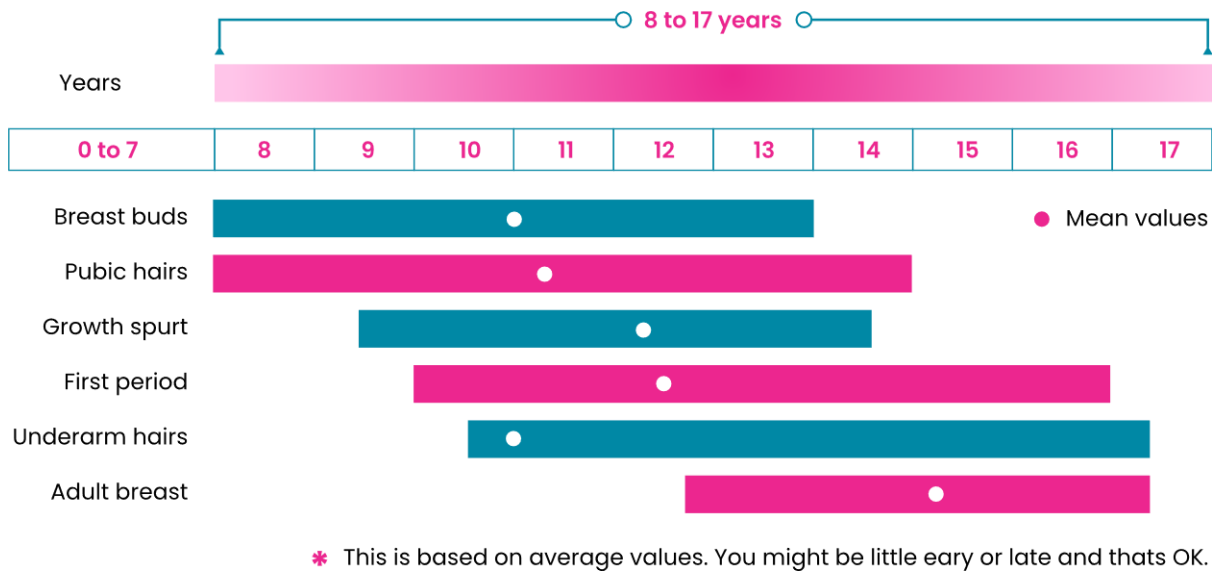


Figure 1: Puberty age in girls

Many factors decide the start of puberty age, the start time, and the duration of body change. The body type and the fat composition may affect puberty age as well as duration. Many environmental conditions may affect the onset and time of the puberty period.

It's entirely normal for puberty to begin at any point from the ages of 8 to 14. To ensure everything is correct, please [consult the gynecologist](#) if it starts before 8 years or after 14 years of age.

## First signs of puberty

The body is transformed over the years during the puberty age. There are many stages of puberty development, but there are few early signs to know that you are entering the puberty age.

The first sign of puberty is usually breast development (getting the breast buds). It's normal for breast buds to sometimes be very tender or for one breast development to start before another.

Growing pubic hair is also one early sign that your puberty age is starting. The growth of pubic hair typically begins after breast development, followed by hair growth in the armpits. A minority of girls, however, begin to develop pubic hair before breast development.



Along with pubic hairs, some girls may notice more hair on their legs and arms.

One of the significant signs of puberty is starting your **periods**. But this usually happens later than other physical changes and usually occurs around 2 to 3 years after the start of puberty age. So, even if your periods are not started, you may have entered puberty age.

## Body developments and physical changes during puberty

Puberty meaning is your body going through many physical and emotional changes. The puberty age is started when the area of the brain called the hypothalamus starts signaling to the rest of the body that it is time to develop adult characteristics. It sends these signals through hormones, which cause reproductive organs, the ovaries, to produce a range of other hormones. These hormones cause growth and changes in various parts of the body.



Figure 2: Physical changes during puberty



## Typical body changes

Following are the physical changes you will experience during puberty age.

- You may get acne or pimples on your face.
- Your face skin becomes oilier.
- Your sweat gland develops, so you will sweat more which may have body odor.
- Your hips get wider, and your body may become curvier.

## Periods

One of the significant changes in your body is starting **your periods**. Getting periods is a sign of puberty and is a normal part of growing up. It typically begins between the age of 12 to 15 years. Most of the time girl gets her period about two years after her breasts start to develop.

## Armpit and pubic hairs

Another (probably a little annoying) sign of puberty age is growing hairs on different parts of your body. You will start noticing hairs where it didn't grow before. You may grow hairs on your arms and legs. Pubic hairs and hairs under your armpit are typical signs of puberty.

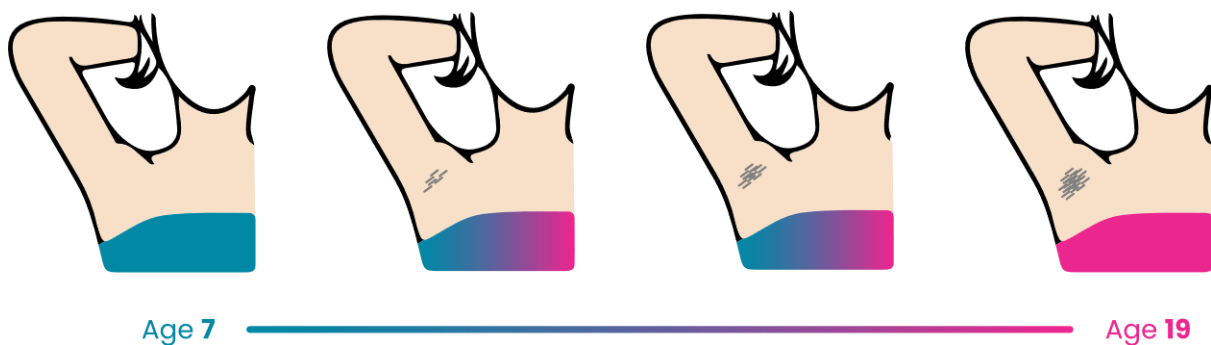


Figure 3: Armpit hair growth

## Bone growth

The most significant gains in bone size and strength occur in the puberty age. Bones not only get longer and wider, but they also get denser. In females, approximately 50% of lifetime's total body calcium is deposited into bones during puberty. The maximal calcium deposition in bones



occurs during the first half of the puberty age. Most of us reach the largest and densest bone by our early twenties.

Having strong bones in childhood lays a foundation for bone health throughout life. We build almost all our bone density when we're children and teens. You need to have a diet rich in vitamin D and calcium. To know more about puberty meaning, its impact on bone growth, healthy diet, and practices, consult [your doctor](#).

## Height and weight gain

The body goes through many transitions during the puberty age. For our body to develop maturity, a little extra fat is normal and essential part of its development. So, many girls do gain weight during puberty, and it's totally normal. You may notice more body fat along the upper arms, thighs, and upper back. Your hips will grow rounder and broader; your waist will become narrower.

Starting at around 9 years of age, girls gain about 17% to 18% of their adult height. Your limbs grow first, then your trunk. For most girls, the growth rate is fastest, about six months before starting their first period.

So, it may feel a little strange for you and others, but it's normal to grow at a faster rate during puberty. It is advised to [visit the doctor](#) at least once a year to check the growth and measure BMI (body mass index). The BMI can be used to check the growth pattern, compare it with the healthy range and see if there is any need for correction.

## Breast development by age

Breast development is caused by hormones released by the ovaries during puberty age. These hormones cause fat to accumulate, causing your breasts to enlarge.

The first sign of breast development is breast buds. Breast buds are small, disc-shaped lumps felt under the nipple. As your breasts first start to grow, they can be very tender and sore. If they grow rapidly, stretch marks may occur in the skin, but they will fade over time. The breasts will continue to grow as your body fat increases during the puberty age. They will become rounder and fuller over the next few years by the end of your puberty age.

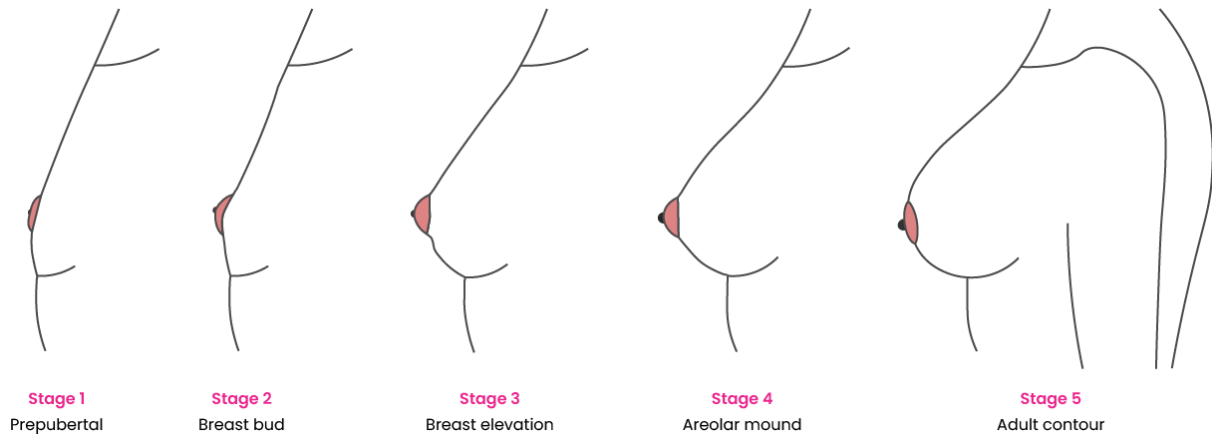


Figure 4: Breast development

Stages	Description
Stage 1 8 years	Preteen. Only the tip of the nipple is raised.
Stage 2 9 to 11 years	Bud appears, breast and nipple are raised. The dark area of skin around the nipple (the areola) gets larger.
Stage 3 After 12 years	Breasts are slightly larger, with glandular breast tissue present.
Stage 4 Around 13 years	The areola and nipple become raised and form a second mound above the rest of the breast.
Stage 5 Around 15 years	Mature adult breast. The breast becomes rounded, and only the nipple is raised.

It's common for one breast to develop faster than the other. Over time, it should even out. The slight difference in the breast size is entirely normal and may not go away. In case of any question or query, [reach out to the gynecologist](#). You may need to consult the doctor in case if:

- No breast buds or breast development by age 13.
- You got the breast bud on one side, but no breast bud on the other side by the next 3 months.
- You feel too much irritation or swelling around the breast buds.
- You have any other concerns and think that you need [to see a gynecologist](#).



## Puberty stages – Tanner stages

Puberty is a time of rapid changes in the body. Tanner staging, also known as Sexual Maturity Rating (SMR), helps break down puberty meaning and body development into multiple stages. Developed in 1969, the system is named after a British pediatrician, Dr. James Tanner. It is based on a girl's breast development and pubic hair growth during puberty age. Although each girl has a different puberty timetable and will pass through each stage at a different age, this method acts as a general guide to compare physical development.

### Tanner stage 1

Age: 8 years

Tanner stage 1 is preadolescent or prepuberty (having nearly reached adolescence). Towards the end of this stage, your brain starts sending signals to your body. At around your eighth birthday, your body begins preparing for puberty. The changes will start happening to your body, but they will not be physically noticeable to you.

### Tanner stage 2

Age: Between 9 to 11 years

Stage 2 of puberty age is marked with the beginning of physical development. The hormones begin to send signals throughout the body. Forming the breast buds is the first sign of puberty. These buds may be a little itchy or tender. In addition, you may get a small number of pubic hairs.

### Tanner stage 3

Age: After 12 years

Puberty meaning of stage 3, is when changes become more prominent. During this stage, your breast buds continue to grow and expand. Pubic hairs get thicker and curlier. You may start seeing the hairs under your armpits. Pimples on your face may begin appearing. Your hips and thighs





will start building up fat, and your body will become curvier. Your height will begin growing at the highest rate, and you will feel taller.

## Tanner stage 4

Age: Around 13 years

Puberty is in full swing, and you will start noticing many changes to your body. The breast bud stage is passed, and your breasts will take a fuller shape. You may get your first periods between the age of 12 to 14. Your first periods can be a little early or late, and it is entirely normal. Your pubic hairs will get thicker. The growth will slow down a little.

## Tanner stage 5

Age: Around 15 years

Stage 5 is the final stage of your puberty. It marks the complete growth and maturity of your body. Your breast may continue to grow for the next few years, but they reach approximate adult size and shape by the end of this stage. Your periods will become regular in the next six months to two years. You will get your adult height in one or two years after your first period. Pubic hairs are entirely grown and reach the inner thighs. Hips, thighs, and buttocks fill out in shape, and your body will look more "woman."

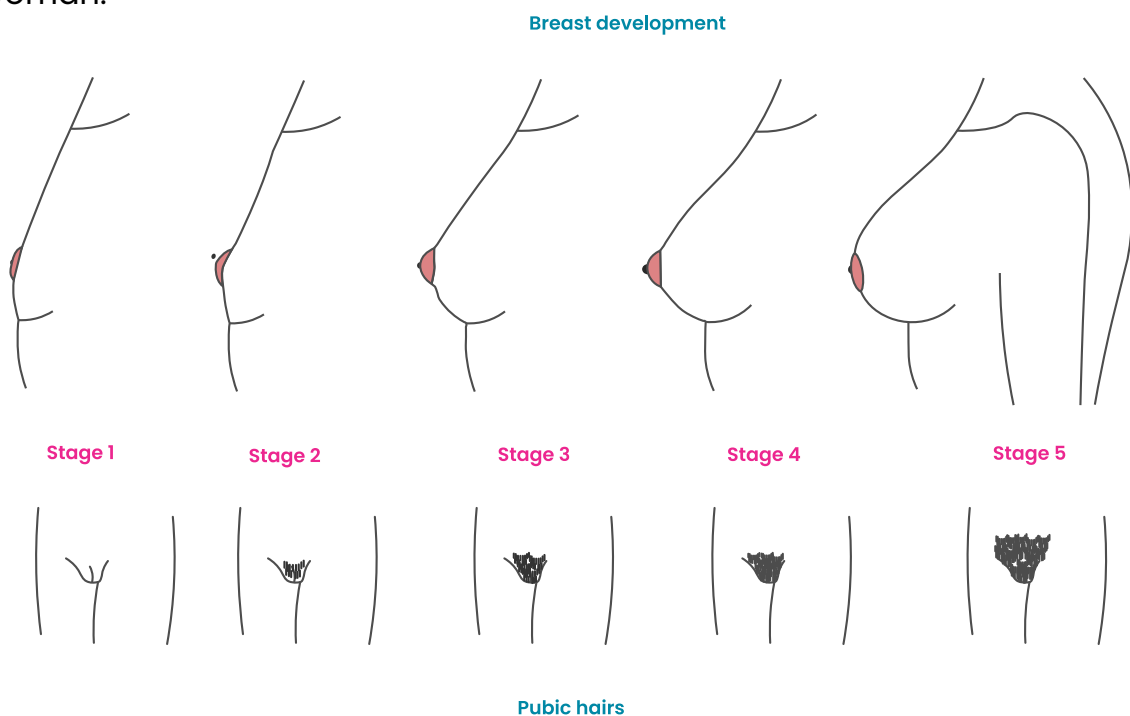


Figure 5: Tanner stages body development



Stages	Body changes
Stage 1 8 years	Nothing noticeable. Small nipples, no breast, and no pubic hairs.
Stage 2 9 to 11 years	Breast bud forms. Initial growth of pubic hairs. The hairs are straight without curls and light color.
Stage 3 After 12 years	Bread buds continue to grow, face pimples appear, hairs under the armpit form. Pubic hair grows and may become curlier.
Stage 4 Around 13 years	You may get your first periods. Nipples are elevated and form an edge towards the breast. Breasts also grow a little longer. The pubic hairs become denser, with curl and dark color.
Stage 5 Around 15 years	Fully developed breasts. Adult pubic hairs. Dense and curly hairs extending towards the inner thigh.

Growth during puberty depends on many factors. Tanner stages and the age mentioned are based on the average data. So, if you are little here and there, that's fine. Do not get worried if your body is not transitioning and does not satisfy all these stages. [Consult your gynecologist](#) in case if you need any help or notice something unusual with your body.

## What are precocious puberty and delayed puberty?

The average age of girls to begin puberty is 11 years. Few girls might be a little early or a little late, but on average, all puberty states happen between 8 to 17 years.

### Precocious puberty or early puberty

Precocious puberty meaning is the medical term for early puberty. Precocious puberty is when a girl's body begins showing the puberty signs too early. There is no global agreement about the puberty age to consider it precocious puberty. It is advisable to examine the puberty signs if they appear before 8 years of age in girls. The main symptoms to observe are whether breast development and pubic hair start appearing before the age of 8 years in girls.



There are mainly two types of precocious puberty.

**Central precocious puberty:** Known as CPP, it is the most common precocious puberty seen in girls. It's triggered by the early production of a hormone called gonadotropin-releasing hormone (GnRH).

**Peripheral precocious puberty:** This is caused by the early secretion of high sex hormones like androgen and estrogen produced by different parts of the body.

Some of the signs of precocious puberty are:

- Breast development before the age of 8.
- Starting the periods before the age of 10.
- Rapid height growth before the age of 8.
- Pubic, underarm, or facial hairs before the age of 8.
- Face pimples at an early age.

In most cases, the early puberty signs are typical and do not require medical attention. But it is advisable to [consult the doctor](#) to confirm that everything is normal. In some cases, precocious puberty could be a sign of a health problem, such as a genetic condition, a hormonal condition, a brain abnormality, or a problem with the testes, ovaries, or adrenal gland. Remember that precocious puberty can be treated. So as a girl, if you feel that things are happening much earlier or faster, talk to your mother, your close ones about it. Get [an appointment with a gynecologist](#).

## Delayed puberty

Delayed puberty meaning is the late onset of different physical body changes. Puberty is usually considered to be delayed when there is no breast development by the age of 13. Your first period should start approximately 2 to 3 years after your breast bud starts forming. So, if your periods are not triggered by the age of 16, you may have symptoms of delayed puberty.

A girl often may have delayed puberty simply because she is a late bloomer and may not need any medical treatment. But few late puberty cases may be caused due to medical disorders and genetic disorders and may require the [doctor's attention](#).



Few girls may have a delayed puberty history in their family. This constitutional delay in puberty is seen in most girls. Problem with thyroid glands, ovaries and testes, and malnutrition are other causes of delayed puberty. Chronic medical conditions, such as diabetes or cystic fibrosis, may cause the delayed onset of puberty. Girls who are competitive athletes or doing strenuous exercise and have very little body fat may experience a delay in puberty.

Delayed puberty is many times normal and does not need any medical attention. But, in case if you feel something is not normal, or have few symptoms like no periods after the age of 16, [consult your gynecologist](#).

## Few medical concerns

The body goes through many changes during puberty. Most of the changes are expected, and as a strong girl, you will deal with them. Few of the changes may be physically or emotionally challenging, and you may need help to deal with them. Following are few examples where you may need help and support.

### Anemia

Anemia is a decrease in the hemoglobin concentration below the normal range. When the body does not get enough iron, it cannot make hemoglobin. There are fewer red blood cells without enough hemoglobin, so less oxygen reaches the cells and tissues that make up our bodies. The iron deficiency may be caused due to not eating a diet with enough iron content. This may be elevated due to loss of blood during the [periods](#). Make sure that your daily diet is rich in iron content, which will help you grow.

### Acne or pimples

Acne or pimples are probably the most visible and irritating consequence of puberty age, and sometimes we feel that puberty meaning is getting pimples on the face. Acne is caused by overactive oil glands in the skin and a buildup of oil, dead skin cells, and bacteria, which leads to swelling or redness in the pore. The face is the most prominent location, but pimples may appear on the upper neck, upper back, and other body parts.



The acne typically occurs during stage 3 or 4 of puberty. Pimples appearing at the early stages of puberty may cause concern and need medical attention from [the doctor](#).

Pimples are primarily un-avoidable, but you can follow some tips to reduce their effect and deal with them. Washing your skin is the most important thing you can do. This will remove excess surface oils and dead skin cells that can clog your pores. Remember to wash your skin after any activity causing sweat. If you are using any beauty products, make sure they don't block the pores. Keep oil, hair spray, hair gel away from your skin. Try to use water-based products. If you are getting pimples on your check or back, avoid wearing tight clothes which can rub and cause irritation. Consult a skin doctor in case if you need any help.

### Musculoskeletal injuries

The body growth is very rapid during the puberty age. An asynchronous maturation of bone growth, bone strength and calcification, muscle mass and strength, and tendon/ligament strength is an underlying problem that can commonly lead to a high rate of musculoskeletal injuries during puberty age.

### Gynecological issues

[Periods](#) are a prominent sign of puberty. At the early age of puberty, the periods may be irregular. The periods are caused due to menstruation cycle. But girls may have periods not associated with ovulation which may have irregular, prolonged, or heavy bleeding. [Consult your gynecologist](#) in case if you feel something wrong with your periods.

### Myopia or vision change

Due to asymmetric growth of the globe or axial diameter of the eye during puberty age, many girls need corrective lenses during puberty.

Apart from the above, there might be few issues related to your rapid body growth and hormonal changes during puberty. Puberty meaning is your body transforming into an adult body. So, keep an eye on the changes happening. Share them with your mother, your close ones and [consult a doctor](#) if you feel something abnormal.



## Puberty and feelings

Puberty meaning is changes caused by hormones in your body. These hormonal changes in puberty age may take you on the emotional roller-coaster apart from changing your body. Your emotions may become stronger, more intense, and you may have mood swings. These changes are not the same for all the girls. They mainly depend on how you respond to the changes and the reactions of people around you.

Not all the emotional changes happening to you will be negative or will make you upset. Puberty is a time where you will learn more about yourself, your interests, your goals. You will learn to relate and talk to other people more maturely. It is a good idea to get involved in fun and healthy activities that will help you release the stress and the extra growing up energy you are getting. Writing, music, art, or even talking to your friends are great ways to express your emotions and feel good about yourself.

Puberty meaning could be confusing at times. During puberty age, you may feel sad, irritated, and feel that your emotions are out of control. These are typical symptoms of growing up. All girls go through this stage. Remember that you need not go through this alone. Talk to your mom, your friend, older sister about it. You can also start talking with a [gynecologist doctor](#), who will help you deal with it emotionally and provide all necessary medical advice. Do not hesitate to [ask any question](#) to anyone you are comfortable with.



Author

**Dr. Varshali Mali**

MBBS, DNB (Obstetrics & Gynecology)

Diploma in Gynecological Endoscopy – Germany

Dr. Varshali Mali is an Obstetrician and Gynecologist. She did her MBBS from Dr. D. Y. Patil Medical College, Pune, DNB (Obstetrics & Gynecology) from Jehangir Hospital, Pune, and Diploma in Gynecological Endoscopy from the University of Schleswig Holstein – Kiel Germany. She has several years of experience working as a gynecologist, pregnancy doctor, and lecturer. Through her clinic located at Life Republic township near Marunji, she provides gynecology and pregnancy care solutions to the women around Hinjewadi, Wakad, and nearby Pune. She is known for her welcome nature, smiley face, supportive attitude, intelligence, and in-depth knowledge about gynecology and pregnancy in her patient community. Mother of two daughters, she believes that motherhood is the best gift one can get. As her contribution, she puts her best efforts into making the pregnancy journey most enjoyable for her patients.

[Book an appointment](#)

[Ask a question](#)

