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# V-Discover

**THE STUDENTS  
DIGITAL MAGAZINE**

**THEME : WOMEN'S HEALTH**



## **SWAMY VIVEKANANDHA COLLEGE OF PHARMACY**

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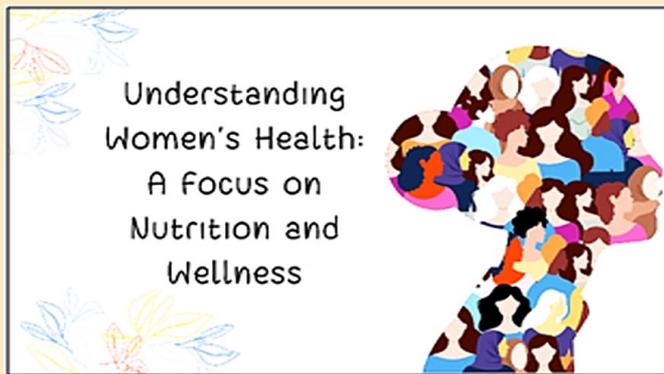
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## WOMEN'S HEALTH

### INTRODUCTION

Women's health refers to the health of women, which differs from that of men in many unique ways. Women's health is an example of population health, where health is defined by the World Health Organization as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." It is often treated as simply women's reproductive health.



### Top Vitamins For Women

**IRON**  
Improves energy. Helps oxygen flow throughout the body. Supports immune function and maintains muscle function

**VITAMIN D**  
Supports brain, muscle and immune function. Good for cardiovascular health maintains bone

@ramanshelly1972

**CALCIUM**  
Builds and maintains strong, healthy bones. Aids in proper heart, nerve, and muscle function

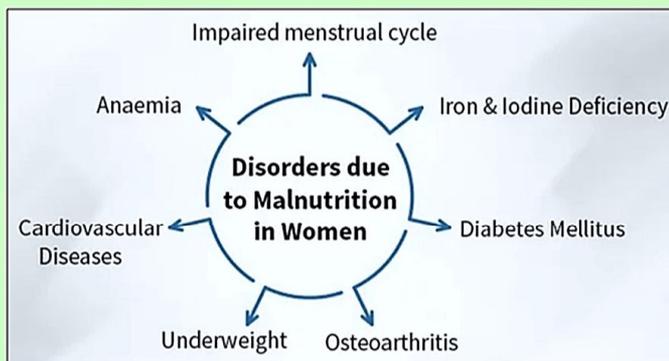
**B12**  
Supports the proper function of the brain, nervous system, and blood cells and improves energy and mood

**MAGNESIUM**  
Aids in heart health. Boosts mood. Relieves symptoms of PMS, reduces muscle weakness and cramps

**BIOTIN**  
Boosts hair, skin and nail health whilst supporting nerves, digestive, cardiovascular and metabolic function

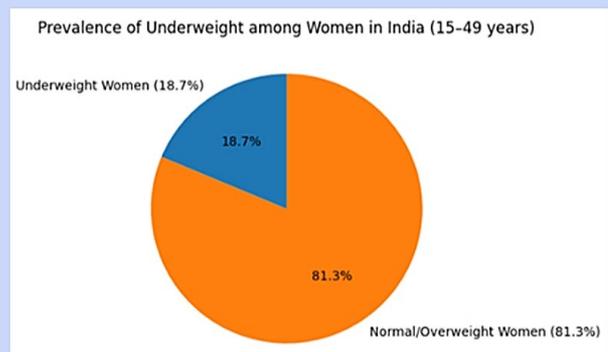
### INTRODUCTION

Nutrition plays a major role in an individual's overall health, and both psychological and physical health status are often dramatically impacted by the presence of malnutrition. India has one of the highest rates of malnourished women among developing countries.



### A STATISTICAL SNAPSHOT OF WOMEN'S MALNUTRITION IN INDIA

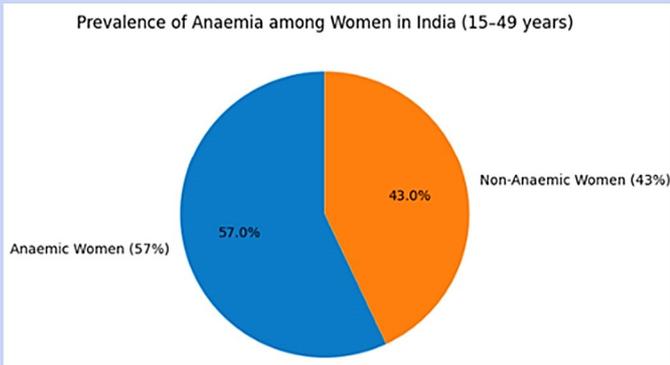
Trends of indicators of nutrition (BMI) among women in India, CG, TN from NFHS-3 (2005–06) to NFHS-5 (2019–20). Source: Data from NFHS-3, NFHS-4 and NFHS-5 fact sheet of India, CG and TN



**Underweight Women in India (15–49 years)**

- Underweight women: 18.7%
- Normal/Overweight women: 81.3%

This visually highlights the burden of chronic energy deficiency among women.



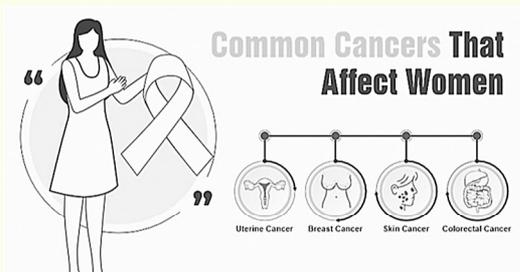
**Anaemia among Women in India (15–49 years)**

- Anaemic women: 57%
- Non-anaemic women: 43%

This strongly communicates the iron and micronutrient deficiency crisis among Indian women.

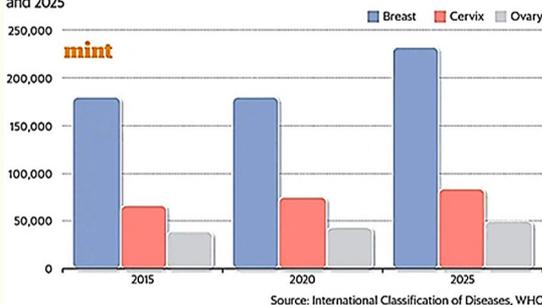
**CANCERS IN WOMEN:**

A person has cancer when abnormal cells grow uncontrollably, invade surrounding tissues, or spread (metastasize) to distant parts of the body, thereby disrupting normal bodily functions and potentially causing death.



**Cancer in India**

Estimated trends in number of cancer cases in females in India in 2015, 2020 and 2025



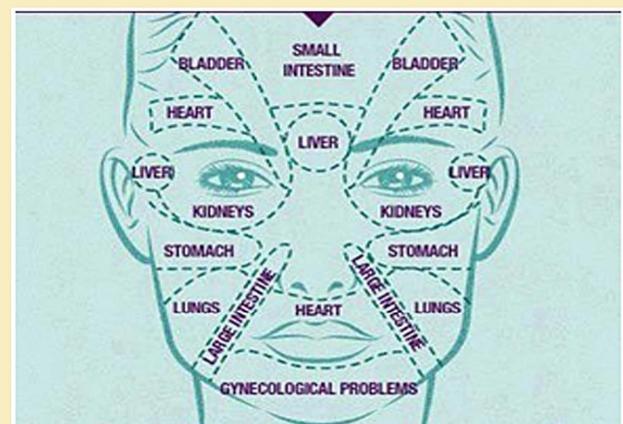
“Estimated trends in the number of female cancer cases in India for 2015, 2020, and 2025 show a steady increase in breast cancer incidence (source: International Classification of Diseases, WHO).”

**DUE TO NUTRITIONAL DEFICIENCY SYMPTOMS ON WOMEN'S FACE**

Face acts as a window to your health, with signs like dullness, puffiness, dark circles, or acne potentially signaling dehydration, lack of sleep, poor diet (sugar, dairy, processed foods), sun damage, stress, or underlying issues with your digestive, respiratory, or hormonal systems, according to traditional face mapping and modern dermatology

*Face mapping links areas like the forehead (digestive) or cheeks (respiratory), modern science emphasizes general skin health indicators like hydration, sleep, and sun exposure as key clues to overall well-being, with severe or sudden facial changes requiring a doctor's*

- DARK CIRCLES**  
Iron or vitamin deficiencies, allergies, or sinus.
- ACNE**  
hormonal fluctuations, diet.
- RED SKIN**  
high blood pressure, a sign of rosacea, or liver problems.
- FACIAL HAIR**  
PCOS, hormonal imbalance, menopause,
- YELLOWISH SKIN**  
a sign of anemia, low iron levels, or poor circulation
- PUFFINESS OR SWELLING**  
can be related to kidney issues, hormonal changes or allergies.
- CRACKED LIPS**  
A lack of vitamins B, dehydration.



**FACTORS AFFECTING FEMALE SEXUAL HEALTH ON BIOINFORMATICS**



**1. AGE**



**2. STRESS**



**3. STI's**



**4. MENOPAUSE**



**5. DECREASED LIBIDO**



**6. CHILDHOOD ABUSE**



**7. DISEASE AFFECTING PHYSICAL HEALTH**

**KALLMANN SYNDROME** is a rare genetic disorder characterized by the combination of hypogonadotropic hypogonadism (failure to start or complete puberty) and anosmia (a partial or total lack of sense of smell). It occurs when the hypothalamus fails to produce enough gonadotropin-releasing hormone (GnRH), which is essential for stimulating the production of sex hormones

|   |  |  |   |
|---|--|--|---|
| <p>Rare genetic disorder characterized by <b>delayed</b> or <b>absent puberty</b></p> | <p>Affects 1 in 10,000 male births</p>   | <p>1<sup>st</sup> described by Kallmann and Schoenfeld in 1944</p>       | <p>Affect <b>males</b> 4-times more frequently than females</p> |
| <p>Risk factors include <b>positive family history</b></p>                            | <p>Caused by inability to produce hormones for sexual maturation</p>                   | <p>Symptoms are impaired smell, small penis &amp; undescended testis</p> |   |
| <p>Secondary sexual characteristics are delayed in both males &amp; females</p>       | <p>Cleft lip, cleft palate hearing loss, tooth loss &amp; kidney issues are common</p> | <p>Diagnosed by genetic karyotyping</p>                                  | <p>Treated by hormone replacement therapy</p>                   |

**TURNER SYNDROME (TS)** is a genetic condition that exclusively affects individuals who are biologically female, occurring when one of the two X chromosomes is either partially or completely missing. It affects approximately 1 in 2,000 to 2,500 live female births worldwide.

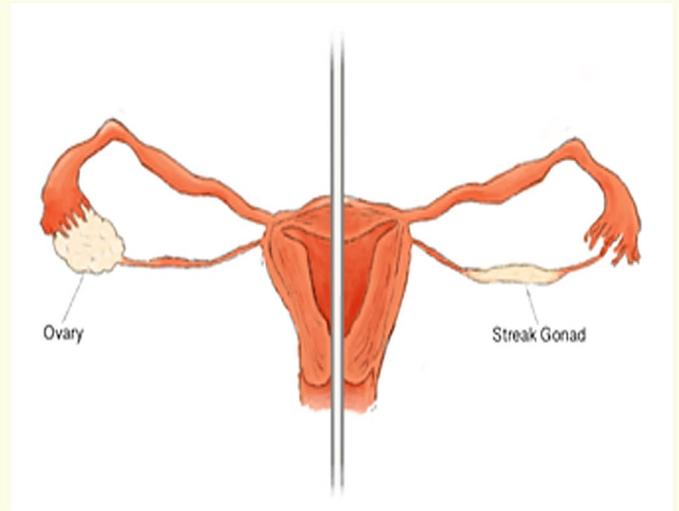
## CURRENT METHODS FOR DRUG DESIGN

### TURNER SYNDROME HEALTH ISSUES

diabetes II type, osteoporosis, short stature, scoliosis, hypertension, kidney irregularity, neck webbing, hearing loss, reduced fertility, many moles, educational difficulties, excellent verbal skills, middle ear infections

TS affects 1 in every 2000 born baby girls

98% of Turner syndrome pregnancies end in miscarriage



**AICARDI SYNDROME** is a rare genetic neurodevelopmental disorder that affects almost exclusively females. It is characterized by a "classic triad" of features: a partially or completely missing corpus callosum (the bridge between brain hemispheres), frequent seizures (infantile spasms) starting in early infancy, and chorioretinal lacunae (punched-out defects in the retina)

**HEMOCHROMATOSIS**, or iron overload, is a disorder where the body absorbs too much iron from food, leading to toxic levels that damage vital organs like the liver, heart, and pancreas

### Hemochromatosis: Genes Involved in Iron Overload

**Causes of Hemochromatosis**

- Genetic Mutations
- Excessive blood transfusions

**HFE Gene**

Controls iron absorption in the intestines  
Mutations lead to excessive iron absorption

**Building Up Iron**

Iron is essential for oxygen transport and needed at the right level.  
Excess iron gets stored in organs and can cause inflammation and cell death.

**HFE Mutations**

HFE Gene Chromosome 6

C282Y, H63D, S65C

Higher risk: C282Y/C282Y, C282Y/H63D, C282Y/-

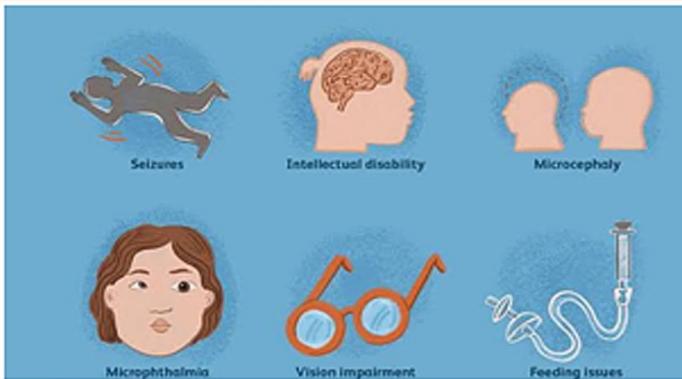
Lower Risk: H63D/H63D, H63D/S65C, H63D/-

**Health Effects**

- Liver damage
- Cardiac failure
- Irregular heartbeat
- Joint pain
- Diabetes
- Hypothyroidism
- Fatigue and depression
- Stomach pain
- Bronzed skin

Genetic Lifehacks  
Learn. Experiment. Optimize.

**GONADAL DYSGENESIS** refers to a group of conditions characterized by the impaired or abnormal development of the gonads (testes or ovaries) during embryonic growth. In many cases, the gonads are replaced by non-functional fibrous tissue known as streak gonads.



**RETT SYNDROME** is a rare genetic neurodevelopmental disorder that occurs almost exclusively in females, affecting approximately 1 in 10,000 to 15,000 live births. It is primarily caused by mutations in the MECP2 gene on the X chromosome. While symptoms typically emerge in early childhood, most women with Rett syndrome now live into their 40s or 50s and beyond, though they require lifelong specialized care



**CANCER IN WOMEN**

As per the studies, there are two forms of cancer, Breast cancer and cervical cancer, which are responsible for the death of about a million women every year. Especially in third world countries where the awareness and scope about early detection are low and the state of women’s health care are dismal. Both these cancers could be cured or stalled, if they are detected during the early stages.

There are many factors that could lead into to a breast cancer. It could be by genes, abnormal menstruation, obesity, breast biopsy or radiation and medication.



**DEPRESSION IN WOMEN**

Research has shown that women are more prone to depression and other psychological disorders than men. A recent survey has revealed that around 12 million women are hit by depression every year which is almost double the number of men suffering from the same ailment. The rate of suicide in women is significantly higher than men by the stress and depression.

The causes of depression in women could be detected by the changes in hormonal levels, especially during and after pregnancy and menopause. Other causes include medication, marital problems, heart diseases, other fatal diseases, drugs or other substance abuse, work pressure etc.

## SEXUALLY TRANSMITTED DISEASES

Like many other diseases, Sexually Transmitted Diseases (STDs) affect women more frequently and seriously than men. There are many sexually transmitted diseases among which few are potentially fatal. HIV+ or AIDS is one of the most common and a fatal STDs in women. Other sexually transmitted diseases and infections include Chlamydia, Gonorrhoea, Syphilis, Herpes, and Trichomoniasis. The symptoms and treatment for all these diseases are different but if detected in early stage, they could be cured or stalled.

A healthy woman is productive and useful to the society. Awareness and providing proper health care to them is of utmost importance so that unnecessary death and unhealthy lives could be prevented.

## FDA APPROVALS IN WOMEN'S HEALTH

2025 has brought several pivotal FDA approvals that are expanding access to care, advancing diagnostic accuracy, and addressing long-standing gaps in women's health



### FDA approves gepotidacin for uncomplicated UTI treatment

The FDA approved gepotidacin (Blujepa; GSK) for the treatment of uncomplicated urinary tract infections (uUTIs) in female patients aged 12 years and older on March 25, 2025, marking the first oral antibiotic in a new class in over 20 years. Clinical trials demonstrated its superiority over nitrofurantoin, with higher therapeutic success rates and a lower potential for resistance development.

### FDA approves Visby's test for at-home STI identification

The FDA granted marketing authorization for the Visby Medical Women's Sexual Health Test on March 28, 2025, making it the first at-home, prescription-free test for chlamydia, gonorrhea, and trichomoniasis. Designed for symptomatic and asymptomatic female patients, the test delivers results within approximately 30 minutes through the Visby Medical App.

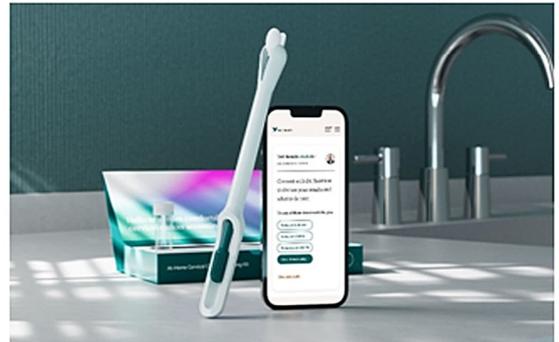


### FDA clears Sonio Suspect AI for fetal anomaly detection

The FDA cleared the Sonio Suspect AI model for detecting fetal anomalies on February 24, 2025, offering a 22-point improvement in reader performance and enhancing early and accurate diagnoses. The technology integrates real-time AI quality control with anomaly detection, addressing gaps in prenatal ultrasound screenings, where up to 51% of anomalies go undetected.

**FDA approves Teal Wand for at-home cervical cancer screening**

The FDA approved the Teal Wand on May 9, 2025, as the first at-home vaginal self-collection device for cervical cancer screening in U.S. women. Designed for women aged 25 to 65 at average risk, the device demonstrated 96% accuracy in identifying cervical precancer in the SELF-CERV trial and showed strong user preference and ease of use. The Teal Wand offers a comfortable alternative to traditional Pap smears and may help increase screening rates, especially among underserved populations. Nationwide availability is expected to follow its June launch in California, with insurance support aimed at reducing access barriers.



**FDA approves generic mifepristone tablet for abortion**

The FDA approved a generic version of mifepristone tablets, 200 mg, submitted by Evita Solutions, LLC, on October 2, 2025, under an abbreviated new drug application, confirming bioequivalence and therapeutic equivalence to Mifeprex (Danco Laboratories). Mifepristone, used in combination with misoprostol, is indicated for the medical termination of intrauterine pregnancy through 70 days of gestation.



**FDA approves elinzanetant (Lynkuet) for vasomotor menopausal symptoms**

The FDA approved elinzanetant 60 mg capsules (Lynkuet; Bayer) on October 24, 2025, for the treatment of moderate to severe hot flashes associated with menopause, based on data from the phase 3 OASIS clinical program. The approval makes elinzanetant the first FDA-approved dual neurokinin 1 and neurokinin 3 receptor antagonist for vasomotor symptoms, providing a new nonhormonal treatment option for menopausal women, including those with contraindications to estrogen therapy.



**FDA approves fosfomycin for treating cUTIs**

The FDA approved fosfomycin injection (Contepo; Meitheal Pharmaceuticals) for the treatment of complicated urinary tract infections, including acute pyelonephritis, in adults aged 18 years and older, expanding treatment options for serious UTIs caused by resistant pathogens. Fosfomycin has no known cross-resistance with other antibiotic classes and is active against common gram-negative organisms such as Escherichia coli and Klebsiella pneumoniae.



### FDA approves gepotidacin (Blujepa) oral therapy for uncomplicated urogenital gonorrhea

The FDA approved a supplemental new drug application for gepotidacin (Blujepa; GSK) as an oral treatment for uncomplicated urogenital gonorrhea in patients aged 12 years and older weighing at least 45 kg who have limited or no alternative treatment options. The approval marks the first new oral antibiotic class for gonorrhea in more than three decades and provides a noninjectable alternative to standard intramuscular therapy, addressing a major unmet need amid rising antimicrobial resistance.



### FDA approves zoliflodacin (Nuzolvence) for uncomplicated gonorrhea

The FDA approved Nuzolvence (zoliflodacin; Innoviva Specialty Therapeutics) as a single-dose oral treatment for uncomplicated urogenital gonorrhea in adults and pediatric patients aged 12 years and older who weigh at least 35 kg. The approval marks one of the first new treatment options for gonorrhea in nearly two decades and provides a convenient, noninjectable alternative to standard therapy at a time of rising antimicrobial resistance.

### FDA approves expanded use of flibanserin for hypoactive sexual desire disorder in women

The FDA approved Addyi (flibanserin 100 mg) for the treatment of hypoactive sexual desire disorder (HSDD) in women younger than 65 years, expanding its indication to include postmenopausal patients for the first time. The decision makes Addyi the first FDA-approved, nonhormonal pharmacologic therapy specifically available to both premenopausal and postmenopausal women with HSDD, a common and historically undertreated condition characterized by persistent, distressing low sexual desire.



### FDA grants 510(k) clearance to Revi System against urgency urinary incontinence

The FDA granted 510(k) clearance to the Revi System (BlueWind Medical) for the long-term management of urgency urinary incontinence (UUI), authorizing use of the wearable, implantable tibial neuromodulation device with updated, patient-friendly controls. The system is designed to provide adjustable therapy through a minimally invasive, single-procedure implant performed under local anesthesia, without the need for a trial phase.

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