

PHARMVIGOUR

A NEWSLETTER

BY

HOLY GRACE

ACADEMY OF PHARMACY



MAKING A DIFFERENCE

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Messages



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I am happy to know that the Holy Grace Academy of Pharmacy is planning to release the next issue of its Newsletter 'PHARMVIGOUR'. Newsletter of an educational institute serves as a tool for sharing professional ideas and information among the readers.

This is the age of infodemic where accurate or inaccurate or misleading info are abundant both in print / electronic / social media. It is very difficult to know the truth. The educators have the responsibility to educate the society and prevent the people from falling prey to the misleading info.

As a pharmacy college newsletter, it should concentrate on medicine and health related issues especially improving the use of medicines. I believe the editorial team with support of other faculty members would fight against infodemics. The fighting against infodemic is massive but a necessary battle.

I take this opportunity to wish good luck to all concerned with 'PHARMVIGOUR'.



Dr. Subhendu Kumar Rath

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I would like to take a moment to thank the whole team of Holy Grace Academy of Pharmacy for their contributions and hard work to the launch this newsletter. PHARMVIGOUR regular issues are inspiring and enjoyable piece created for the pharmacy fraternity.

Nevertheless, Pharmacy is a key area among the students and which gives a valuable contribution to the society. Pharmacy education has maintained the quality across India. Kerala, a rich state in education is enlightening the young minds in pharma sector. Talk about the herbs, ayurveda, tourism and pharma education are certainly strengthening the medical science of the State and Country.

It gives me great pleasure in sending this message to the PHARMVIGOUR, that is being published by the Holy Grace Academy of Pharmacy. The College has held high the lighted torch of teaching and learning and has not failed in its duty in the hour of need. The students imbibe qualities of an excellent teacher and researcher to set academic standards. I have no doubt that the college will continue with its good work, meeting the aspirations of our community. I wish the Director, Teachers and students' success in their endeavour.

My Best Wishes and Happy reading!



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This Newsletter will bring to the focus, talents and professional skills of students and faculty. I am sure that the information published in the Newsletter will be useful for the students and faculty members. I wish to congratulate the Newsletter Committee members for their efforts in bringing out the same in an exceptional manner.

PHARMA: PAST – PRESENT- FUTURISTIC

Knowledge is divine and infinite. Regarding knowledge, everybody is a student. To attain and update our knowledge, it is essential for all of us to participate in continuous education, Workshops, Seminars, Conferences, Visiting Pharma Industries, etc., which is a must for every student.

Past Development: Pharmacy research is just like Ksheera Sagara Mathanam'. 'Halahala', the deadly poison, was produced initially. Which was swallowed by Lord Siva for the welfare of mankind. The ultimate result of 'Ksheera Sagara Mathana' was that Lord Vishnu himself handed over 'Amrutha Bhandu' to 'Lord Dhanvanthari', who is the God of Medicine for 'Ayur Vruddhi' i.e. Ayurveda, which is the most ancient knowledge of medicine. Incidentally 'Ksheera Sagara Mathana' also yielded precious things like Kalpavruksha, Kamadhenu, Iravatha, and Uchhaishrava, apart from God Chandra and Goddess Lakshmi. Similar to "halahala," the pharmacy student may first encounter numerous challenges and risks, such as adverse drug responses while conducting his or her research and studies.

Present Knowledge: Particularly in this current decade of the twenty-first century, pharmacy is progressing at the fastest rate as a science, a profession, a practice, a choice of employment in research and development, or simply as a business proposition at any level of drug development, manufacture, marketing, or export. Empowered Patients emerge into the therapeutic scene and resolve to actively participate in their medical treatment process. This is a trend already popular in the US since the 1970s, revolving around the idea that the patient is the most important 'player' in the industry and he should have a 'say' in his own therapy.

As for tech solutions, we will have never heard of technology assisting Pharma sector in the future! So we have to learn now itself about EDC (Electronic Data Capture), IVR/IWR (Interactive Voice/Web Response) & e-PROs (Electronic Patient Reported Outcomes), Electronic Imaging and Data Transfer, EMR/EHRs (Electronic Medical/Health Records), CTMS (Clinical Trials Management Software), Lab and Biomedical Analysis Technologies, etc. These will bring about sweeping changes in optimization and patient enrollment, reduction of screening and diagnostic failures, minimization of monitoring costs, adjudication of data in real-time for endpoints, assessment of safety data for therapeutic management, etc. Integrated Information Platforms (IIPs) at hospitals will be the order of the day!

Futuristic: Artificial Intelligence (AI) has the potential to completely transform the pharmacy sector and benefit patients and chemists alike. AI technology has the potential to enhance medication management, expedite drug development, manage chronic diseases, and improve patient outcomes. It can also increase the precision and safety of medicine delivery. The application of AI technology can save healthcare expenses by increasing productivity and decreasing mistakes. For instance, when employing AI-powered systems to monitor medical data, privacy, and security issues may arise. Furthermore, chemists might require further training in order to properly use and adopt AI technology. However, when applied and managed properly, the advantages of AI in pharmacy greatly exceed any potential drawbacks or difficulties, opening the door to a more promising future in the medical industry. Even though AI has many potential uses in pharmacy, research and development still need to be done extensively. Future research might focus on how AI technology integrates with other healthcare systems, such as telemedicine platforms or electronic health records (EHRs). As a result, patient outcomes and healthcare costs may be improved and a more thorough and integrated approach to healthcare delivery may be possible. Future investigations may also focus on the moral issues surrounding the application of AI technology in pharmacy. As technology advances, it is crucial to take into account concerns like data privacy and security,

and the possibility that AI systems will eventually replace human workers. It is possible to assure that the application of AI in pharmacy is both morally and practically sound by approaching these problems with consideration and initiative. We may further harness the potential of artificial intelligence (AI) in pharmacy and open the door to a more effective and efficient healthcare system by pursuing these areas of research.

The ultimate goal of research is well being of mankind, name and fame to the person, family and nation.

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Women being the integral part of the society perform multitask in her daily life. A small girl to a matured woman, is a journey where many hormonal and physical changes happen. A woman's duties are not limited to the core house hold works, rather she plays role as mother, wife, daughter, sister and an educated independent person as well. She always tries her best endlessly to maintain balance between her home and her career. Being the caretaker of the family, she often forgets about her own health whether physical or mental. Due to her negligence towards her own health, she suffers from many diseases.

Today's woman is a front runner and competing with man in many fields. The job she does often involve long sitting hours, lack of physical movements and mental pressure which in turn affects the overall health of a woman. In addition to this, the intake of junk foods, ready to make foods, soft drinks and overall life style also harming the health of the woman.

The most common health issues associated with women are:

- Anaemia
- Polycystic Ovary Syndrome (PCOS) or Polycystic Ovarian Disease (PCOD)
- Osteoporosis
- Heart Disease
- Breast Cancer
- Ovarian and Cervical Cancer
- Lungs Cancer
- Diabetes
- Obesity
- Mental health issues like depression, anxiety etc.
- Gynaecological health issues such as unusual menstruation and cramps
- Autoimmune diseases like vertigo

This Newsletter, PHARMVIGOUR is a humble effort from Holy Grace Academy of Pharmacy, aimed at extending a helping hand to the women in the society to gather awareness and know-how on the health issues prevailing and their possible remedies.

QUOTE OF THE THIRD QUARTER

"When women take care of their health, they become their best friend."

- Maya Angelou, Poet



PHARMA QUIZ



1. Isabgol belongs to family

Ans) Plantaginaceae

2. The following classification of herbal drugs gives better understanding of biosynthetic pathway in the drug
.....

Ans) Chemotaxonomical

3. Which of the plant family contains volatile oil in their trichome

Ans) Laminaceae

4. The plant growth regulator which act as selective weedicide or hervbicide in high concentration

Ans) Auxins

5. Which part of Clove is used as the source of Drug

Ans) Flowering bud

6. Which enzymes amongst them are amylyolytic enzyme

Ans) Diastase

7. Family of Ipecac

Ans) Rubiaceae

8. Shark liver oil contains

Ans) Vitamin A

9. Drug which shows Antihypertensive and tranquilising effects

Ans) Rauwolfia

10. Compounds which are complex natural substances without any specific chemical properties and are inert chemical are called:

Ans) Resenes

11. Spermaceti is an example of:

Ans) Wax

12. Which drug amongst them are vasoconstrictor, antimigrain and obstetrics in nature

Ans) Ergot

DAYS TO REMEMBER



OCTOBER

1 st October	International Day for the Elderly
2 nd October	National Anti-Drug Addiction Day
10 th October	World Mental Health Day
12 th October	World Sight Day
12 th October	World Arthritis Day
16 th October	World Food Day
17 th October	World Trauma Day
20 th October	World Osteoporosis Day
21 st October	World Iodine Deficiency Day
24 th October	World Polio Day
29 th October	World Stroke Day

NOVEMBER

12 th November	World Pneumonia Day
10 th November	World Immunization Day
14 th November	World Diabetes Day
15 th November	World COPD Day
15 – 21 st November	New Born Care Week

DECEMBER

1 st December	World AIDS Day
2 nd December	National Pollution Prevention Day
3 rd December	International Day of Disabled Persons
10 th December	Human Rights Day

UPCOMING WEBINARS & SEMINARS



Date	List	Venue
04/11/2023	International Conference on Pharmaceutical Chemistry (ICPC) ISER	Cochin, India
04/11/2023	World Congress on Advanced Pharmacy and Clinical Research (WCAPCR) ISER	Cochin, India
18/11/2023	World Congress on Advanced Pharmacy and Clinical Research (WCAPCR) ITAR	Trivandrum, India
19/11/2023	International Conference on Pharmaceutical Chemistry (ICPC) SFE	Trivandrum, India
19/11/2023	World Congress on Advanced Pharmacy and Clinical Research (WCAPCR) SFE	Trivandrum, India
09/11/2023	World Congress on Advanced Pharmacy and Clinical Research (WCAPCR) ITAR	Trivandrum, India
10/11/2023	International Conference on Pharmaceutical Chemistry (ICPC) ASAR	Trivandrum, India
10/11/2023	World Congress on Advanced Pharmacy and Clinical Research (WCAPCR) ASAR	Trivandrum, India
10/11/2023	International Conference on Pharmaceutical Chemistry (ICPC) SFE	Trivandrum, India
10/11/2023	World Congress on Advanced Pharmacy and Clinical Research (WCAPCR) SFE	Trivandrum, India

MENSTRUAL HYGIENE



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Adequate management of menstrual hygiene is taken for granted by many; however, inadequate menstrual hygiene is a major problem for girls and women in countries where speaking or discussing it is considered taboo, which can adversely affect the health and development of adolescent girls. The major area of concern is like
Taboos and Stigma: Addressing cultural taboos and stigma around menstruation is crucial. Education and awareness campaigns can play a significant role in breaking down these barriers. Schools and community leaders can be involved in promoting open discussions about menstruation to reduce shame and embarrassment.
Access to Menstrual Products: Many women in rural areas lack access to affordable menstrual products. Efforts should be made to provide these products at a subsidized cost or for free, especially in schools and workplaces. Promoting the use of reusable products like cloth pads can also be beneficial.

Sanitation Facilities: Adequate water and sanitation facilities in schools, colleges, and workplaces are essential for managing menstrual hygiene. Advocacy for improved infrastructure, including private and clean toilets with facilities for disposal and handwashing, is crucial.

Pain Management: Menstrual cramps and discomfort are common issues. Health education programs should include information on managing menstrual pain and discomfort through proper nutrition, exercise, and, if necessary, over-the-counter pain relief options.

Proper Disposal: Education on the proper disposal of menstrual products is essential to prevent clogging and environmental pollution. Implementing waste management techniques like incineration can be beneficial.

Environmental Considerations: Promoting the use of environmentally friendly menstrual products made from sustainable materials is a positive step. Creating awareness about the environmental impact of disposable menstrual products can encourage women to opt for more eco-friendly options.

Education and Awareness: Comprehensive menstrual hygiene education should be integrated into school curricula and community programs. This education should cover not only hygiene practices but also the broader social and environmental aspects.

Support Systems: Encouraging familial and community support for girls and women during menstruation is vital. Teachers, parents, and peers can play a significant role in providing emotional support and understanding.

Affordability: Initiatives to make menstrual products more affordable and accessible are crucial. This may involve government subsidies, nonprofit organizations, or partnerships with businesses.

Research and Innovation: Continued research and innovation in menstrual hygiene products can lead to more affordable and sustainable options for women in resource-constrained areas.

In summary, addressing menstrual hygiene challenges in less affluent and rural areas requires a multifaceted approach involving education, awareness, infrastructure improvement, and access to affordable and eco-friendly menstrual products. It's a critical issue that can significantly impact the health and well-being of adolescent girls and women, as well as the environment.

As per a study published in "Assessing the perception of risk factors associated with unhygienic use of sanitary pads in Kerala, India" authored by Ms. Therese Mathew et.al. in International Journal of Academic Multidisciplinary Research (IJAMR) 6 (5), 2022, 135-144, states that even though Kerala is having a literacy rate of 96.2 % and is the most literate state in India, 5.66% of the participants were using reusable cloth and 0.5% were using both pad and cloth, indicating that still in a highly literate state, some rely on cloth as absorbent and the disposal techniques adopted by people are harming the environment. The article concludes with a statement that, proper education is required for women regarding menstrual health and hygiene, and it should be provided in the early stage of menstruation. The article also points out the requirement for reduction of cost to make the absorbent as affordable as possible to the common people, with the availability of public places for proper disposal of pads.

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MENOPAUSAL SYMPTOMS AND MANAGEMENT



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INTRODUCTION:

Menopause is a natural process of aging. The stage when the ovaries completely stop producing reproductive hormones, and there are no monthly periods for consecutive twelve months.

Every year, 1.5 million women go through the menopause transition, which frequently involves bothersome symptoms such as vasomotor symptoms, vaginal dryness, decreased libido, sleeplessness, lethargy, and joint pain. Most women make direct connections between menopause and the usual symptoms of hot flashes, vaginal dryness, and disrupted sleep (with or without associated night sweats). A number of symptoms have an obvious association to the changing hormonal milieu associated with menopause. Women may also experience cognitive problems and depression symptoms during menopause, which are more subtly and erratically linked to hormones.

SYMPTOMS:

- The core 4 symptoms are:
- Vasomotor
- Vaginal
- Insomnia
- Mood



MENOPAUSAL SYMPTOMS

EPIDEMIOLOGY:

Following an assessment of the available data, three symptoms—vasomotor symptoms, vaginal dryness/dyspareunia, and difficulty sleeping/insomnia—came to light as having strong links to menopause.

There are numerous other symptoms that menopausal women report. Aches in the joints and muscles, modifications to the way the body is shaped, and more visible wrinkles are a few of them.

Vasomotor symptoms

Most women experience vasomotor symptoms throughout the menopausal transition, albeit each woman experiences these symptoms differently in terms of severity, frequency, and length. Up to 85% of menopausal women report experiencing hot flashes. Up to five years or more following menopause, 25% of women still have hot flashes. With variations in or a reduction in oestrogen synthesis, the thermoregulatory system is reset and narrowed.

The 5-HT_{2A} receptor in the hypothalamus is hypothesised to be upregulated when oestrogen levels are low since this lowers serotonin levels. As a result, more serotonin is then discharged, which may activate the 5-HT_{2A} receptor directly. Hot flashes are caused by this activation, which also alters the set point temperature.

Vulvovaginal atrophy

Because urogenital tissues are so delicately responsive to oestrogen, it is possible for these tissues to become fragile and develop painful symptoms as a result of the variations in oestrogen that take place throughout the menopausal transition and are followed by continuous low levels after menopause. Numerous population- and community-based studies have shown that menopausal symptoms of vaginal dryness or dyspareunia are reported by between 27% and 60% of women with varying degrees of severity. Without medical intervention, vulvovaginal atrophy doesn't get better over time.

Treatment for dryness and vaginal atrophy with menopausal hormone therapy (MHT) is beneficial. Systemic or vaginal oestrogen can be utilised for this purpose, although local oestrogen application is advised and can be done at extremely low levels.

Long-term therapy are needed for females with the urogenital atrophy symptom. Buying lubricants and moisturisers without a prescription could be useful for milder symptoms; however, for those with severe symptoms, hormonal treatment is the mainstay.

Sleep disturbances and insomnia:

As they move into menopause, women report having more problems falling asleep, and actigraphy and self-reporting have both demonstrated that sleep is worse around the time of the menstrual cycle.

Sleep issues are exacerbated by mood disorders and persistently bad sleep hygiene.

Devices for continuous positive airway pressure are frequently used to treat sleep apnea. Dopamine agonists, gabapentin, and opioids are all effective treatments for restless leg syndrome. Hormone therapy is an option for women who struggle to sleep due to vasomotor symptoms, although it appears to work best for postmenopausal women who have undergone surgically induced menopause.

Adverse mood

Large prospective cohort studies have revealed a roughly 3-fold greater risk of major depressive episode development during perimenopause compared to premenopause and an increased risk of depressed mood during the menopausal transition. Poor sleep, stressful or unfortunate life events, unemployment, a higher body mass index, smoking, and other similar characteristics are independent risk factors for the emergence of depressive mood during the menopause transition.

Psychotherapy, antidepressants, or a combination of both may be used as the first line of treatment for a major depressive episode. Patients' preferences and the degree of their depression are frequently taken into account while designing a treatment plan. Undoubtedly, a more serious episode would necessitate both drug and psychological treatment. If a patient is interested in a mild to moderate episode, counselling or an antidepressant alone may be effective treatments.

CONCLUSION:

Sleep issues, vaginal dryness/dyspareunia, and cognitive issues frequently remain or worsen with ageing, but the vasomotor symptoms and unfavourable mood frequently improve after menopause. Better knowledge on the nature of risk factors helps the prevention, identification, and treatment of these typical symptoms in menopausal women.

It is possible to provide older female patients with better patient care and better health outcomes by having a better awareness of the risk factors, clinical presentation, and management of these typical menopausal symptoms.

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NATURAL METHODS TO MANAGE PCOD



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PCOD (polycystic ovarian disease) is a hormonal disorder that affects women in their reproductive age, in which ovaries become enlarged and they may develop numerous fluid filled follicles and it causes to production of immature eggs. About 22.5% of menstruating Indian women suffering from PCOD.

SYMPTOMS

- Irregular periods
- Infertility
- Fatigue
- Severe acne (face, chest and upper back)
- Abnormal facial hair (face, back, belly and chest)
- Hair loss
- Skin darkening (neck, in the groin and under the breast)
- Heavy menstrual bleeding

- Mood swings
- Weight gain

CAUSES

- Over production of androgen hormone
- Genetics
- Insulin resistance
- Life style changes- excess junk foods, smoking, alcoholism, lack of exercise.

COMPLICATIONS

- Infertility
- Gestational diabetes or pregnancy induced high blood pressure
- Miscarriage or premature birth
- Sleep apnea
- Depression and anxiety
- Endometrial cancer



TIPS TO MANAGE PCOD

- Regular exercise or yoga
- Maintain body weight
- Take enough sleep of at least 8 hours
- Avoid eating junk foods
- Quit smoking and alcoholism.
- Reduce carbohydrate and fat diet
- Include more protein in diet
- Control blood sugar
- Drink at least 2 liters of water daily
- Should not skip meals
- Periodic gynecologists consultation



FOODS TO TREAT	FOODS TO AVOID
<ul style="list-style-type: none"> > Whole grains – brown rice, barley, millet > Leafy green vegetables – spinach, broccoli > Seeds – chia seeds, flax seeds > Fruits – guava, apple, pear > Nuts – walnuts, almonds, pistachios > Berries – grapes, blue berries, black berries, cherries > Fish – salmon, tuna, sardine, mackerel > Spices – cinnamon, turmeric > Virgin olive oil > Dark chocolate (moderate amount) 	<ul style="list-style-type: none"> > Sugars – sweets, ice creams, chocolates > White rice, white flour foods > Red meat – beef, pork, mutton > Fried foods – chips, snacks > Junk foods – cakes, biscuits, burgers, pizza > Carbonated drink – soda, energy drinks > Processed meat- sausage, hot dog, ham, bacon > Alcohol, tobacco > Excess tea and coffee > Milk and milk products – cheese, butter

PCOD can manage naturally by good life style routine and by good food habits.

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POST MENOPAUSE ARTHRITIS PROBLEMS IN WOMEN



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Post menopause arthritis refers to the development of arthritis symptoms or the exacerbation of existing arthritis symptoms in women after they have undergone menopause. Menopause typically occurs in women between the ages of 45 and 55 and is characterized by the cessation of menstrual periods due to hormonal changes in the body. According to a 2012 study, women who go through early menopause are more likely to develop RA compared to those who experience normal to late menopause.

Arthritis is a condition that affects the joints, causing inflammation, pain, and stiffness. There are several types of arthritis that can affect women post menopause, including osteoarthritis, rheumatoid arthritis, and gout.

- Osteoarthritis is the most common type of arthritis, and it occurs when the protective cartilage cushioning the joints wears down over time. The decreased estrogen levels that occur after menopause can contribute to the degradation of cartilage, leading to the onset or worsening of osteoarthritis symptoms.
- Rheumatoid arthritis, is an autoimmune disease where the body's immune system mistakenly attacks the joints. The hormonal changes that occur after menopause may affect the immune system, potentially leading to an increased risk of developing rheumatoid arthritis or flares in those already diagnosed.
- Gout is a type of arthritis that results from a buildup of uric acid crystals in the joints. Postmenopausal women may experience an increased risk of developing gout due to hormonal changes affecting uric acid metabolism. Symptoms: Common symptoms of postmenopausal arthritis include joint pain, swelling, stiffness, decreased mobility, and difficulty performing daily activities. These symptoms can significantly impact a woman's quality of life, as they may limit her ability to engage in regular physical activities and cause chronic pain.

MANAGEMENT

Treatment options for postmenopausal arthritis may involve a combination of medication, lifestyle changes, and physical therapy. Medications such as nonsteroidal anti-inflammatory drugs (NSAIDs), corticosteroids, and disease-modifying antirheumatic drugs (DMARDs) may be prescribed to manage pain and inflammation. Lifestyle changes, including regular exercise, maintaining a healthy weight, and incorporating joint-friendly activities such as yoga or swimming, and intake of calcium and vitamin D also help manage symptoms. Physical therapy can provide guidance on exercises and techniques to improve joint function and relieve pain.

CONCLUSION

Postmenopausal women may experience the onset or worsening of arthritis symptoms due to hormonal changes and other factors. It is essential for women to be aware of these potential risks, monitor their joint health, and seek appropriate medical care to manage symptoms and maintain their overall well-being.

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DEPRESSION “A MAJOR THREAT TO WOMEN”



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In our day-to-day life we may normally experience depression when we lose something, face failures in life or encounter unprecedented tragedy. Major depressive disorder is a serious mood disorder which is characterized by persistent depressed mood or loss of interest in activities causing significant impairment in life.

It is a disorder which is mostly observed in women. According to WHO depression is 50% more common in women than men. Globally more than 10% of the pregnant women and women who have just given birth undergo depression. Women are particularly at risk during young adulthood.

VARIOUS FACTORS LEADS TO DEPRESSION IN WOMEN :

- Women may experience depression in response to life events including pregnancy and birth.
- Women undergo hormonal changes regularly and thus can increase the risk of depression.
- Today women like men are also household earners. They also have the responsibility to take care of their house. With so much house work and responsibilities women experience a lot of stresses in every day life.
- Post partum depression affects women after having a baby due to physical, emotional and hormonal changes. Compared to other disease depression is highly treatable even if become severe.

SYMPTOMS

- Persistent sadness, anxious or empty mood
- Loss of interest in activities
- Feeling of guilt, hopeless
- Thoughts of suicide
- Very slow behaviour

MEDICATION

- Broxanolone
- Fluxetine
- Paroxiline
- Fluvoxamine

TREATMENT

- Electroconvulsive therapy
- Transcranial magnetic stimulation
- Individual psychotherapy

WAYS TO PREVENT DEPRESSION

- Exercise regularly
- Get 8 hours sleep everyday
- Participate in activities that you enjoy
- Say positive things about yourself and others
- Have patience with all things and chiefly with yourself.

It is rightly stated “A healthy mind is the greatest treasure to find”. Being both mentally and physically fit is the key to success in all aspects of life.

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2. <https://www.ssnha.gov >>



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POLYCYSTIC OVARY SYNDROME

Polycystic ovary syndrome (PCOS) is a common hormonal condition that affects women of reproductive age. It usually starts during adolescence, but symptoms may fluctuate over time. PCOS is a chronic condition and cannot be cured. However, some symptoms can be improved through lifestyle changes, medications and fertility treatments.

The cause of PCOS is unknown but women with a family history higher risk.

- Polycystic ovary syndrome (PCOS) affects an estimated 8–13% of reproductive-aged women.
- Up to 70% of affected women remain undiagnosed worldwide.

SYMPTOMS OF PCOS

- Irregular or no periods.
- Excessive hair (Hirsutism) on the face or body.
- Skin conditions such as acne and skin tags.
- Hair loss (alopecia)
- Reduced fertility.
- Stress, anxiety and depression.
- Weight problems.
- Sleep problems.



CAUSES OF PCOS:

- We don't know the exact cause of PCOS, but genetics and family history play an important role. PCOS may be associated with the hormone levels in your body before birth and your lifestyle or environment.
- The name 'polycystic ovary syndrome' suggests the problem is mainly with the ovaries, and that you might have multiple cysts on your ovaries. But the cause of PCOS is hormonal.
- In some women diagnosed with PCOS, an ultrasound image of the ovaries shows multiple follicles in the ovaries. These are not cysts. They are eggs that haven't developed properly.

TREATMENT:

Polycystic ovary syndrome (PCOS) cannot be cured, but the symptoms can be managed. Treatment options can vary because someone with PCOS may experience a range of symptoms or just 1.

The main treatment options are discussed in more detail below:

- Lifestyle changes: In overweight women, the symptoms and overall risk of developing long-term health problems from PCOS can be greatly improved by losing excess weight.
- Medicines: A number of medicines are available to treat different symptoms associated with PCOS. A medicine called clomiphene may be the first treatment recommended for women with PCOS who are trying to get pregnant. Clomiphene encourages the monthly release of an egg from the ovaries (ovulation). If clomiphene is unsuccessful in encouraging ovulation, another medicine called metformin may be recommended. Productive PCOS Tablet is an excellent vitamin for ladies with Polycystic Ovarian Syndrome (PCOS).



PRECAUTIONS:

- Stay at a healthy weight. Weight loss can lower insulin and androgen levels. It also may restore ovulation.
- Limit carbohydrates. High-carbohydrate diets might make insulin levels go higher.
- Be active. Exercise helps lower blood sugar levels

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MENOPAUSE – THE STRUGGLING ERA

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Menopause is a stage of transition in a woman's life from being fertile to infertile. Absence of menstruation for at least 12 months indicates menopause. Natural menopause is the permanent ending of menstruation that doesn't happen because of any type of medical treatment.

The process happens in three stages:

1.PREMENOPAUSE OR MENOPAUSE TRANSITION: Perimenopause can begin 8-10 years before menopause, when the ovaries gradually produce less oestrogen. It usually starts in 40's .Perimenopause lasts until menopause, the point when the ovaries stop releasing eggs.

2.MENOPAUSE: Menopause is the point when there is no longer have menstrual periods. At this stage ,ovaries stops releasing eggs and producing most of their oestrogen.

3.POST-MENOPAUSE : This is the time period after menopause. During this stage, menopausal symptoms such as that hot flashes (a sudden feeling of warmth that spreads over the body) may get better. Some people continue to experience menopausal symptoms for a decade or longer after the menopause transition .Some of the symptoms are:

- Irregular periods.
- Vaginal dryness.
- Hot flashes.
- Chills.
- Night sweats.
- Sleep problems.
- Mood swings.
- Hair loss and dry skin.



In majority of women, menopause occurs in the age between 45-55. Rarely menopause occurs in the age after 40 and when ovary is removed. The production of oestrogen will be low in the time period of menopause. During adolescence, women produce one egg every month, which if not fertilized, is expelled through a process called menstruation. Women have to face many difficulties and health problems related to the decrease of female hormone in the body. Many people in our country do not have proper knowledge about this. Many of them, known as 'MENOPAUSAL SYNDROME', can be challenging. As a solution to this, 'MENOPAUSAL CLINICS' can be found in hospitals in many foreign countries.

Menopausal changes create mental problems in women and affect body process, which affect the regulatory functions, hormonal , cardiovascular functions, nervous system and sex life. These changes are difficult for women. Many of these can be resolved or delayed with proper treatment. This is a time when women need the support of their family members, their partner or husband the most. But lack of proper understanding of these matters by family members aggravates many problems. Major complications of menopause are:

- Osteoporosis.
- Urinary incontinence.
- Weight gain.
- Sexual function.

Menopause requires no medical treatment. Instead, treatments focus on relieving the signs and symptoms and controlling chronic conditions that may occur with aging. Treatments may include:

- Hormone therapy.
- Vaginal oestrogen.
- Low – antidepressants.
- Clonidine.
- Medications to treat osteoporosis.

Menopause is something that all women will have to go through in their lifetimes. There are different types of menopause, different stages, different symptoms and different treatments. Each is dependent on the woman. There are other factors that affect a woman's menopausal experience and the woman may have to make changes to their nutrition and exercise plan.

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..... JUST DIAGNOSED WITH PCOS



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"Women with PCOS have higher body image dissatisfaction scores than women without PCOS. These scores are related to higher depression scores. This data is significant because it shows how PCOS isn't just a "period problem" and influences both physical and mental health.

"One of the most frustrating parts of having PCOS is trying to explain this condition that affects me so deeply to people who just have no idea what I'm talking about or what I'm really going through"

Polycystic ovary syndrome is a set of symptoms due to elevated androgen in females. Signs and symptoms of PCOS include irregular or no menstrual period, heavy periods, excess body and facial hair, acne, pelvic pain difficulty getting pregnant and patches of thick, darker, velvety skin. Associated conditions include type 2 diabetes, obesity, obstructive sleep apnea, heart disease, mood disorders and endometrial cancer.

polycystic ovary syndrome (PCOS) is a hormonal common among women of reproductive age. Women with PCOS may have infrequent or prolonged menstrual periods or excess male hormone (androgen) level. The ovaries may develop numerous small collections of fluid and fail to regularly release eggs.

Symptoms of PCOS arise during the early pubertal years. Both normal female pubertal development and PCOS are characterized by irregular menstrual cycles, anovulation, and acne.

According to the National Institutes of Health Office of Disease Prevention, PCOS affects approximately 5 million women of childbearing age in the U.S. Costs to the U.S. health care system for the identification and management of PCOS are approximately \$4 billion per year.

Research suggests that 5% to 10% of females 18 to 44 years of age are affected by PCOS, making it the most common endocrine abnormality among women of reproductive age in the U.S. Women seeking help from health care professionals to resolve issues of obesity, acne, amenorrhea, excessive hair growth, and infertility often receive a diagnosis of PCOS.

In 2012, the NIH sponsored an evidence-based methodology workshop on polycystic ovary disease. The expert panel concluded that each criterion has its own strengths and weaknesses; however, the use of multiple criteria was considered confusing, impeding progress in understanding PCOS.

If PCOS is suspected, a complete medical history, physical examination, blood tests, and a pelvic ultrasound should be performed.⁵ A medical history and physical examination provide the physician with information about unexplained weight gain, menstrual cycle abnormalities, male-pattern hair growth, skin changes, and elevated blood pressure (BP). Blood is drawn to assess hormone, glucose, and lipid levels, and a pelvic ultrasound is performed to scan for ovarian cysts.^{5,13,15} During the assessment period, other potential causes associated with reproductive, endocrine, and metabolic dysfunction should be excluded. Physicians should rule out adrenal hyperplasia, Cushing's syndrome, and hyperprolactinemia before a PCOS diagnosis is confirmed.

There is no cure for PCOS, but treatment aims to manage the symptoms that affect an individual.

This will depend on whether the individual wants to become pregnant and aims to reduce the risk of secondary medical conditions, such as heart disease and diabetes.

There are several recommended treatment options, including:

Birth control pills: These can help regulate hormones and menstruation.

Diabetes medications: These help manage diabetes, if necessary.

Fertility medications: If pregnancy is desired, these include the use of clomiphene (Clomid), a combination of clomiphene and metformin, or injectable gonadotropins, such as follicle-stimulating hormone (FSH) and luteinizing hormone (LH) medications. In certain situations, letrozole (Femara) may be recommended.

Fertility treatments: These include in-vitro fertilization (IVF) or inseminations.

PCOS treatment focuses on managing the things that are concerning you. This could include infertility, hirsutism, acne or obesity. Specific treatment might involve lifestyle changes or medication.

Your health care provider may recommend weight loss through a low-calorie diet combined with moderate exercise activities. Even a modest reduction in your weight — for example, losing 5% of your body weight — might improve your condition. Losing weight may increase the effectiveness of medications your provider recommends for PCOS, and it can help with infertility. Your health care provider and a registered dietitian can work with you to determine the best weight-loss plan.

It is clear from the review that PCOS is a complex condition. The central mechanism is difficult to understand and state. Thereby no treatment can be claimed as a magic bullet as it targets the clinical symptoms rather than curing the syndrome. Alternative drugs such as herbal or medicinal plants should be considered by knowing their mechanism of action. Further investigation regarding pathophysiology and drugs acting on it should be done for improvising the abiding consequence on patient's health. Improvising lifestyle could ease the PCOS related symptoms.

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PELVIC INFLAMMATORY DISEASE



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Pelvic inflammatory disease (PID) is an infection of the female reproductive organs. PID is an inflammation of the upper genital tract. The disease affects the uterus, fallopian tubes, and ovaries. It is typically an ascending infection, spreading from the lower genital tract.

Many types of bacteria can cause PID, but gonorrhoea or chlamydia infections are the most common. These bacteria are usually acquired during unprotected sex.

Less commonly, bacteria can enter your reproductive tract anytime the normal barrier created by the cervix is disturbed. This can happen during menstruation and after childbirth, miscarriage, or abortion. Rarely, bacteria can also enter the reproductive tract during the insertion of an intrauterine device (IUD) or any medical procedure that involves inserting instruments into the uterus.

SIGNS AND SYMPTOMS

The signs and symptoms of pelvic inflammatory disease might be mild and difficult to recognize. Some women don't have any signs or symptoms. When signs and symptoms of pelvic inflammatory disease (PID) are present, they include:

- Pain — ranging from mild to severe — in the lower abdomen and pelvis
- Unusual or heavy vaginal discharge that may have an unpleasant odor
- Unusual bleeding from the vagina between periods
- Fever, sometimes with chills
- Painful, frequent or difficult urination



COMPLICATIONS

PID can cause scarring inside the reproductive system, which can later cause serious complications, including chronic pelvic pain, infertility, ectopic pregnancy (the leading cause of pregnancy-related deaths in adult females), and other complications of pregnancy. Occasionally, the infection can spread to the peritoneum causing inflammation and the formation of scar tissue on the external surface of the liver.

CONCLUSION

PID can be life threatening if untreated. See a health care provider or seek urgent medical care if:

- Severe pain low in your abdomen
- Nausea and vomiting, with an inability to keep anything down.
- Fever, with a temperature higher than 101 F.
- Foul vaginal discharge

Vaginal discharge with an odor, painful urination or bleeding between periods can also be symptoms of a sexually transmitted infection (STI). Never forget that PID can be cured if treated earlier.

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WOMEN & THYROID DISEASE

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Thyroid is a small gland found at the base of our neck. Thyroid makes thyroid hormone. Thyroid hormone controls many activities in our body, including how fast burn calories and how fast our heart beats. These glands regulate the calcium levels in blood and bones. Calcium should be maintained in an adequate level since it is essential for the normal functioning of heart, nervous system, kidneys and bones. It also secretes several hormones such as Thyroxine (T4), Triiodothyronine(T3), Calcitonin.

Thyroid diseases are common worldwide. In India too, there is a significant burden of thyroid diseases. According to a projection from various studies on thyroid disease, it has been estimated that about 42 million people in India suffer from thyroid diseases. This review will focus on the epidemiology of common thyroid diseases in India



The two main types of thyroid conditions are:

- Underactive thyroid (Hypothyroidism)
- Overactive thyroid (Hyperthyroidism)

Diseases of the thyroid cause it to make either too much or too little of the hormone. Women are more likely than men to have thyroid diseases, especially right after pregnancy and after menopause. One of the main reasons for this is that thyroid disorders are caused by autoimmune responses, where the immune system attacks thyroid gland.

Thyroid issues in women can affect their reproductive system, causing irregular, light heavy or absent menstrual periods, ovulation and pregnancy problems and infertility, Joint and muscle pain. It also causes weight gain, mood swings, hair fall, racing or slow heartbeat, high or low blood pressure and brain fog.

COMMON THYROID DISEASES

• Graves' disease

Graves' disease is an autoimmune disease that affects the thyroid gland. The gland produces too much thyroid hormone, a condition known as hyperthyroidism. An overactive thyroid causes problem with organs like the heart, as well as bones and muscles. Symptoms of hyperthyroidism, such as heat intolerance, weight loss, diarrhoea and palpitations. In addition, gradual protrusion of the eyes may occur, called Graves' ophthalmopathy, as may swelling of the front of the shins. It can be diagnosed by following tests, Thyroid blood test, Thyroid antibody blood tests, Thyroid uptake and scan, Doppler blood flow measurement.

• Thyroid nodules

A condition where lumps are formed in the thyroid gland. This causes breathing, difficulty in swallowing, and sudden weight loss. Thyroid nodules can be detected by a physical exam, blood tests, ultrasound, or biopsy. Most nodules don't need treatment, but some may require medication, surgery, or radioactive iodine therapy.

Thyroid cancer

It is a rare and treatable disease. Thyroid cancer can cause symptoms such as a lump in the neck, hoarseness, difficulty swallowing, or enlarged lymph nodes, but sometimes it has no signs at all. Thyroid cancer is more common in women.

• Goiter

Goiter is a condition where your thyroid gland grows larger. The most common cause of goiter is iodine deficiency, which affects millions of people worldwide, especially in developing countries.

Thyroid problems can be caused by autoimmune diseases, iodine deficiency, inflammation, nodules, cancer medication side effects. It can be diagnosed by a blood test that measures the levels of thyroid stimulating hormone(TSH) and thyroid hormones (T3 and T4).

HOW TO TREAT

Thyroid problems can be treated with medication (example: Levothyroxine) surgery or radioactive iodine (commonly Radioactive Iodine I-131 can be used to destroy thyroid cells) depending on the type and severity of the condition.

Diet & Lifestyle Changes for Better Thyroid Management

Iodine is crucial for the production of thyroid hormone. Iodine rich foods (seaweeds, iodised salt& seafood etc.) choose to avoid iodine deficiency. Eating smaller, more frequent meals throughout the day may have a positive impact on T3 levels. Nutrient rich diet could help people with improve their thyroid function such as Dark leafy greens, Avocados, Zinc & selenium containing foods, non-starchy vegetables etc. prevent nutrient deficiencies and improve thyroid function.

Regular exercise is another important thing. Exercise not only enables weight-loss but also releases 'happy hormones' in the body. An under active thyroid can respond to natural remedies such as Yoga.

SOME PRECAUTIONS TO AVOID THYROID DISEASE

- Avoid processed food, as it can alter the thyroid hormone production.
- Avoid soy, as it can also affect the hormone production.
- Stop smoking, as the toxins can make the thyroid gland over sensitive.
- Reduce stress, as it can contribute to many health disorders including thyroid disease.
- Ask for a thyroid collar when you get an X-ray, to protect your thyroid from radiation.

CONCLUSION

If anyone suffering with thyroid condition is better to consult with Thyroid specialist and take a necessary action. Not only depends on the medication but also continue an Iodine and nutrient rich diet. A good life style is also place an important role in better thyroid management. Overall, most people with thyroid disease can go on to live a normal life.

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WOMEN'S HEALTH ISSUES



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I. HEART DISEASE

According to the Centers for Disease Control and Prevention (CDC), only 56% of women recognize that heart disease is the leading cause of death for women. While sometimes heart disease is thought of more prominently among men, the CDC reported that this disease was responsible for 1 in 5 female deaths in 2019. Further, most women between the ages of 40 and 60 have at least one or more risk factors for heart disease and may not even realize it. Post-menopause as well as early menstruation are uncontrollable risk factors for heart disease that are specific to women. However, many risk factors can be helped. In fact, in 95% of deaths from heart disease, the individual had at least one of these major risk factors:

- Smoking.
- High blood pressure.
- High blood cholesterol.
- Overweight.
- Physical inactivity.
- Diabetes.

You can reduce your risk for heart disease by up to 82% by adopting a heart-healthy lifestyle.

To keep your heart healthy, it is vital to maintain all the following heart-healthy habits:

1. Healthy diet:- Roughly half of your overall diet should include fruit and vegetables.

2. Regular physical activity:- Experts recommend at least 150 minutes of moderate-intensity physical activity (brisk walk, light-effort bicycling, cleaning) or 75 minutes of vigorous-intensity physical activity (hiking, jogging at 6 mph, fast bicycling) per week.

3. Stop (or never start) smoking:- For those who have a heavy smoking history, consider a lung screening. A lung screening uses a low radiation CT scan to detect lung cancer early.

4. Make time to relax:- Anger and stress can damage your heart. Allot 15-20 minutes a day to sit quietly or enjoy one of your favorite hobbies to reduce stress.

II. BREAST CANCER

The most common type of cancer in women in the U.S. is breast cancer. Breast cancer begins in the breast and occurs when cells change and grow. The ducts and lobules are the two parts of the breast where cancer is most likely to start. There are approximately 240,000 new cases of invasive breast cancer as well as 50,000 new cases of non invasive breast cancer diagnosed each year in the U.S. The major identified risk factor categories for this type of cancer pertain to hormone and family history. In addition to this, other prior medical problems, including past history of premalignant breast biopsies, dense breast tissue and history of chest wall radiation, can increase a woman's risk for breast cancer. While these risk factors are important, 70% of newly diagnosed women have no special risk factors except female sex and advancing age. Research has indicated that women with the following lifestyle risk factors have an increased chance of developing breast cancer:

- Alcohol use.
- Smoking.
- High weight or obesity.
- Limited exercise.
- Poor diet.

III.GYNECOLOGICAL HEALTH - OVARIAN AND CERVICAL CANCER

Ovarian Cancer

Ovarian cancer starts in the ovaries, walnut-sized organs located on both sides of the uterus. Cancer can affect any of the complex cells within the ovaries and since only women have ovaries, this type of cancer can only be found in women.

Ovarian cancer often shows no symptoms until after it has spread outside of the ovaries. Even then, symptoms tend to be vague and are like those of other more common diseases.

There are one or more of the following tests to diagnose ovarian cancer

- Pelvic exam.
- Ultrasound.
- CT scan.
- CA-125 blood test.
- Biopsy

Cervical Cancer

Cervical cancer is the occurrence of abnormal growth of the cells of the cervix, the lower end of the uterus that connects the uterus to the vagina. This type of cancer cell growth typically starts in the outer layer called the squamous cells. In most women, cervical cancer is caused by the human papillomavirus (HPV). HPV infection is very common and often goes away on its own. However, in some instances, over time, HPV can lead to cervical cancer. HPV infection is strongly linked to cervical cancer. But it's important to keep in mind that most women with HPV don't develop cervical cancer.

Other risk factors include:

- 1.Smoking.
- 2.Other lifestyle factors, such as diet and activity.
 - Being overweight.
 - Long-term use of birth control pills (oral contraceptives).
 - Having chlamydia or herpes (sexually transmitted diseases).
 - Having a weak immune system.
 - Having multiple full-term pregnancies.
 - Having a full-term pregnancy before age 17.
 - Having a family history of cervical cancer.

Cervical cancer is diagnosed by following tests:-

- Pap and HPV tests.
- Colposcopy.
- Biopsy

IV.DEPRESSION AND ANXIETY

Depression

Depression effects the whole body. This involves one's body, mood and mind. With this said, depression is more than feeling blue or unhappy and it is not a sign of personal weakness. It is important to recognize that depression is in fact an illness and just like any other illness, depression often requires treatment. While there is no clear cause, depression has been linked to chemical imbalances in the brain. In addition to this, environmental, mental health, physical and inherited factors can play a role in the causation of depression. Women are about twice as likely to have depression than men, as many hormonal factors and potential additional stresses may add to this increased rate in women. many women are at an increased risk after giving birth to a baby. In this situation, women have hormonal and physical changes in addition to the added responsibility of caring for a new baby. In some women, these factors can lead to postpartum depression (PPD). Treatment may include counseling, medication or a combination of both. If you or your loved one is experiencing signs of depression, seeking professional help, including speaking with your primary care physician, is the first step to take. Without treatment, symptoms may last weeks, months or even years.

These symptoms can include the following:

- Depression-persistent sadness.
- Loss of interest in activities one earlier enjoyed.
- Inability to experience joy.
- Poor appetite.
- Weight loss or gain.
- Poor sleep.
- Low energy.
- Poor libido.
- Poor focus.
- Feelings of guilt, hopelessness, worthless.
- In severe cases, suicidal thoughts.
- In case of PPD, may present with obsessive worry about baby's well-being.

Anxiety

Anxiety is a natural part of the body's defense system. In fact, normal anxiety can be helpful as it works to alert your body of a threat. In this state, an individual's feelings can often range from a vague sensation of worry to physical sensations such as a racing heartbeat. However, when an individual has an anxiety disorder, this response can happen at inappropriate times when there is no apparent threat. Anxiety can become an issue when it interferes with day-to-day life, is hard to control and occurs for months. With some anxiety disorders, the anxiety is way out of proportion to the threat that triggers it. With others, anxiety may occur even when there isn't a clear threat or trigger.

Management of Anxiety

- Do what you can:- Keep in mind that you can't control everything. Change what you can. And let the rest take its course.
- Exercise:- This is a great way to ease tension and help your body feel relaxed.
- Stay away from caffeine and nicotine:- These can make anxiety symptoms worse.
- Stay sober:- Don't use alcohol or unprescribed medicines. They only make things worse in the long run.
- Learn more about anxiety disorders:- Keep track of helpful online resources and books you can use during stressful periods.
- Try stress management:- Try methods such as meditation.
- Talk with others:- Think about joining online or in-person support groups.
- Get help:- Find professional mental health services if your symptoms can't be managed or reduced with the above methods.

CONCLUSION

For any nation, taking care of women's health and lifestyle must be one of the priorities. Women health issues encompass a board range of conditions and concerns that are specific to the female anatomy and reproductive system. While some of these issues are more common than others all of them and have a significant impact on a women's quality of life , overall health and wellbeing. Like numerous other nations, India is dealing with a variety of women's health issues. Keeping in mind It's necessary that women start taking their health seriously and get the medical care they deserve.

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ANAEMIA IN PREGNANCY



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Anaemia during pregnancy is a global health challenge, especially in the developing countries. Anaemia in pregnancy is an important contributor to maternal mortality/morbidity as well as to the low weight of the new born which in turn contribute to increased percentage for infant mortality.

Anaemia in pregnancy is one of the most common and widespread public health problems affecting 24.8% of the population in the world today. WHO has estimated that India has the highest prevalence of anaemia in pregnancy. Prevalence of Anaemia in pregnant Indian women is 49.7%, against the global prevalence of 41.8% (WHO 2008). In Asia, Anaemia (irrespective of severity) is the second leading cause of maternal death and accounts for 12.8% of maternal deaths apart from death due to postpartum haemorrhage. India contributes to about 80% of the maternal deaths due to Anaemia in South Asia.

Anaemia is defined as a low red blood cell (RBC) count, a low hematocrit (the proportion of blood volume that is RBCs), or a low hemoglobin concentration (the oxygen carrying protein of RBCs). Hemoglobin concentration is measured in grams per liter or grams per deciliter. In pregnancy, a hemoglobin concentration of less than 11.0 g/dL in the first trimester and less than 10.5 or 11.0 g/dL in the second or third trimester is considered Anaemia. In India, the prevalence of Anaemia is high because of

- Fewer intakes of iron.
- Folic acid and food sources that prevent iron absorption, coupled with poor bioavailability of iron is the major factor responsible for prevalence of Anaemia .
- Poor nutritional status affected by low body mass index (BMI) in the women was found to be associated with Anaemia.

What causes anaemia?



Inherited
red blood cells
disorders



Deficiency of nutrients:
Iron, vitA, folate, vitB12



Chronic
diseases



Heavy menstruation and
pregnancy-related issues



HIV



Parasitic
infection



IRON DEFICIENCY ANAEMIA

Iron deficiency as one vital cause of Anaemia, Iron deficiency Anaemia is the most common and widespread nutritional deficiency in the world. It is a global nutritional problem affecting up to 52% of pregnant women. Many of these women are symptomatic. Lack of proper weight gain during pregnancy is an important predictor of iron deficiency.. The gold standard for the diagnosis of iron deficiency Anaemia is a low ferritin level. First-line treatment for iron deficiency Anaemia is oral iron. New evidence suggests that intermittent dosing is as effective as daily or twice daily dosing with fewer side effects. For patients with iron deficiency Anaemia who cannot tolerate, cannot absorb, or do not respond to oral iron, intravenous iron is preferred in the third trimester and sometimes as early as the second trimester.

The causes of iron deficiency are:

- Insufficient quantity of iron-rich foods and 'iron enhancers' in the diet (foods rich in vitamin C, such as citrus fruits) and low bioavailability of dietary iron,
- Excessive quantity of 'iron inhibitors' in diet, especially during mealtimes (e.g. tea, coffee; calcium-rich foods),
- Iron loss during menstruation,
- Poor iron stores from infancy and childhood deficiencies,
- Iron loss from postpartum hemorrhage,
- Increased iron requirement due to tissue, blood and energy requirements during pregnancy,
- In some areas, due to heavy workloads,
- Teenage pregnancy,
- Repeated pregnancies with less than 2 years' interval,
- Iron loss due to parasite load (e.g. malaria, intestinal worms),
- Poor environmental sanitation,
- Unsafe drinking water and inadequate personal hygiene.
- Maternal risks during antenatal period are poor weight gain,
- Preterm labors,
- Placenta previa,
- Accidental hemorrhage,
- eclampsia,
- premature rupture of membrane (PROM).
- Maternal risks during intra and postnatal period are postnatal sepsis, sub involution, embolism.
- Fetal and neonatal risks include prematurity, low birth weight, poor Apgar score, fetal distress, neonatal distress requiring prolonged resuscitation and neonatal Anaemia due to poor reserve.

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THE ALARMING RISE OF CHRONIC CARDIAC DISEASES AMONG WOMEN IN INDIA



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India, a country known for its rich cultural heritage and diverse population, is grappling with a silent epidemic - an exponential increase in chronic cardiac diseases. With a growing burden of lifestyle-related risk factors and inadequate healthcare infrastructure, the prevalence of heart ailments has reached unprecedented levels. It's crucial to understand the reasons behind the surge in cardiac diseases in India, explores the impact on public health, and suggests potential measures to address this pressing issue.

Cardiovascular diseases (CVDs) are the leading cause of death in India, accounting for over a quarter of total adult deaths.

Chronic heart disease is a major contributor to CVDs, and India has been dubbed the "chronic heart disease capital of the world"

In India, the government has taken steps to reduce the prevalence of CVDs.

In 2015, India became the first country to develop specific national targets and indicators aimed at reducing the number of global premature deaths from non-communicable diseases (NCDs), including CVDs, by 25% by 2025.

In recent years, India has witnessed an alarming rise in chronic cardiac diseases among women. This concerning trend has become a major public health issue, necessitating immediate attention and action.

Traditionally, heart disease has been commonly associated with men. However, the prevalence of cardiac diseases among women has been steadily increasing, posing a significant threat to their overall well-being. It is crucial to understand the factors contributing to this rise and implement effective preventive measures.

One of the primary reasons for the surge in chronic cardiac diseases in women is the changing lifestyle patterns. With urbanization and globalization, women in India have undergone significant societal transformations. They are now leading increasingly sedentary lifestyles, often spending long hours at work or engaging in minimal physical activity. This lack of exercise, coupled with unhealthy dietary choices, has contributed to the deterioration of cardiovascular health.

Furthermore, the stress of modern life has taken its toll on women's hearts. Juggling multiple roles and responsibilities, women often face higher levels of stress and anxiety. Prolonged stress can lead to the development of chronic conditions such as hypertension, which significantly raises the risk of heart disease.

Another significant factor is the lack of awareness and access to healthcare services. Many women in India tend to prioritize the health needs of their families over their own. Consequently, they overlook early warning signs and delay seeking medical help. Additionally, the rural-urban divide in healthcare facilities further exacerbates the issue, as women in remote areas face challenges in accessing timely and quality care.

Addressing this alarming rise of chronic cardiac diseases in women in India requires a comprehensive approach. Firstly, raising awareness about the importance of a healthy lifestyle is crucial. Encouraging regular physical activity, promoting nutritious eating habits, and emphasizing stress management techniques can significantly contribute to reducing the risk of heart disease.

Secondly, providing accessible and affordable healthcare services is essential. Increasing the availability of medical facilities in rural areas and ensuring that women have access to regular health check-ups can aid in early detection and prevention of cardiac diseases.

Lastly, empowering women to prioritize their own health and well-being is paramount. Educating them about the early warning signs of heart disease and encouraging them to seek medical help promptly can make a significant difference in reducing the impact of cardiac diseases.

The alarming rise of chronic cardiac diseases in women in India demands immediate attention from policymakers, healthcare providers, and society as a whole. By addressing lifestyle factors, improving access to healthcare, and promoting awareness, we can strive towards a healthier future for women, ultimately reducing the burden of cardiac diseases on individuals and the nation as a whole.



CHOLESTEROL LEVELS AMONG INDIAN WOMEN: A COMPREHENSIVE ANALYSIS



Mr. P P John
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Cholesterol plays a vital role in physiological processes but is also a significant risk factor for cardiovascular diseases (CVDs). Indian women's unique sociodemographic, cultural, and dietary characteristics may influence their cholesterol profiles. This study employs a cross-sectional analysis of cholesterol data collected from diverse regions of India, highlighting the need for gender-specific interventions to manage cholesterol levels and improve the overall health of Indian women.

Cholesterol is a crucial lipid molecule involved in various physiological functions, including cell membrane integrity, hormone synthesis, and bile acid production. Elevated cholesterol levels, particularly low-density lipoprotein cholesterol (LDL-C), are well-established risk factors for cardiovascular diseases (CVDs), which are a leading cause of morbidity and mortality worldwide. In recent years, India has witnessed a substantial rise in the prevalence of CVDs, and it is crucial to understand cholesterol levels among Indian women and their implications for women's health.

Indian women represent a diverse population with variations in genetics, culture, and dietary habits. Furthermore, gender-specific factors, such as hormonal changes during the life course, can influence cholesterol metabolism. As India undergoes social and economic transformations, including shifts in lifestyle and dietary patterns, understanding cholesterol levels among Indian women becomes paramount. This study aims to assess cholesterol levels among Indian women, explore potential regional differences, and discuss their significance for tailored healthcare interventions.

Data Collection is usually done from a variety of sources, including national health surveys, regional studies, and clinical databases, to perform a cross-sectional analysis of cholesterol levels among Indian women. Standardized laboratory methods were used to measure cholesterol levels, and additional data on demographics, dietary habits, and lifestyle factors were also collected.

Statistical analysis was carried out using software packages such as SPSS and R. Descriptive statistics were used to summarize cholesterol levels among different regions and age groups of Indian women. Multivariate regression analysis was performed to investigate associations between cholesterol levels and various factors, including age, socioeconomic status, dietary patterns, and hormonal changes.

The analysis revealed variations in cholesterol levels among Indian women, with urban areas typically exhibiting higher mean cholesterol levels compared to rural regions. Age was a significant factor, with older women tending to have higher LDL-C levels. These findings highlight the importance of considering age-specific cholesterol management strategies.

Several factors influenced cholesterol levels among Indian women. Socioeconomic status was linked to dietary choices, with higher socioeconomic groups consuming more saturated fats. Hormonal changes, such as menopause, were associated with adverse lipid profiles. Furthermore, lifestyle factors, including physical activity and sedentary behavior, played a significant role in determining cholesterol levels.

Elevated cholesterol levels are a modifiable risk factor for CVDs, and tailored interventions are needed to address the specific factors influencing cholesterol among Indian women. These interventions may include promoting healthier dietary choices, increasing physical activity, and providing targeted healthcare resources for women during transitional life stages like menopause.

Regional and age-related variations in cholesterol levels includes several factors, including socioeconomic status, hormonal changes, and lifestyle choices, that influence cholesterol levels in this population. Tailored healthcare interventions are essential to manage cholesterol levels effectively and improve the overall health and well-being of Indian women.

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ROLE OF VITAMIN D IN PREGNANCY AND LACTATION



Mrs. Delphina C P
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Holy Grace Academy of Pharmacy

During a woman's life cycle, pregnancy is a crucial time when she is responsible for both her own health and the health of her developing fetus, a process that continues during nursing. Data on vitamin D's importance in health are challenging conventional wisdom and imply that vitamin D affects both the mother and her fetus's health beyond calcium and bone metabolism through its impact on immune function and surveillance. This process continues after birth, with the breastfeeding mother continuing to be the baby's main supply of vitamin D. Therefore, maternal deficiency predicts fetal and infant deficiency during both pregnancy and lactation;

PREGNANCY:

- Calcium absorption: Vitamin D helps in the absorption of calcium from the intestines and supports the development of the baby's bones and teeth.
- Fetal development: Daily doses of 400 IU of vitamin D during pregnancy are essential for the proper growth and development of the fetus, including skeletal development.
- Immune system support: Vitamin D supports a healthy immune system during pregnancy and helps prevent infections that can potentially harm the mother and the baby.
- Pre-eclampsia prevention: Adequate vitamin D levels may reduce the risk of developing pre-eclampsia, a potentially dangerous condition characterized by high blood pressure and organ damage during pregnancy.
- Gestational diabetes prevention: Studies suggest that maintaining optimal vitamin D levels may help prevent the development of gestational diabetes during pregnancy.

LACTATION:

- Colostrum production: Colostrum is the first milk produced by the mother after childbirth, rich in various nutrients and immune factors like secretory IgA, lactoferrin, leukocytes, as well as developmental factors such as epidermal growth factor. Vitamin D supports the production of colostrum, ensuring the baby receives essential nutrients from the earliest stages of breastfeeding.
- Milk production: Adequate levels of vitamin D are necessary for the synthesis and secretion of breast milk.
- Nutrient transfer: Vitamin D is transferred to breast milk, allowing the baby to benefit from this essential nutrient during breastfeeding.
- Immune system support: Breast milk containing vitamin D helps support the baby's developing immune system, reducing the risk of infections and diseases.

Management of Vitamin D deficiencies

Vitamin D deficiencies are most commonly found in pregnant women who eat a vegetarian diet, those who do not get enough sunlight or those with particularly dark skin. A blood test should be performed to determine the vitamin D (25-OH-D) levels in women who are considered to be at high risk of having a vitamin D deficit. If the levels are determined to be less than 32 ng/ml, the lady is considered to have a vitamin D insufficiency and should start taking 1000–2000 IU of vitamin D tablets daily. Regular vitamin D supplements for pregnant women often include just 400 IU of vitamin D per pill, which is insufficient to correct the imbalance that those with a deficiency face. Pregnant women who fall into any of the high risk categories must therefore undertake blood vitamin D level testing.

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ENDOMETRIOSIS



Ms. Krishna Priya, T.S
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Holy Grace Academy of Pharmacy

INTRODUCTION

Endometriosis is a condition where tissue that resembles uterine lining develops outside of the uterus. It can make getting pregnant more difficult and result in severe pelvic discomfort. Endometriosis can develop during a person's first menstruation and persist beyond menopause. Tissue resembling the uterine lining develops outside the uterus as a result of endometriosis. This causes swelling and the formation of scar tissue in the pelvic area and (occasionally) other parts of the body.

Endometriosis affects roughly 10% (190 million) of reproductive age women and girls globally. It is a chronic disease associated with severe, life-impacting pain during periods, sexual intercourse, bowel movements and/or urination, chronic pelvic pain, abdominal bloating, nausea, fatigue, and sometimes depression, anxiety, and infertility. There is currently no known cure for endometriosis and treatment is usually aimed at controlling symptoms. Access to early diagnosis and effective treatment of endometriosis is important, but is limited in many settings, including in low- and middle-income countries.

SYMPTOMS

- It causes severe pain in the pelvis, especially during menstrual periods
- During or after sex
- when urinating or defecating
- heavy bleeding during periods or between periods
- trouble getting pregnant
- bloating or nausea
- fatigue
- depression or anxiety

CAUSES

- Retrograde menstruation is when menstrual blood containing endometrial cells flows back through the fallopian tubes and into the pelvic cavity at the time that blood is flowing out of the body through the cervix and vagina during periods. Retrograde menstruation can result in endometrial-like cells being deposited outside the uterus where they can implant and grow.
- Cellular metaplasia is when cells change from one form to another. Cells outside the uterus change into endometrial-like cells and start to grow.
- Stem cells can give rise to the disease, which then spreads through the body via blood and lymphatic vessels.
- Endometriosis is known to be dependent on estrogen, which increases the inflammation, growth and pain associated with the disease.

IMPACT

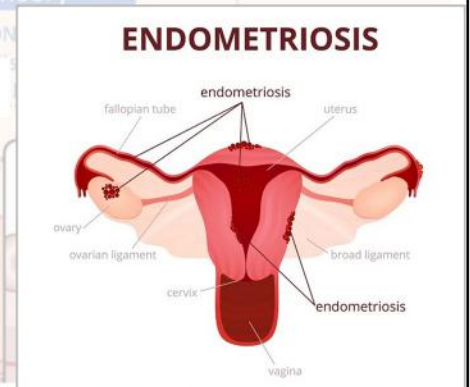
- Endometriosis has significant social, public health and economic implications.
- It can decrease quality of life due to severe pain, fatigue, depression, anxiety and infertility.
- Painful sex due to endometriosis can lead to interruption or avoidance of intercourse and affect the sexual health of affected individuals and their partners.

DIAGNOSIS

- Ultrasonography or magnetic resonance imaging (MRI)
- Histologic verification, surgical/laparoscopic visualization

TREATMENT

- Non-steroidal anti-inflammatory drugs (NSAIDs) and analgesics (painkillers)
- pills
- hormonal intrauterine devices (IUDs)
- vaginal rings
- implants
- injections
- patches



REFERENCE:

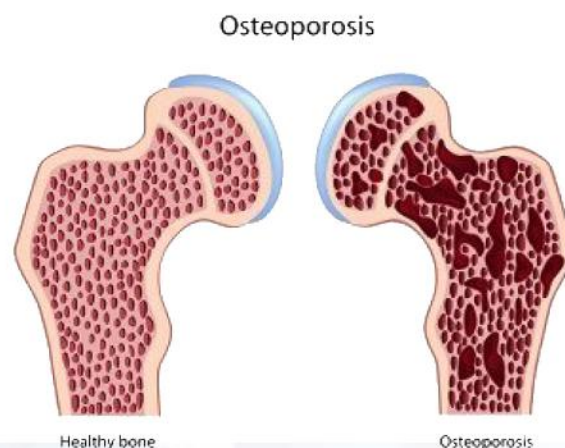
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WOMEN AND OSTEOPOROSIS



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Holy Grace Academy of Pharmacy

ABSTRACT : Now a days osteoporosis is common in women which leads to several health issues. The decreased bone density & low calcium intake in food contributes to the above condition. Among the humans, the women are more prone to develop osteoporosis. Especially the nursing mothers should take extra calcium supplements. The condition of osteoporosis can be treated with medication



There are two different types of osteoporosis that women are more likely to develop. Type 1 is a type of osteoporosis that begins after menopause. Following menopause, women's bodies make less estrogen. Since estrogen is essential to helping protect bone density, bone loss often occurs. Some women lose up to 25% of their bone density in the first 10 years following menopause. Type 2 is a type of osteoporosis that occurs after age 70. Women typically live longer than men, making them more prone to this type of osteoporosis. Osteoporosis occurs when bone density decreases and the body stops producing as much as it did before. It is due to some factors like low calcium intake in food, menopause related issues etc.. The person who is seen with osteoporosis shows symptoms like back pain, loss of height over time, a stopped posture. When we move on to the risk factors it is more prone to women & post menopausal women. Also smoking, alcohol, family history, inactive lifestyle, thin / small frame, calcium & vitamin deficiency, getting older, corticosteroids, anti seizure medications and medical condition that weaken calcium absorption etc... are the risk factors of osteoporosis. The diagnosis of osteoporosis can be done by DEXA scan (Dual X-ray absorptiometry scan) measures bone density by passing a high and low energy x-ray beam through the body, usually in the hip and the spine. For the post menopausal women DEXA result is based on the T score. The T score is equal to or above -1.0 is considered normal bone density. The T score between -1.0 and -2.5 is considered as low bone density, referred as Osteopenia. The T score -2.5 and below is considered as osteoporosis. Other than the DEXA scan, ultrasound scan is also used to determine the bone density. Also we collect blood samples & urine samples to check the values.

Move on to the treatment, medication is the proper care for osteoporosis. Now a days the modern technology become popular in clinical side. Hormone replacement therapy can be used. More over from the above technique, first of all the person suffering from osteoporosis should take nutrition for strong bones. Also do proper exercise to regain better health. The prevention of this disease can be done by avoiding alcohol intake, stop smoking, and take calcium and vitamin D supplements and do walk or jog regularly.

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CERVICAL CANCER



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Holy Grace Academy of Pharmacy

Across the globe, cervical cancer is the fourth most common cancer among women. It is estimated that about 604,000 new cases of cervical cancer were reported in 2020. Around 342,000 people died from cervical cancer in 2020. Most of these deaths, about 90%, happened in countries with lower incomes. Women who have HIV are six times more likely to get cervical cancer than women who do not have HIV. Approximately 5% of all cases of cervical cancer are caused by HIV. Furthermore, in every part of the world, younger women are affected more than others by HIV-related cervical cancer.

Cervical cancer that begins in the cells that grow in the cervix (the lower part of uterus that connects to vagina). The majority of cervical cancers are caused by various strains of the HPV virus, also known as Human Papillomavirus (HPV). HPV is a very common infection that is spread through sexual contact. The body's immune system usually fights off the virus, but in a small number of people, the virus can survive for years. This helps to drive the process that turns some cervical cells into cancer cells. Screening tests and a vaccine can help reduce your risk of getting cervical cancer.

SYMPTOMS:

Cervical cancer may not cause symptoms when it is first diagnosed. However, as the cancer progresses, it may cause symptoms such as:

- Vaginal bleeding that occurs after sex, between periods, or after the menopause.
- Heavy, prolonged menstrual bleeding
- Watery, blood-stained vaginal discharge
- Heavy, foul-smelling vaginal discharge
- Pain or discomfort in the pelvis during sexual intercourse

CAUSES AND RISK FACTORS:

Cervical cancer is caused by changes in the cells' DNA, which contains instructions that tell the cells what to do. These changes cause the cells to multiply faster, which is normal for healthy cells to do as part of their normal life cycle. This leads to an overabundance of cells, which can form a mass known as a tumour. These cells can invade and damage healthy body tissue. Over time, these cells can break away from the tumour and spread to other areas of the body. The most common cause of cervical cancer is Human Papillomavirus (HPV), which is a virus that is transmitted through sexual contact. Most people never experience any problems with HPV, and it usually disappears on its own. However, for some people, HPV can cause changes in cells that can lead to cancer.

People who smoke tobacco are more likely to develop HPV (human papillomavirus) infections, which are more likely to last longer and be more likely to spread to other parts of the body. HPV is the cause of most cervical cancers. Having more than one sexual partner increases the risk of getting HPV, and early sexual activity increases the risk of developing cervical cancer. Other sexually transmitted infections (STIs) can also increase the risk of HPV cancer, such as herpes, gonorrhoea and syphilis, as well as HIV/AIDS. If you have a weakened immune system

due to another health condition and have HPV, you may be at risk for cervical cancer. If you have a parent who took a medicine known as diethyl stilbestrol (also known as DES) while you were pregnant, it may increase your risk of getting cervical cancer. DES was a medicine used to prevent miscarriage in the 1950s. It has been linked to a form of cervical cancer called Cervical Carcinoma.



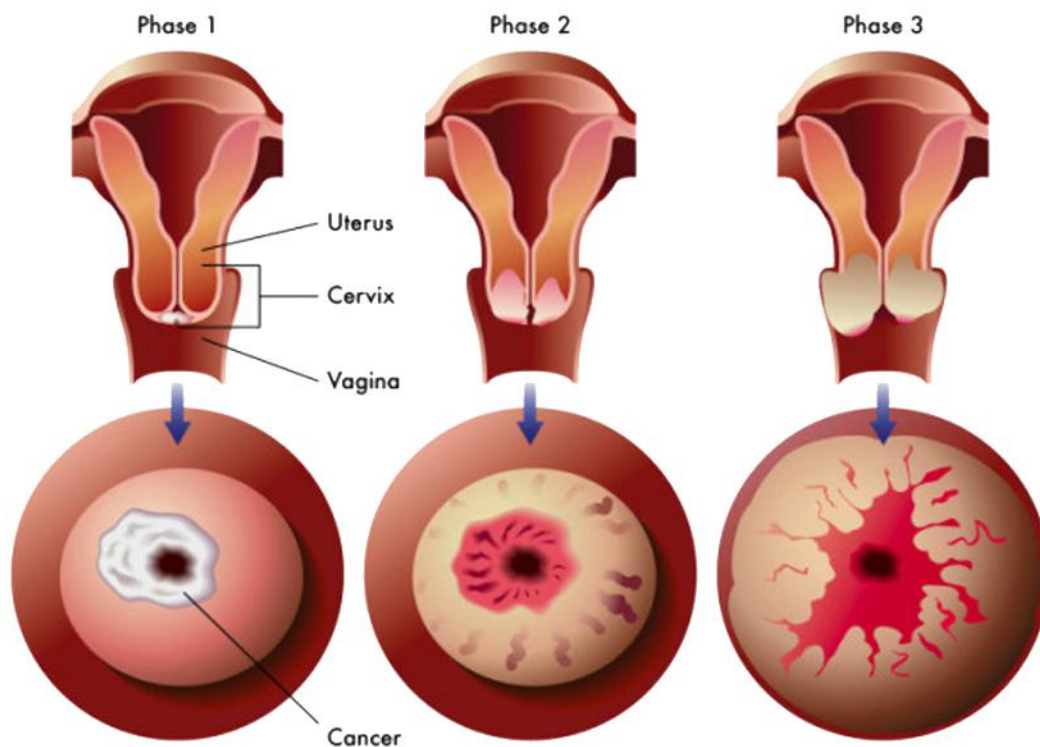
PREVENTION AND TREATMENT:

Cervical cancer prevention should encompass a multidisciplinary, including community education, social mobilization, vaccination, screening, treatment and palliative care.

- Vaccinating against HPV can reduce your risk for cervical cancer and other cancers related to HPV.
- Have a routine Pap test. Pap tests can help detect pre-cancerous conditions in the cervix and can be used to monitor or treat these conditions. Most medical organizations recommend having a routine Pap test at the age of 21 and repeating it every couple of years.
- Practice safe sex. Take steps to reduce your risk of sexually transmitted infections by using a condom and limiting your number of sexual partners.
- Do not smoke. try to quit smoking if you are a chain smoker ask to your health care professional about how to help you quit smoking.

When cervical cancer is diagnosed, it is usually first treated surgically to remove the cancer cells. Other possible treatments include medicines that kill the cancer cells, chemotherapy, targeted therapy medicines, and radiation therapy with high energy beams. In some cases, radiation and low-dose chemotherapy may be used.

Cancer of the Cervix



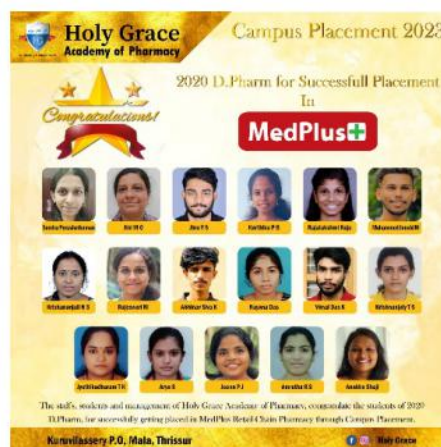
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GALLERY



JULY CHAPTER PLACEMENT DRIVE (26/07/2023)




WORLD HEPATITIS DAY(29/07/2023)



Holy Grace


Academy of Pharmacy

(Approved by PCI | Affiliated to KUHS & DME)



WORLD HEPATITIS DAY

Talk on :-
WORLD HEPATITIS DAY - FACTS TO KNOW



Dr. ARATHY P.S
(General Physician, Govt. Hospital Mala)

Theme : **ONE LIFE
ONE LIVER**

VENUE : PHARMACY CAMPUS
29/07/23 10.30 AM



AUGUST CHAPTER

WORLD BREAST FEEDING DAY (01/08/2023)



Painting Competition

SENT OFF FOR 2020 DPHARM (04/08/2023)



INDEPENDENCE DAY (15/08/2023)



WORLD PHOTOGRAPHY DAY(18/08/2023)
“COLOURS OF THE SKY: THE ULTIMATE ART GALLERY ”



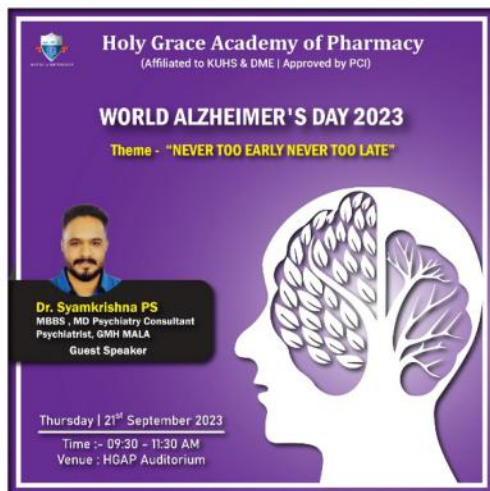
Photos By Abijith S S,First Year D.Pharm

ONAM CELEBRATION(24/08/2023)



SEPTEMBER CHAPTER

WORLD ALZHEIMER'S DAY - "NEVER TOO EARLY TOO LATE" (21/09/2023)



WORLD PHARMACIST DAY - "PHARMACIST STRENGTHENING HEALTH SYSTEM" LIPID PROFILE TESTING CAMP (19/09/2023)



HEALTH AWARENESS RALLY (25/09/2023)



OUTREACH PROGRAM AT ST.ANTONY'S HIGHER SECONDARY SCHOOL, MALA ON "ADVERSE EFFECTS OF SELF MEDICATION" (25/09/2023)



AWARDS / RECOGNITIONS RECEIVED

AUGUST



Dr. Priyambada Sarangi, Director, Holy Grace Academy of Pharmacy has Participated as one of the Academic Leaders in “Ninth Round Table Discussion of Academic Leaders” organized by Centre for Education Growth and Research at Chennai Institute of Technology & Applied Research on 04/08/2023.

SEPTEMBER



Dr. Priyambada Sarangi, Director, Holy Grace Academy of Pharmacy, Conferred with “Visionary Academic Leader of the Year 2023 Award” by Centre for Education Growth and Research, New Delhi. The award was presented by Prof. Anil D Sahasrabudhe, Chairman, NBA-NAAC-NETF on 27/09/2023.



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