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Menstruation- Hygiene Management



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ABSTRACT

Women's health enterprises are generally underrepresented in introductory and translational exploration, but reproductive health has been hampered by a lack of understanding of introductory uterine and menstrual physiology. Menstrual health is an integral part of overall health because between menarche and menopause, utmost women menstruate. Yet for knockouts of millions of females around the world, period regularly and frequently catastrophically disrupts their physical, internal, and social well-being. Enhancing our convention of the underpinning marvels involved in period, unusual uterine bleeding, and other period-related diseases will move us near to the thing of substantiated care. likewise, a deeper mechanistic understanding of period- a presto, scarless mending process in healthy individualities- will probably yield perceptivity into a myriad of other conditions involving regulation of vascular function locally and systemically.^[1]



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INTRODUCTION:

Period is a natural physiological process that most women suffer during their reproductive times.^[2] Women and girl's need information on menstrual health and hygiene. For women and girls to live a healthy and staid life, operative menstrual health and hygiene is all-important.^[3] Menstrual hygiene operation is an important health and social issue in Nepal. Nepal is generally hindu country. Although it isn't explicitly stated in any hindu Holy Writ, numerous hindus believe that menstruating women and girls are impure. Due to religious beliefs about the contamination of women during period, numerous women and girls are barred from participation in typical diurnal and community conditioning during period. Nine out of ten women and girls in Nepal report restrictions during period including being banned from entering prayer apartments, tabernacles, and kitchens, touching their manly family members, sleeping in their own bed, and going to academy. There are some hormonal changes occurs during menstrual cycle. Estrogen levels rise and fall twice during menstrual cycle. Estrogen level rise during mid-follicular phase and drops after ovulation.

SOCIAL ECOLOGICAL MODEL:

The social ecological model (SEM) is a paradigm used to guide public health exploration and practice.^[4] The model describes how individual and environmental characteristics impact health issues. Examining a public health problem using the SEM shows that health is impacted by factors on multiple situations including existent, interpersonal, community, organizational and policy situations.^[5] Although utmost menstrual health and hygiene exploration and interventions have been concentrated on individual and interpersonal situations, disquisition of factors affecting menstrual health and hygiene at all situations of SEM is important.^[6] Women and girls may warrant of knowledge about period. Poor knowledge on period leads to misconceptions that immortalize smirch and artistic restrictions as well as poor hygiene.^[7]

THE MENSTRUAL CYCLE:

The main phases in the menstrual cycle are the proliferative phase, secretory phase, and menstrual phase. During the proliferative phase, the endometrium responds to the endocrine ambience to suffer expansive proliferation. This phase is variable in length and oestradiol is the dominant hormone. At ovulation, the oocyte is released from the dominant ovarian follicle. The follicle also transforms into the corpus luteum, which secretes progesterone and

leads to a progesterone dominant secretory phase, generally lasting 14 days. During this phase, in the presence of high situations of oestradiol and progesterone, the cells of the endometrium suffer morphological and functional changes, a process known as decidualization. With the demise of the corpus luteum in the late secretory phase, progesterone and oestradiol situations decline, and the cells of the endometrium are no longer maintained. As a consequence of progesterone pullout, there's a coordinated spatial and temporal response in the upper functional subcaste of the endometrium that culminates in period. Original cellular and molecular events include endometrial apoptosis, seditious middleman affluence and the induction of matrix metalloproteinase (MMP) expression. The pre-menstrual phase encompasses endometrial transition from the secretory phase, through menstrual breakdown and form, to rejuvenescence in the proliferative phase. The ovarian fellow of the pre-menstrual phase is lute follicular transition.^{[8][9]}

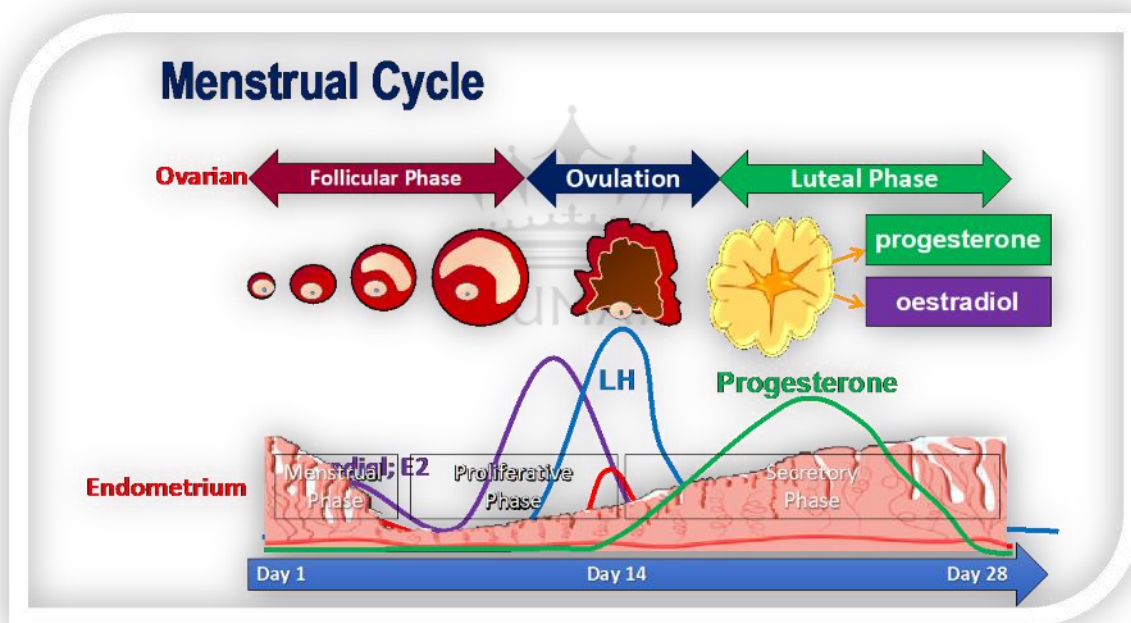


Fig.1. Menstrual Cycle

You may have period symptoms like these:

1. Cramps
2. Tender breasts
3. Irritability
4. Mood swings

5. Low back pain

IMPORTANT MENSTRUAL CYCLE HORMONES:

1. Follicle Stimulating Hormone (FSH)
2. Luteinizing Hormone (LH)
3. Estrogen
4. Progesterone
5. Testosterone

MENSTRUAL DISORDERS:

POLYCYSTIC OVARY SYNDROME (PCOS):

Polycystic ovary syndrome (PCOS) is an endocrine- gynecology condition affecting numerous women of travail age. Although a part of the involved process in PCOS circumstance is discovered, the exact etiology and pathophysiology aren't exhaustively understood yet.^[10] This syndrome is frequently associated with enlarged and dysfunctional ovaries, redundant androgen situations, resistance to insulin etc.^[11] It's estimated that roughly every 1 in 10 women face PCOS before menopause.^[12]

Term	Meaning
Oligomenorrhea	Infrequent Periods
Hypomenorrhea	Short or Light Periods
Polymenorrhea	Frequent Periods
Hypermenorrhea	Heavy or long periods
Dysmenorrhea	Painful periods
Amenorrhea	Absent Periods

Some other menstrual disorders are:

MEDICATIONS USED TREATMENT OF MENSTRUAL DISORDERS:

Medicaments including 3- hydroxy-3-methyl-3-glutaryl-coenzyme A (HMG- CoA) reductase inhibitors, thiazolidinediones, sodium- glucose cotransporter-2 inhibitors, dipeptidyl peptidase- 4 inhibitors, glucose like peptide- 1 receptor agonists, mucolytic agents and some step-ups have been backing data for being repurposed in PCOS.^[13]

RISK FACTORS:

A] External Factors:

1. Epigenetic Mechanism: Epigenetic refers to heritable differences in genome and gene expression without any changes in DNA sequence.^[14] LH/ choriogonadotropin receptor (LHCGR) is responsible for the steroidogenesis process in theca cells.^[15]

2. Environmental toxics: Endocrine dismembering chemical (EDC) act as hormones agonist or antagonist in binding to their receptors. EDCs are nearly the corridor of everything we use in our diurnal life. Their structures correspond of phenols or halogens like chlorine and bromine, so they imitate steroid hormone conduct.^[16]

3. Stress: Stress triggers the hypothalamic- pituitary- adrenal (HPA) axis to release cortisol. Stress is also involved in enhancing the insulin situations. Other stress influences on PCOS may relate to conclusion with anti-mullerian hormone (AMH) and changing coitus hormone situations.^{[17][18]}

B] Internal Factors:

1. Insulin Resistance: IR means an inadequate cells response to insulin.^[19] IR is independent of cases obesity, body fat geomorphology, and androgen situations, i.e. it has been reported in spare cases as well. Insulin directly triggers androgens product in ovarian theca cells and grow.^{[20][21][22][23]}

2. Inflammation: Applicable inflammation is a vital cause of oocyte growth and ovulation. In addition, NLRP3 inflammasomes induce follicular pyroptosis,^[24] ovarian fibrosis and disturbance of follicular conformation. Inflammation is a cause of HA.^[25]

3. Oxidative Stress: Oxidative stress (OS) is an imbalance between pro-oxidants and antioxidants. ROS plays a part in different mechanisms like signaling pathways, cell growth and isolation, as well as RNS.^{[26][27]}

MENSTRUAL HYGIENE MANAGEMENT:

Menstrual products also called as “feminine hygiene” products are made to absorb or catch menstrual blood. A number of different products are available, some are disposable, and some are applicable. Where women can go it, particulars used to absorb or catch monthlies are generally commercially manufactured products. Menstruating women manage period primarily by wearing menstrual products analogous as tampons, napkins or menstrual mugs to catch the menstrual blood.^[28]

The main disposable products include:

1. **Sanitary napkins:** also called as sanitary towels or pads. It is rectangular pieces of material worn attached to the underwear to absorb menstrual flow, often with an adhesive backing to hold the pad in place.

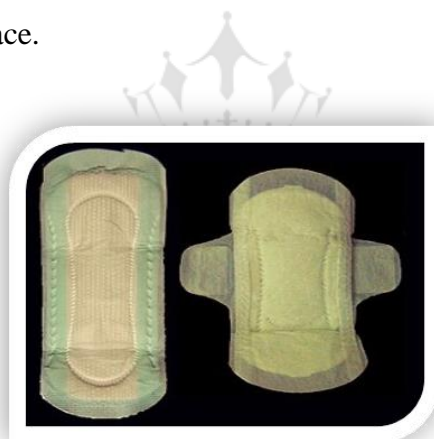


Fig.2. Sanitary Napkins

Tampons: This are disposable cylinders of treated rayon/ cotton composites or each- cotton coat, generally blanched, fitted into the vagina to absorb menstrual inflow.



Fig.3. Tampons

The main reusable products include:

1. **Menstrual cups:** These are disposable cylinders of treated rayon/cotton blends or all-cotton fleece, usually bleached, that are inserted into the vagina to absorb menstrual flow.



Fig.4. Menstrual Cup

2. **Reusable cloth pads:** These pads are made of cotton, terrycloth or flannel and may be handsewn (reused clothes or towels) or storebought.

- Due to poverty, some women cannot go marketable womanlike hygiene products.^[29] “period poverty” is a global issue affecting women and girls who don't have access to safe, aseptic products.^[30]

DIAGNOSIS, CARE AND TREATMENT FOR DISORDERS:

A range of diseases of menstrual cycle have significant counteraccusations for physical, internal, and social well-being. Timely opinion and support for diseases and discomfort requires those passing a menstrual cycle to be suitable to identify menstrual symptoms that are abnormal for their body and to have access to health services handed by competent health workers who operate in system that's responsive to menstrual health requirements. In grounding menstrual health within the menstrual cycle, we fete that the treatment of health conditions that may beget abnormal uterine fibroids or cancer, falls beyond the remit of menstrual health. still, by addressing menstrual health requirements there's significant occasion to ameliorate the health of those passing these conditions.^[31] Treatment and care for discomforts and diseases may range from clinical care to advice for tone-care. diurnal access to coffers similar as drug, comforting, exercise, or heat remedy.^{[32][33]}

The ministry of health and family welfare introduce a scheme for promotion of menstrual hygiene in girls of rural areas. The scheme introduced is menstrual hygiene scheme (MHS).

MENSTRUAL HYGIENE SCHEME:

OBJECTIVES:

- To increase awareness among adolescent girls on hygiene.
- To increase use of high quality sanitary napkins to adolescent girls.
- To ensure safe disposal of napkins in an environment friendly manner.

The scheme is implemented in 2011 in 107 districts in 17 states. The pack of six sanitary napkins called "Freedays" was provided to rural area girls for Rs.6 from 2014 onwards. The ASHA will continue to be responsible for distribution, receiving an incentive Rs.1 per pack sold and free pack of napkins every month for her own use. She will convene monthly meetings at Anganwadi centres or other platforms for adolescent girls to focus on menstrual hygiene management. The range of IEC material has developed around MHS. In 360 degree approach to spread awareness in adolescent girls about safe and hygienic menstrual health practices. It includes audio, video and reading material for individuals. It also includes job aids for ASHAs and other functionaries for communicating with adolescent girls.

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