

The background of the entire page is decorated with soft-focus images of pink roses. There are roses in the top-left and top-right corners, and a large, detailed rose in the bottom-left corner. The overall aesthetic is clean, feminine, and natural.

**HEALTH TOTAL**

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# The PCOS Guide

Causes, Symptoms  
& Role of Nutrition

By Anjali Mukerjee  
Nutritionist, Researcher, Author, Columnist,  
Founder-Director of Health Total

[www.health-total.com](http://www.health-total.com)

## LET'S TALK ABOUT PCOS

Managing your life with Polycystic Ovarian Syndrome (PCOS), the excess weight, emotional stress, not being able to conceive, the hair problems, having no one to talk to and most importantly — dealing with the comments and snide remarks — all probably leave you feeling dejected and with no time for the most important person in your life — YOU!

PCOS occurs not just in women, but in girls as young as 11. Studies have shown that 1 in 11 women in the age group of 15 to 44 has PCOS, but many don't know about it.

It can be a challenging condition, and having a good support to manage this disorder is crucial. So, if you don't know anyone else who has PCOS, or don't have anyone with whom you talk about it, Health Total can help you.

Health Total uses an innovative 'Integrated Approach' to healthy living. This combines the benefits of Ayurveda, nutritional therapy, Nutrigenomics, Homeopathy, functional foods, lifestyle modification and moderate exercise to help you achieve real results, steadily regain health, look and feel beautiful inside out and live a happier, healthier life.

A team of qualified nutritionists and doctors do a comprehensive case history, post which targeted Nutrition and Ayurvedic therapies are recommended that are patient-specific.

This PCOS eBook has been created as a resource for women with this condition, with the aim to educate and empower them. It provides all the information that you might be seeking in order to manage PCOS better.

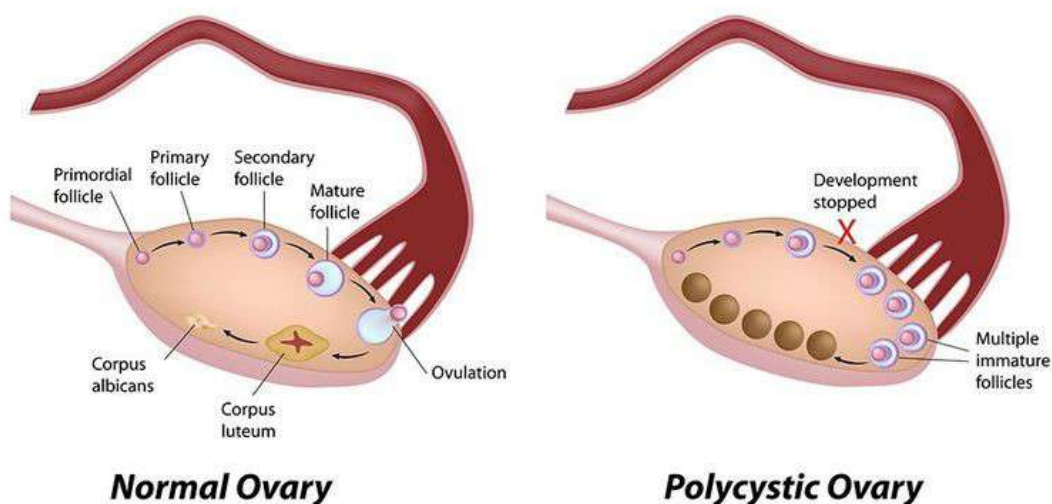
## WHY DO WOMEN HAVE PCOS?

Polycystic ovary syndrome (PCOS) is a group of symptoms that affect the ovaries and ovulation process in women of reproductive age. The word “polycystic” means “many cysts”. Its three main features are –

- Cysts in the ovaries / numerous small collections of fluid (follicles)
- High levels of male hormones (androgen)
- Irregular or skipped periods

Polycystic ovaries are generally larger in size and denser than the normal ovaries. It usually occurs when the sex hormones go out of balance and the body starts producing more male hormones, resulting in the onset of several symptoms.

## NORMAL OVARY VS POLYCYSTIC OVARY



## WHAT CAUSES PCOS

No one really knows what exactly causes PCOS, but it is likely to be the result of a number of genetic and environmental factors. Doctors believe that high levels of male hormones prevent the ovaries from producing hormones and making eggs normally. Genes, insulin resistance and inflammation have all been linked to excess androgen (male hormone) production.

### Genes

One of the reasons you may have PCOS is partly determined by your genes. Researchers have found that 24% of women with the syndrome had a mother with PCOS, and 32% had a sister with the disorder. It's likely that many genes, not just one, contribute to the condition.



### Excess insulin

Insulin is the hormone produced in the pancreas that allows cells to use sugar, the body's primary energy supply. If the cells become resistant to the action of insulin, then blood sugar levels can rise, and the body might produce more insulin.



Excess insulin may increase androgen (male hormone) production, causing difficulty with ovulation. More insulin means more weight gain and related health risks.



## Inflammation

If you have PCOS, you may also have elevated levels of inflammation in the body. This is often associated with diabetes, insulin resistance, and heart disease. Being overweight can also contribute to inflammation. Studies have linked excess inflammation to higher androgen (male hormone) levels. One of the best ways to ease inflammation is by consuming more anti-inflammatory foods and making certain lifestyle changes.



### Bottom line:

Genes, environmental factors combined with obesity and metabolic disorders are the primary cause of PCOS.

## SYMPTOMS

Symptoms of PCOS may begin shortly after puberty, but in some cases, it can also develop during later teen years or early adulthood. If you are having delayed or missed periods, or trouble losing weight or getting pregnant, or oily skin, you may think these issues are a part of your life. But these could be the signs of PCOS. The most common symptoms are:

### Irregular periods

Women with PCOS have an irregular menstrual cycle and the primary reason is a hormonal imbalance. Some women may continue to have regular periods every 28 days, others may have longer cycles – for instance, every 30 to 40 days, and some may stop having periods.



Lack of ovulation prevents the uterine lining from shedding every month. Interestingly, an average woman has around 400 periods during her lifetime. But, some women with PCOS get fewer than eight periods a year.

### Heavy bleeding

During a normal period, you lose around 30 ml of blood. If you have heavy bleeding, you lose more. But if you lose more than 60 ml of blood, it is termed as excessive bleeding.

The uterine lining builds up for a long time, so the periods you get can be heavier than normal.

## Hirsutism or unwanted hair growth

More than 70% of women with this syndrome have unwanted hair growth. Areas affected may include the face, arms, back, chest, thumbs, toes, and abdomen. Some women also have “male-pattern” hair thinning of the scalp and top of the head.



## Acne

Women with the disorder have acne and oily skin. Male hormones can make the skin oilier than usual and cause breakouts on areas such as the face, chest and upper back.

## Hair Loss & PCOS

Women with PCOS often struggle with hair loss, as they have excess amounts of the androgens. Some have high dihydrotestosterone (DHT) levels, which kill hair follicles, resulting in hair fall and hair thinning.



## Abnormal weight gain

Up to 50% of women with PCOS are overweight and experience difficulty in losing weight.

## Darkening of the skin

Insulin resistance can lead to the development of Acanthosis Nigricans i.e. dark patches of skin in women with PCOS. It often shows up in body creases like those on the neck, in the groin and under the breasts.

## ASSOCIATED HEALTH CONDITIONS

It is important for a woman to take control of the symptoms of PCOS.

### Insulin Resistance

Up to 70% of women with PCOS have insulin resistance, meaning their cells can't use insulin properly. When cells can't use insulin properly, the body's demand for insulin increases.



The pancreas makes more insulin to compensate. Extra insulin triggers the ovaries to produce more male hormones. Obesity is a major cause of insulin resistance. Both obesity and insulin resistance can increase the risk of type 2 diabetes.

### Metabolic syndrome

Up to 50% of women with PCOS are overweight or obese. Both obesity and PCOS increase the risk of high blood sugar and high BP. Around 70% women with the syndrome have hyperlipidaemia, often low HDL (good) cholesterol and high LDL (bad) cholesterol levels. Together, they increase the risk for heart disease, diabetes and stroke.





## Pregnancy complications

Around 70-80% women have fertility problem. To get pregnant, ovulation is important. Women who don't ovulate regularly, don't release as many eggs as required to be fertilised. So, PCOS is one of the leading causes of infertility in women.



## Sleep Apnea

Many women with PCOS can develop sleep apnea – a condition marked by repeated pauses in breathing during the night. Sleep apnea is more common in women who are overweight, especially if they also have PCOS. The risk for sleep apnea is 5 to 10 times higher in obese women with PCOS than in those without the syndrome.

## Mental health issues

Psychological stress is prevalent and is probably the result of a combination of factors such as hormonal imbalance, irregular periods and more. So, anxiety and depression are common in women with PCOS. It is important for a woman to seek professional assistance if she is struggling with either of these issues.

### Bottom line:

PCOS isn't only about infertility; it has major metabolic implications as well. So, changing your lifestyle, diet and doing moderate exercise can reduce the symptoms of PCOS.

## HOW DO I KNOW I HAVE PCOS?

There are a number of symptoms that a woman with PCOS will experience. However, not each one will have the same symptom. The diagnosis of PCOS is –

### Symptoms & physical examination

- High androgen (male hormone) levels
- Irregular menstrual cycle or
- Cysts in the ovaries

The doctor would also ask whether you've had symptoms such as acne, face and body hair growth, and weight gain. A pelvic exam can look for any problems with your ovaries or other parts of your reproductive tract.

### Hormonal Test

Blood tests check for higher-than-normal levels of male hormones. Apart from this, blood tests check your cholesterol, insulin, and triglyceride levels to evaluate your risk for related conditions like heart disease and diabetes.



### Ultrasound exam

An ultrasound looks for abnormal follicles and other problems with your ovaries and uterus. Polycystic ovaries contain many small cysts – at least 10. Some of these cysts contain eggs, some are dormant, and others might secrete hormones. The cysts are quite small – usually no bigger than 8 mm – but they are clear enough on ultrasound to allow accurate diagnosis.

## HOW TO MANAGE SYMPTOMS OF PCOS

PCOS is one of the most common endocrine disorders in women of reproductive age. Several pieces of research have come to a similar conclusion – the best way to manage PCOS starts with –

- Losing weight, if you're overweight
- Eating right
- Lifestyle modifications
- Exercise
- Stress management
- Herbal therapy

Losing just 5% of your body weight can help regulate your menstrual cycle and improve PCOS symptoms, along with increasing the effectiveness of medications given by your doctor and can help with infertility. Weight loss can also improve cholesterol levels, lower insulin, and reduce heart disease and diabetes risks. Whether you're overweight or not, this is where the remedy lies.



Changing your diet should be the first thing you must do to manage the symptoms of PCOS. Although you must have seen improvement with medication, diet and lifestyle changes are far more effective. If you're wondering what your PCOS diet must look like, here's what you should be eating and avoiding!

## EAT RIGHT: WHAT FOODS YOU MUST ADD?

- Lean protein sources such as fish
- Anti-inflammatory foods & spices
- Low-GI foods
- Whole fruits
- Fibre-rich & non-starchy vegetables
- Raw vegetables

Add lean meat and protein like grams, chickpeas, lentils, chicken, fish and tofu, as all of these are very filling. It should be about 18% to 25% of your daily calories.

Foods that reduce inflammation are also beneficial for women with PCOS. Some of the best anti-inflammatory foods are flaxseeds, walnuts, raw papaya, fish oil and haldi.

Complex carbohydrates take longer for your body to digest, so the sugars are released slowly, which prevents a spike in insulin level. Your PCOS diet must have more of low glycemic index foods such as fruits like strawberries, cherries, apples and vegetables like bhindi, baigan, French beans and cauliflower. Whole grains in the form of jowar, oats, brown rice and barley, and whole pulses like green moong, moth and matki, are also recommended.



Try to eat at least 25 grams of fibre every day by including vegetables that are high in fibre such as palak, methi, sarsoo, amarnath, doodhi, toori, cabbage, and cucumbers. Increase your intake of raw vegetables as these are high on the satiety index.

Snack on whole fruit such as apples, cherries, grapefruit, peaches, strawberries, oranges, sweet lime and pomegranate. Besides increasing your intake of complex carbohydrates, increase your level of exercise for at least 30 minutes every day of the week.



## WHICH FOODS MUST YOU LIMIT OR AVOID?

- High GI (Glycemic Index) Foods
- Sugary snacks & drinks
- Starchy vegetables
- Salty & processed foods
- Bad fats
- Gluten

Foods that have a high GI – above 70 – quickly raise blood sugar levels and trigger a large release of insulin as well. Some examples include white rice, white bread, sugar, flour, bananas, grapes, raisins, mashed potatoes, rice cakes, muffins, cakes, cookies and soda.



Sugary drinks and beverages like colas, soda, sweetened juices and syrups are a no-no for women with PCOS.

Avoid starchy vegetables like potatoes. Reduce the intake of salty and fatty foods as much as possible. The same applies to alcohol, processed foods, smoking, and caffeine.

Not all fats are good for women with PCOS. By this, we mean saturated fats. If you have PCOS, cut down on red meat, egg yolks, poultry, coconut, cocoa and dairy products.



### Bottom line:

Reduce your carbohydrate intake to about 40% of total calories, if you have PCOS. As you become insulin resistant, you will be able to burn less carbs as fuel, thus making you gain more weight, especially around the stomach.

## LIFESTYLE CHANGES TO CONSIDER

Like other lifestyle disorders, PCOS responds positively if you change your lifestyle. By this, we mean exercise, sleeping habits, managing stress, eating right, stop smoking and reduce alcohol intake. All of these can help to reduce insulin resistance and maintain a healthy weight. De-stressing is also an important factor in managing PCOS symptoms.

### Exercise

Exercise is even more beneficial when combined with a healthy diet. Diet plus exercise helps you lose more weight than either intervention alone.

Exercise helps lower blood sugar levels. If you have PCOS, increasing your daily activity and participating in a regular exercise program may treat or even prevent insulin resistance. You can also maintain an ideal body weight and avoid developing diabetes.



It has been found that regular brisk walking of moderate intensity, for a minimum of 45 minutes to an hour every day, can support women with PCOS to lose weight gradually.

## De-stress

Management of stress factors is a critical component to addressing the symptoms of PCOS, although, no single approach can affect all the components of this widespread syndrome. Some common stress management therapies, apart from eating a healthy nutritious diet and exercise, can include:



- Behavioural techniques
- Identify trouble areas that cause stress
- Meditation
- Music therapy
- Keep your sense of humour
- Minimise job stress
- Create a support network
- Relaxation techniques
- Massage

## Supplements & Herbs

With the proper supplements, your diet and exercise regimen will begin to work to reduce your body fat. As you begin to eat healthy and lose weight, you will experience a reduction in PCOS symptoms including reduced facial hair, reduced hair loss, improvement in menstruation cycles, reduction in mood swings and acne.

- Take vitamin D3 supplements if your blood levels are low, as vitamin D helps calcium absorption, which in turn helps in normal follicular development.
- Chromium is considered highly beneficial for women with PCOS. It is known to enhance the action of insulin, helps reverse insulin resistance, and reduces and control triglycerides in the blood. Chromium supports glucose metabolism and helps to reduce hunger and sugar cravings. Chromium supplementation alone will not produce weight loss, but it helps to correct the problem that leads to easy weight gain.
- Zinc is another mineral which is recommended as it drastically reduces food craving and binge eating.
- Magnesium is a common micro-nutrient found to be low in people with insulin resistance, especially with PCOS, as it is essential for proper glucose utilisation and insulin signalling.
- Anti-androgen therapeutics is often helpful to incorporate natural anti-androgenic therapies to manage excess androgen (male hormone) production. Some of these are - Spearmint Tea, *Glycyrrhiza glabra* (Licorice), *Paeonia lactiflora* (Chinese peony), *Camellia sinensis* (Green Tea) and *Rosmarinus officinalis* (Rosemary).

## Herbs

Many nutritional and herbal agents are useful in patients experiencing chronic stress. Some of the most effective ones are - Phosphatidylserine (commonly manufactured from cabbage or soy), L-Theanine (found in Green Tea), *Hypericum perforatum* (St John's wort), Melatonin (regulates sleep and wakefulness) and *Lavandula officinalis* (Lavender oil).

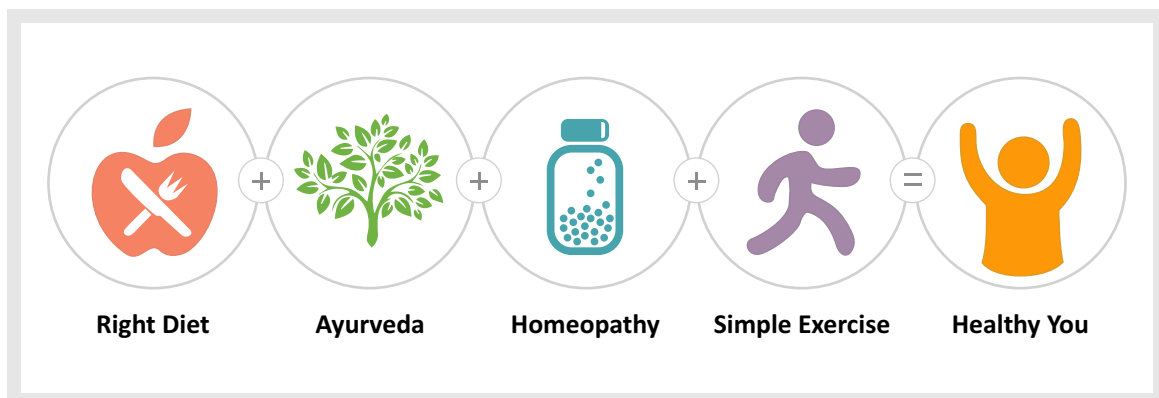
It is recommended that you consult your physician before starting with any supplements or herbs.



## THE HEALTH TOTAL WAY OF MANAGING PCOS

The Health Total integrated approach is a holistic one that combines the benefits of Ayurvedic treatment, homeopathy, nourishing food plan, exercise and certain lifestyle changes. We believe good nutrition has a powerful impact on a person's health and is the number one holistic medicine tool.

The Health Total approach is based on a unique, scientific 4-step process that helps to improve disease outcome—



## It's Easy

Your nutrition plays a vital role in all Health Total programs. The Health Total PCOS Management plan is completely personalised and formulated to cater to your unique health objectives.

This is how lakhs of people continue to benefit from our programs:

- Easy-to-follow tailor-made diet plans
- Tasty & healthy recipes
- Support and motivation at every step
- One-on-one consultation with women health experts
- Steady & natural body-fat reduction
- Clinically proven results
- Added skin & beauty benefits

This book presents the ability of food to influence your state of health. And that is the real power of nutrition. Achieving good health is a journey, not a destination. It's about a process, not an outcome. It's about being 'alive' not just living. Looking after your health is the only way you can celebrate life better.

## DISCLAIMER

The purpose of this book is to provide researched information on PCOS and is not intended to treat or cure the condition. Diet is but one factor in the genesis of disease. Genetic susceptibility, environmental exposure to pathogens and pollutants, and poor stress management also play a critical role. Hence, one cannot rely on diet alone to cure or prevent PCOS.

It is important to understand that no book can be a substitute for sound medical advice. As each one of us has different biochemistry, the complications accompanied by a disease may vary from person to person.

So, it is advisable to consult at any of the Health Total centres, mentioned below or write to us at [www.health-total.com](http://www.health-total.com). You can also consult your physician or healthcare practitioner for your health problems.

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@anjalimukerjee



@health\_total



HealthTotalByAnjaliMukerjee



amhealthtotal

# HEALTH TOTAL

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## Health Total Centres At-

### MUMBAI

- **Andheri (W)**  
Contact: 022-66753770  
Email: andheri@health-total.com
- **Chembur**  
Contact: 022-66711194  
Email: chembur@health-total.com
- **Ghatkopar**  
Contact: 022-66713570  
Email: ghatkopar@health-total.com
- **Navi Mumbai**  
Contact: 022-27550464  
Email: navimumbai@health-total.com
- **Worli**  
Contact: 022-24928319  
Email: worli@health-total.com
- **Andheri (E)**  
Contact: 022-28311737  
Email: andheri.east@health-total.com
- **Colaba**  
Contact: 022-22160353  
Email: colaba@health-total.com
- **Kandivali**  
Contact: 022-66718261  
Email: kandivali@health-total.com
- **Mulund**  
Contact: 022-25676027  
Email: mulund@health-total.com
- **Bandra**  
Contact: 022-66753880  
Email: bandra@health-total.com
- **Colaba**  
Contact: 022-22160353  
Email: colaba@health-total.com
- **Khar**  
Contact: 8879605602  
Email: hinduja@health-total.com
- **Thane**  
Contact: 022-25381937  
Email: thane@health-total.com
- **Borivali**  
Contact: 022-28981099  
Email: borivali@health-total.com
- **Kharghar**  
Contact: 022-27742864  
Email: kharghar@health-total.com
- **Kalyan**  
Contact: 0251-2200618  
Email: kalyan@health-total.com
- **Powai**  
Contact: 022-67969437  
Email: powai@health-total.com
- **Bhayandar**  
Contact: 022-28141275  
Email: bhayandar@health-total.com
- **Ghodbunder**  
Contact: 022-61668769  
Email: ghodbunder@health-total.com
- **Malad**  
Contact: 022-28838863  
Email: malad@health-total.com
- **Vile Parle**  
Contact: 022-26120423  
Email: parle@health-total.com

### DELHI

- **CR PARK**  
Contact: 011-26273121  
Email: crp@health-total.com
- **Hauz Khas**  
Contact: 011-26522552  
Email: hauzkhas.delhi@health-total.com
- **Model Town**  
Contact: 011-27427266  
Email: modeltown.delhi@health-total.com
- **Punjabi Bagh**  
Contact: 011-45143254  
Email: pb.delhi@health-total.com
- **Vasundhara**  
Contact: 0120-4575407  
Email: vasundhara.delhi@health-total.com
- **DLF Galleria**  
Contact: 0124-4218405  
Email: dlfgalleria.delhi@health-total.com
- **Indirapuram**  
Contact: 0120-4903998  
Email: indirapuram.delhi@health-total.com
- **Noida Sec 18**  
Contact: 9152005127  
Email: noidasec18.delhi@health-total.com
- **Raj Nagar**  
Contact: 0120-4352548  
Email: rajnagar@health-total.com
- **Rohini**  
Contact: 011-43709357  
Email: rohini.delhi@health-total.com
- **Dwarka**  
Contact: 011-28081076  
Email: dwarka.delhi@health-total.com
- **Janakpuri**  
Contact: 011-25997256  
Email: janakpuri.delhi@health-total.com
- **Palam Vihar**  
Contact: 0124-2365154  
Email: palamvihar.delhi@health-total.com
- **Rajouri Garden**  
Contact: 011-25104526  
Email: rajouri.delhi@health-total.com
- **Vasant Kunj**  
Contact: 011-46000507  
Email: vk@health-total.com
- **Gurgaon Sec 15**  
Contact: 0124-4250263  
Email: gurgaonsec15.delhi@health-total.com
- **Lajpat Nagar**  
Contact: 011-41048665  
Email: lajpatnagar.delhi@health-total.com
- **Preet Vihar**  
Contact: 011-43018765  
Email: preetvihar.delhi@health-total.com
- **Rajinder Nagar**  
Contact: 011-45084269  
Email: rajinder.nagar.delhi@health-total.com

### BENGALURU

- **Electronic City**  
Contact: 9513450017  
Email: elec.city@health-total.com
- **JP Nagar**  
Contact: 080-40906622  
Email: jp.nagar@health-total.com
- **Vijayanagar**  
Contact: 080-40937557  
Email: vijayanagar@health-total.com
- **HSR Layout**  
Contact: 080-22585515  
Email: hsr@health-total.com
- **Kammanahalli**  
Contact: 080-40996776  
Email: kammanahalli@health-total.com
- **Whitefield**  
Contact: 9513450018  
Email: whitefield@health-total.com
- **Indiranagar**  
Contact: 080-41622015  
Email: indiranagar@health-total.com
- **Koramangala**  
Contact: 080-41472014  
Email: koramangla@health-total.com
- **RT Nagar**  
Contact: 080-40939399  
Email: rt.nagar@health-total.com
- **Jayanagar**  
Contact: 080-40913809  
Email: jayanagar@health-total.com
- **Malleshwaram**  
Contact: 080-40921022  
Email: malleshwaram@health-total.com

### PUNE

- **Aundh**  
Contact: 8237084465  
Email: aundh@health-total.com
- **Kothrud**  
Contact: 020-25382174  
Email: kothrud.pune@health-total.com
- **Deccan**  
Contact: 020-26830995  
Email: fatimanagar.pune@health-total.com
- **Kondwa**  
Contact: 020-26830995  
Email: fatimanagar.pune@health-total.com
- **Kalyani Nagar**  
Contact: 020-26653335  
Email: kalyani.nagar@health-total.com
- **Kondwa**  
Contact: 8237084465  
Email: aundh@health-total.com

### INDORE

- **MG Road**  
Contact: 0731-6554555  
Email: indore@health-total.com

### NASIK

- **Kute Marg**  
Contact: 0253-2318805  
Email: nasik1@health-total.com