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# Menses During Student Life

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***Abstract*** : Menstruation, in other terms known as 'periods', is the discharge of blood along with tissue lining, the inner layer of uterus known as the endometrium lining through the vagina. Items which are essential for consumption during 'periods' are necessary to know well. Remedies from painful menstruation is very essential part that to be known by every young girl students. Family support during menstruation and details of mechanism are also discussed in this article.

***IndexTerms*** – Young Girl,Menstruation, Family Support, Awareness

## INTRODUCTION

'Driti' was a School going child studying in Class VI. One day during PT period while their regular exercise going on, she felt stomach ache. Without knowing about the problem, she informed her teacher accordingly. Two teachers came running to the ground and took her with them to the school's nursing area. Probably she was feeling like something was oozing out from her genital part. So her white skirt had marks of blood stains. Working into them she started crying. The teacher consoled her and stated that "it is as normal as for any other girl child and this indicates the onset of puberty and gaining adolescence." Understanding the situation, she showed conscience regarding it.

Menstruation, in other terms known as 'periods', is the discharge of blood along with tissue lining, the inner layer of uterus known as the endometrium lining through the vagina. It continues for a particular interval of time like 3-5 days in every month, sometime may be extended till 7 days. Some months it may occur in a regular or proper manner or it may be irregular which it occurrence day may shift a little quickly or little late. One may have periods at an early age of 10-15 years of age and continues till 45-50 years and after that it gets stop. Initial starting of periods in a tender age is known as menarche and completely stopping of the events of menstruation at a particular ageing time is known as menopause.

While having menstruation, there are girl students who have to bear this monthly blood loss and have to study or to do their academic works. During periods girl students face many consequences like cramping, lower back pain, fatigue, mood swings, headaches, bloating, acne, breast tenderness. Moreover, they may also face various disorders, medically termed as Amenorrhea (absence of menstruation), Menorrhagia (Excessive menstruation), Dysmenorrhea (Painful menstruation) etc.

## FOOD FACTORS CONTROLLING MENSTRUATION

Items which are essential for consumption during 'periods' are as follows-

Water: Helps to stay hydrated and reduces headaches which occurs due to dehydration and reduces bloating.

Fruits: Water rich fruits and sweet fruits helps to maintain water balance in body and helps to curb sugar cravings without eating of unhealthy unsaturated fatty acids and sugars.

Green Leafy Vegetables: During heavy menstrual flow, iron deficiency occurs and taking iron tablets during menstrual days may cause constipation and may show side effects for a few in the vast population. To enrich iron content in blood, green leafy vegetables like spinach may be preferred.

Chicken: Chicken is rich in iron and protein which helps to stay full and curbs cravings.

Folic Acid: Intake of folic acid is good for health and during 'periods' as it helps to build red blood cells which regulates iron level in blood. One may have them through medicinal course like tablets or from sources like broccoli, peas, leafy green vegetables like spinach, cabbage, chickpeas and citrus fruits. It maintains optimum level of vitamin B9 in body.

Dark Chocolate: Enriched with iron and magnesium and controls "mood-swings" during menses.

Nuts: Enriched with magnesium and various kinds of vitamins and omega-3-fatty acids. Allergenic persons shouldn't include in their diet.

Yogurt: Enriched with magnesium, calcium and provides nutrition to the good bacteria present in vagina.

Items which is to avoid for consumption during 'periods' are as follows-

Salt: High salt concentration may increase bloating and cause edema.

Coffee: Coffee contains caffeine, which can cause bloating and edema issues with an increase in headaches and sometime causes diarrhea.

Alcohol: Causing dehydration of body, increase bloating, headaches, diarrhea, vomiting surrounded it.

Red meat: Red meat is responsible for making prostaglandins in body which in turn causes cramps when taken too much during menstruation.

Spicy delicacies: Causes diarrhea, vomiting, abdominal pain during periods. One can have spicy food except one's menstrual days.

**REMEDIES FOR PAINFUL IMPACTS OF MENSTRUATION**

For 'period' cramps: - Soft massages in abdomen or waist
- Hot water bags suppresses pain in abdomen and stoop positions
- Exercise like simple posturing *yoga asana* may reduce pain

For 'bloating': - Practice exercise
- Low sodium intake
- Drinking ample amount of water
- Prevent caffeine and alcohol
- Less oily food intake

**FAMILY SUPPORT DURING MENSTRUATION TO A GIRL STUDENT**

Being a loyal supporter of girl students, always try to understand their situation and try not to believe easily on various social taboos which prolong the mental illness of the lady and allow them sufficient rest and sleep. Try to have hospitable behavior towards them. If possible help them with comforting manages, walk together, chat together, preparing hot water bags, help them with medication if needed.

**HORMONAL REGULATION IN MENSTRUATION**

Menstruation is not just passing of blood from the vaginal pore but it is the removal of degenerated follicles which was short out of the ovaries as since and gets passed out as no fertilization has occurred by sperm from donor.

After birth of a girl child, a girl child may have 60,000 to 80,000 ova in her ovaries which progressively degenerate at different times after puberty and remains like 450 in count. A girl has two ovaries. Each ovary contains several ova or ovum or ootid. The ovum in ovaries gets covered with granulosa cells with a single layer of granulosa cells it makes the primary follicle, with two layers known as secondary follicle, with three layers known as tertiary follicle and when in the stage of tertiary it matures after time and thus known as graafian follicle. A graafian follicle is a ovum lining outside with perivitellin space, zona pellucida, cells of

corona radiata, granulosa cells wrapping the corona radiata. In the stage of graafian follicle, it shoots out of the ovaries in regulation of an hormone LH (Leutinizing hormone) and development by FSH (Follicle Stimulating Hormone). The matured graafian follicle arrives at a place in oviduct or fallopian tube, which is subdivided into three regions known as isthymus, ampula, fimbria. It waits in ampullary – isthymic junction for sperm to fertilise and the whole process is synchrinised. If not fertilised, soon it degenerates. The uterus is well lined with blood tissues foring the endometrium lining, outside of it was myometrium which follows perimetrium, followed by the degeneration of follicle, the endometrium lining for degenerate and thus 'period' occurs.

GnRH is secreted by the hypothalamus in fore brain region, which stimulates the anterior lobe of pituitary gland and thus LH and FSH are secreted. FSH stimulates the growth of graafian follicle. FSH also helps the development of eggloocyte with in the follicle to complete the meiosis I, that to form secondary oocyte. FSH also is stimulating the formation of estrogen hormone, which is responsible for the growth of mammalian lobes (breast) & development. Side by side, LH induces the rupture of the mature graafian follicle and thereby controls the release of secondary oocyte, i.e. needed for ovulation. The remaining part of the graafian follicles is stimulated by LH to develop into corpus luteum (yellow body) which in turn degenerates to form corpus albicans (white scar) in ovaries. Again, the rising level of progesterone inhibits the release of GnRH which in turn inhibits production of FSH, LH and progesterone.

## OOGENESIS

Oogenesis is the process of formation of ova in ovaries, a female gamete. It has three phases namely Multiplication phase, growth phase, maturation phase. Chromosome number in Multiplication phase is 46, Growth phase 46, Maturation phase which is subdivided in two stage are 23, 23 but at the ends of all these events chromosome number is restored to 46.

1. Multiplication phase: Events like multiplication occurs in ovaries of female foetus where an oogonium (2N) and two additional oogonia (2N).
2. Growth phase: Events occurs each month in ovary of female after puberty where one primary oocyte (2N) undergoes meiosis I to form first polar body (N) and a secondary oocyte (N).
3. Maturation phase: Events like ovulation, Fertilization, zygote formation governs this phase where the polar bodies (N) and the secondary oocyte (N) form one polar body and one mature ovum (N) which ompletes its Metaphase and stops further development and awaits for sperm for starting Anaphase, thus works as an Anaphase promoting Factor (ANF) soon after the event, the male and female pronucleus fuses and thus fertilization occur which results in to a zygote (2N) restoring 46 chromosome count.

## MENSTRUAL CYCLE, A 28 DAY CYCLE IN GENERAL

| Phases | Days | Events |
|---|---|---|
| Menstrual | 1 – 5 | Endometrium breaks down, menstruation begins. The cells of endometrium, secretions, blood and unfertilized ovum constitute the menstrual flow. Production of progesterone, LH, Estrogen is reduced. In fact, menstrual flow is associated with withdrawal of progesterone. |
| Follicular (Proliferative) | 6 – 13 | Endometrium rebuilds, FSH secretion and estrogen secretion increase |
| Ovulatory | About $14^{th}$ day | Both LH and FSH attain a peak level concentration of estrogen in blood is also high and reaches its peak. Ovulation occurs. |
| Luteal (Secretory) | 15 – 28 | Corpus luteum secretes progesterone. Endometrium thickness and uterine glands become secretory. |

In primates, the menstrual cycle of two separate cycles that operates simultaneously in two location organs in body. These are (1) Uterine cycle and (2) Ovarian cycle.

| | Uterine cycle | Ovarian cycle |
|---|---|---|
| Hormones controlling cycle | Estrogen and progesterone from ovary | FSH and LH from anterior pituitary |
| Function | Growth of endometrial lining to prepare uterus for implantation and to shed off the lining if no implantation occurs | Release of hormones necessary for female reproductive system follicular growth and ovulation |
| Region where cycle occurs | Uterus | Ovaries |
| Phases of cycles | I. Menstrual phase<br>II. Proliferative phase<br>III. Secretory phase | I. Follicular phase<br>II. Ovulatory phase<br>III. Luteal phase |

Sex hormones affect neurotransmitters and control the perception of thinking during transition periods. Estradiol and progesterone levels charges having different neurological active responses with the dopaminergic system. Estradiol increases an energetic feeling in woman in follicular phase. Before the onset of menstruation in every month, the transport of neurotransmitter serotonin in brain increased which induces mood swings. It was followed by quick releasing of neurotransmitter estrogen which acts as an excitatory neurotransmitter. As an important hormone, estrogen affects dopamine neurotransmitter.

## CONCLUSION

Menstruation is a part and parcel of woman's life. Naturally, women are entering in menstruation life in every month. But, menstruation is really an issue for a beginner, as it is entering into womanhood , as when she is not ready for it. Studying with concentration and attention is anyway even disrupted in normal menstrual cycle; and in addition with menstrual complication, life of a girl student is really very miserable. Our society and family members may support girl students during menstruation with special attention and extra care to continue her study well.