

# Insight of Pathophysiology of Premenstrual Syndrome through Ayurveda – A Narrative Review

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## ABSTRACT

**Background:** Premenstrual syndrome is a common disorder among young and middle-aged women. The cyclic occurrence of physical, psychological, and behavioral symptoms in the luteal phase of the menstrual cycle characterizes it. These symptoms usually remit upon onset or immediately after menstruation. It is estimated that approximately 90% of women will experience premenstrual syndrome (PMS) at some point in their lifetime. The exact cause of PMS is unknown. Ayurveda doesn't mention any condition similar to PMS, but all diseases have been noted based on *Doshas*. In Ayurvedic terms, PMS is considered a pathological condition due to imbalances in *Vata*, *Pitta*, and *Kapha* during the *Rituvyateeta Kala* (luteal phase) of *Artava Chakra* (menstrual cycle). Understanding of the involvement of the *Dosha* in PMS's *Samprapti*(pathology), the *Chikitsa* (treatment) can be administered. **Methods and materials:** This narrative review synthesizes information from Ayurvedic and modern texts, previous research, and relevant literature to explore the pathophysiology of PMS from an Ayurvedic perspective. **Result and Discussion:** After analyzing the relation between PMS symptoms and *Tridosha* (three governing factors of body), it was found that PMS symptoms correlate with imbalances in *Vata*, *Pitta*, and *Kapha Doshas* during the luteal phase. Specific focus is placed on the obstruction of *Vata Dosha* (*Avarana*), which plays a significant role in PMS pathology.

**Key Words** Menstrual cycle, Premenstrual Syndrome, *Rituvyateeta Kala*, *Tridosha*

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## INTRODUCTION

Reproductive health is a vital aspect of women's overall health and an indispensable component of human development. It indicates the state of health during childhood and adolescence. It significantly impacts adulthood and beyond, influencing the health of both men and women

and the next generation<sup>1</sup>. Premenstrual syndrome encompasses clinically significant somatic and psychological manifestations during the luteal phase of the menstrual cycle<sup>2</sup>. These symptoms are severe enough to impair interpersonal relationships and normal activities. The World Health Organization International Classification

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of Diseases (ICD) includes “premenstrual tension syndrome” under the heading “Diseases of the Genitourinary Tract<sup>3</sup>”.

Studies have shown that 75% of women of reproductive age are affected by premenstrual syndrome. Women with more severe affective symptoms are classified as having premenstrual dysphoric disorder (PMDD) and 3-8% of women suffer from PMDD<sup>4</sup>. According to the American Council of Obstetrics and Gynaecology, up to 85% of women have one or more symptoms of premenstrual syndrome. 20-40% of reproductive women and 14-88% of adolescent girls have moderate to severe PMS<sup>5</sup>. A study found that only 36% of women diagnosed with PMS met the diagnostic criteria one year later.

The definitive etiology of PMS is uncertain. Several studies suggest that cyclical changes in several hormone and neurotransmitter levels trigger the symptoms<sup>6</sup>. Some clinical trials have shown that serotonin precursors significantly increase between days 7 to 11 and 17 to 19 of the menstrual cycle<sup>7</sup>. Magnesium and Calcium deficiencies are postulated as nutritional causes of PMS<sup>8</sup>. Genetic factors also seem to play a role, as the concordance rate is two times higher in monozygotic twins than, in dizygotic twins<sup>[9]</sup>. Increased endorphins, gamma-aminobutyric acid (GABA) system alterations, and hyperprolactinemia also affect the PMS<sup>10</sup>. The experience of abuse (emotional, sexual, or physical) in early life places women at higher risk for PMS in the middle-to-late reproductive years<sup>11</sup>.

Women go through various physical and mental changes throughout their lifetimes, which are classified into stages such as *Bala*(childhood), *Madhyama*(adult), and *Vridhavastha* (elderly people)<sup>12</sup>. However, the stress and tension caused by modern lifestyles, nuclear families, and work environments can lead to conditions like PMS. In classical Ayurvedic literature, there is no explicit reference to any condition resembling premenstrual syndrome. Although Ayurveda permits the disease without nomenclature by judging the involvement of *Dosha* and *Dushya*<sup>13</sup>. So, PMS can be explained based on the principles of *Dosha* (primary energies), *Dhatu* (fundamental tissues), and *Mala* (waste products). In Bhavaprakasha mentioned that the difference in the color of *Artava* (menstrual bleeding) is due to the *Prakriti* of individuals, and vitiated *Dosha* are responsible for pain and burning sensation<sup>14</sup>. According to Acharya Charaka, normal menstruation is that which has a duration of blood loss of five days and is not associated with pain or burning sensation<sup>15</sup>.

### Symptoms of Premenstrual Syndrome:

Premenstrual Syndrome encompasses clinically significant somatic and psychological manifestations during the luteal phase of the menstrual cycle, leading to substantial distress and impairment in functional capacity. There are more than 150 symptoms associated with PMS<sup>16</sup>. The symptoms occur in cycles and vary in intensity and duration. The majority of women with premenstrual syndrome only experience a few of the potential symptoms. Premenstrual

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syndrome is not a single or specific syndrome but a heterogeneous group of symptoms. The American College of Obstetricians and Gynaecologists (ACOG) (2011) has defined PMS as “the cyclic occurrence of symptoms that are sufficiently severe to interfere with some aspects of life and that appear with a consistent and predictable relationship to the menses<sup>17</sup>.” The commonly used assessment tools for PMS are the

PMS Scale, the menstrual symptomology questionnaire, the Menstrual distress questionnaire, the Calendar of Premenstrual Experience (COPE), the Premenstrual assessment form, and the Premenstrual Symptoms Screening Tool (PSST). The most common physical and psychological symptoms of Premenstrual symptoms are explained in Table 1 & 2

**Table 1** Physical symptoms of premenstrual symptoms

Weight gain	Skin changes, rashes and pimples	Headache
Swollen extremities	Generalized ache and pain	Palpitation
Breast tenderness	Increased appetite	Fainting
Abdominal bloating	Food craving	Nausea and vomiting
Fluid retention	Change in bowel habits	Fatigue
Muscle and joint pain	Abdominal cramps	Insomnia/ Hypersomnia

**Table 2** Psychological and behavioural symptoms of Premenstrual syndrome:

Anger	Obsessional thoughts	Social withdrawal
Anxiety/tension	Decreased interest in activities	Impulsiveness
Tearful/easy crying	Confusion	Irritability
Depression	Forgetfulness	Loss of concentration
Poor judgement	Irritability	Hopelessness
Difficult concentrating	Mood swing	Restlessness
Compulsive behaviour	Being over sensitive	Lack of self-control
Feeling overwhelmed	Wish to be alone	Feeling guilty

## MATERIALS AND METHODS

For this review, literary materials related to premenstrual syndrome, *Tridosha*, *Avarana*, *Yoni-roga* had been compiled, screened and critically analysed from Charaka Samhita, Susrutha Samhita, Ashtanga Sangraha, Astanga Hridaya and also from the commentaries of these texts and Ayurvedic textbooks Ayurvediya Prasuthi tantram evam Striroga, research articles published in peer reviewed journal, Pub-Med, Google Scholar, J-gate etc. The search strategy used for the article searching the words are,

Premenstrual syndrome, menstrual cycle, *Tridosha*, *Avarana* and *Yoni-roga*.

## RESULTS AND DISCUSSION

According to Ayurveda, a healthy individual is characterized by a balanced state of *Doshas*, optimal digestive function, and normal functioning of *Dhatus* (tissues) and *Malas* (waste products). Additionally, there must be a clear state of *Atma* (soul), *Indriya* (sense organs), and *Manas* (mind)<sup>18</sup>. The three *Doshas* are essential for maintaining the body’s integrity and performing all physiological and biochemical

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processes<sup>19</sup>. These *Doshas* are fundamental to both health and disease; their equilibrium supports health, while imbalances lead to disease. Ayurveda considers these principles as timeless, though their application may evolve with societal changes. Premenstrual syndrome (PMS) is not explicitly mentioned in classical Ayurvedic texts; it is considered an '*Anukta Vyadhi*' (disease not detailed in Ayurvedic classics). As medical science advances, new diseases are encountered that may not have direct references in classical texts. To address such conditions, Ayurveda provides guidelines for disease assessment, including *Prakriti* (constitution), *Adhithana* (site), and *Samuththana* (symptoms)<sup>20</sup>.

In the context of PMS, the *Tridoshas* can be used to explain the pathology. PMS typically occurs during the luteal phase of the menstrual cycle, which follows the proliferative phase (*Ritukala*) and precedes menstruation (*Rajasrava Kala*). This phase, known as *Rituvyateeta Kala* (secretory phase), is influenced primarily by *Pitta*. According to Acharya Charaka, the ovum accumulated during this period is termed '*Purana Rajas*,' and the menstrual cycle concludes with its evacuation<sup>21</sup>.

During the *Rituvyateeta Kala* (secretory phase), *Pitta* levels rise towards the end of the *Ritukala* (proliferative phase), leading to *Pittaprakopa* (increased *Pitta*), while *Kapha* decreases, resulting in *Kaphasamana* (reduced *Kapha*). Subsequently, *Vata* becomes active and increases, leading to *Vata Prakopa* (elevated *Vata*). Symptoms during this phase include

*Purana Rajas* (unfertilized ovum), *Yoni Sankocha* (vaginal constriction), and elevated body temperature. Impaired *Pitta* can lead to the accumulation of impurities, obstructing the *Artava Vaha Srotas* (female reproductive system). This obstruction results in increased *Vata* and decreased *Kapha*, which manifests as the physiological and psychological symptoms of PMS.

In Ayurvedic classics, diseases related to the *Tridosha* are categorized into several types based on their manifestations. *Nanatmaja Vikara* refers to diseases produced by a single *Dosha*, while *Samanyaja Vikara* involves the vitiation of two or more *Doshas*. *Avarana Vikara*, on the other hand, is a particularly complex concept dealing with obstructive diseases. *Avarana*, or obstruction, is particularly intricate. *Vata* is unique among the *Doshas* due to its *Chalatwa* (mobility) property, which means its movement can be affected by obstruction. When *Vata*'s course is obstructed by the other two *Doshas*, any of the seven *Dhatus* (tissues), or the three *Malas* (waste products), it results in complex disease manifestations<sup>22</sup>. The symptoms of **Premenstrual Syndrome (PMS)**, can be associated with the concept of *Avarana of Vata Dosha*, especially *Pittavruta Vyana Vata* (*Vyana Vata* obstructed by *Pitta*)<sup>23</sup>. This alignment helps in understanding the pathophysiology of PMS within the Ayurvedic framework, where *Vata*'s mobility and its interaction with other *Doshas* are crucial in explaining the condition's symptoms.

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The term *Yoni* can be regarded as encompassing the entire reproductive system. Ayurvedic texts describe four primary factors contributing to *Yonivyapad* (diseases of the female reproductive system), which can be seen as underlying causes for psychosomatic changes during the premenstrual phase. These factors are *Mithyaachara* (faulty regimen), *Pradushtartava* (abnormal menstrual cycle), *Bijadosha* (defects in ovum and sperm), and *Daiva* (divine or unknown causes) <sup>[24]</sup>. *Mithyaachara* includes both *Mithyaahara* (faulty diet) and *Mithyavihara* (abnormal behavior). *Mithyaahara* encompasses dietary abnormalities such as *Alpabhojana* (light diet), *Dushtabhojana* (polluted diet), *Akalabhojana* (untimely food), *Virudhaashana* (unwholesome food), and *Vishamaashana* (irregular food intake). These dietary issues disrupt *Agni* (digestive fire), leading to imbalances in either *Pitta* or *Vata Doshas* or both, which can contribute to PMS. *Mithyavihara* involves increased physical and mental stress, improper *Dinacharya* (daily regimen), and modern lifestyle changes. These disruptions disturb natural biological rhythms, including menstruation, thus increasing susceptibility to PMS. Additionally, *Mithyavihara* affects both bodily functions and mental health, illustrating the interplay between lifestyle, psychology, and PMS. *Pradushtartava* refers to abnormalities in the menstrual cycle, and in the context of PMS, *Artava* pertains to female hormones like estrogen and progesterone. Increased sensitivity to fluctuations in these

hormone levels is a significant factor in PMS, reflecting the concept of *Pradushtartava*. *Bijadosha* involves genetic or hereditary factors that contribute to PMS. Studies reveal a familial predisposition, with identical twins having equal chances of developing the condition, highlighting the role of genetic factors. *Daiva* encompasses divine or unknown causes, including idiopathic factors or influences such as past deeds. These can also contribute to PMS in the absence of identifiable pathological factors. Understanding these factors helps in addressing PMS from an Ayurvedic perspective, focusing on balancing *Doshas*, modifying diet and lifestyle, and managing psychosomatic aspects to alleviate symptoms and enhance overall well-being.

*Vata, Pitta, and Kapha* are integral to every tissue in the body, maintaining its integrity by orchestrating all physiological and biochemical processes. These *Tridoshas* are the foundation of both health and disease. In their balanced state, they support health, while imbalances can disrupt the structural and functional integrity of the body. In Ayurveda, normal menstruation is viewed as a sign of health and well-being. Analyzing the symptomatology of **Premenstrual Syndrome (PMS)** reveals that *Doshik* imbalances play a significant role in its development. For instance, the intake of foods that are *Teekshna* (sharp), *Ushna* (hot), *Kashaya* (astringent), and *Amla* (sour), as well as *Alpa* (less), *Rooksha* (dry) *Pramita Bhojana* (moderate eating), and *Vegadharana* (suppression of natural urges), leads to *Vata Kopa* (increased Vata). This

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imbalance manifests as physiological symptoms of PMS such as constipation, abdominal discomfort, pain, and appetite changes.

Similarly, *Nisajagarana* (reduced sleep), along with emotional factors like fear, grief, and anger, exacerbate *Vata Kopa*, leading to psychological symptoms of PMS. Overindulgence in *Pitta Kopa Nidana*, such as foods that are *Katu* (spicy), *Amla* (sour), *Teekshna* (sharp), *Patu* (salty), and *Vidahi* (irritating), results in *Pitta Dushti* (vitiation of Pitta Dosha). This can lead to changes in appetite, skin conditions, acne, as well as impairments in *Budhi* (intelligence), *Medha* (cognition), and *Smriti* (memory), causing symptoms like reduced cognitive abilities, hot flashes, irritability, insomnia, and anger.

On the other hand, overconsumption of *Amla* (sour), *Lavana* (salt), and *Seeta* (cold) foods, combined with a sedentary lifestyle, leads to symptoms related to *Kapha* imbalance, such as fluid retention, swelling, *Arochaka* (anorexia), appetite changes, and sleep disturbances. PMS is characterized by a predominance of *Vata* and *Pitta* imbalances. The symptoms of PMS can thus be categorized under the headings of *Vata*, *Pitta*, and *Kapha Lakshanas* (characteristics), reflecting the multi-dimensional impact of these *Doshas* on the condition. Figure 1 illustrates the pathophysiology of Premenstrual Syndrome through Ayurveda.

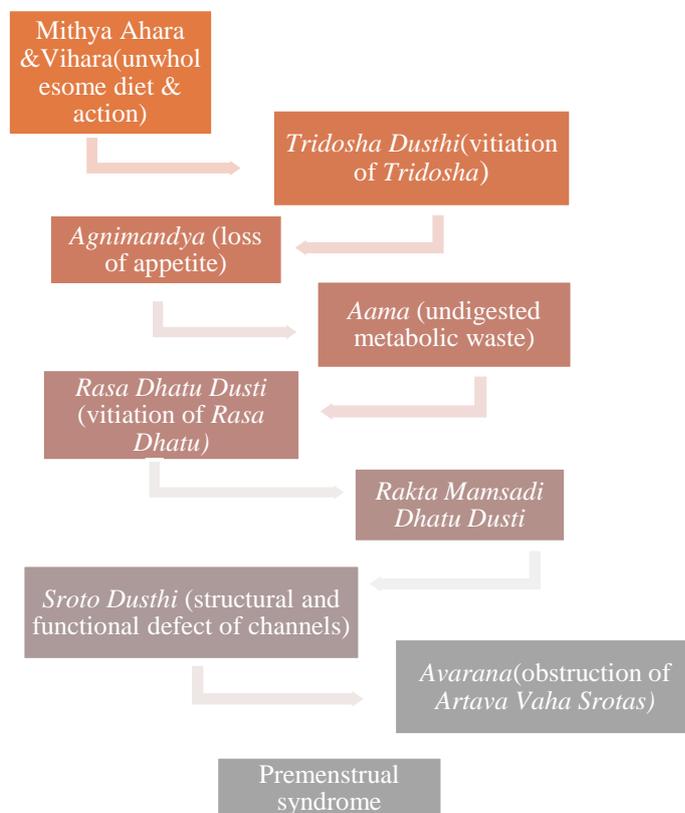


Figure 1 Pathogenesis of Premenstrual syndrome according to Ayurveda

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Various *Nidanas* (causes) such as *Mithya Ahara Vihara* (faulty dietary and lifestyle practices) lead to *Agnidushti* (vitiating of digestive fire) and *Pratilomata of Vata* (reversal of Vata's normal direction). These disturbances impair the *Prana-Apana axis*, which is crucial for maintaining the body's physiological rhythm. Proper functioning of this axis is essential for overall health and well-being.

In Ayurveda, *Artava* (menstrual blood) is considered the *Upadhatu* (subordinate tissue) of *Rasa Dhatu* (nutritional fluid). Therefore, any dysfunction in the *Rasavaha Srotas* (channels of the nutritional fluid) or *Artavavaha Srotas* (channels of menstrual blood) can contribute to the development of **Premenstrual Syndrome (PMS)**. The disruption of these channels, combined with the malfunctioning of the Prana-Apana axis, plays a significant role in the onset of PMS.

Symptoms of PMS often reflect imbalances in the subdivisions of *Vata* and *Pitta* Doshas. For instance, *Agnimandya* (malfunctioning of digestive fire) indicates a disturbance in *Pachaka Pitta* (digestive Pitta), while *Atisweda* (excessive sweating) points to issues with *Bhrajaka Pitta* (Pitta responsible for skin health). Additionally, the involvement of *Prana Vayu* (vital air) and *Sadhaka Pitta* (Pitta associated with mental functions) can be inferred from symptoms such as reduced cognitive ability, decreased concentration, and forgetfulness. Understanding these connections helps identify the underlying *Doshic* imbalances and guides the development

of effective Ayurvedic treatments for managing PMS.

Various imbalances in the *Tridoshas* (*Vata*, *Pitta*, and *Kapha*) manifest distinctly in Premenstrual Syndrome (PMS). When Vata is aggravated (*Vata Prokopa*), it leads to symptoms such as abdominal bloating (*Anaha*), headache (*Sirasoola*), breast tenderness (*Stanasoola*), lower backache (*Kateesoola*), stomachache (*Udarasoola*), constipation (*Malagraha*), insomnia (*Nidrabramsa*), weakness (*Balabramsa*), overall fatigue (*Deenatha*), confusion (*Moha*), fear (*Bhaya*), and grief (*Soka*). In the case of Pitta vitiating, symptoms include reduced sleep (*Alpa Nidrata*), anger (*Krodha*), burning sensations (*Daha*), general agony (*Santhapa*), lassitude (*Glani*), deterioration of body tissues (*Kotha*), roughness of the body (*Angaparushya*), fainting (*Moorcha*), and the displacement of *Oja* from its normal state (*Ojo Visramsa*). For *Kapha Pakopa*, symptoms present as nausea (*Hrillasa*), weakness in body parts (*Angasada*), laziness (*Alasya*), heaviness (*Gourava*), excessive sleep (*Atinidra*), excessive salivation (*Praseka*), loss of appetite (*Agnisada*), joint stiffness (*Sandhi Vislesha*), and lethargy (*Tantra*). Recognizing these manifestations helps understand the underlying *Dosha* imbalances and crafting targeted Ayurvedic interventions to manage and alleviate PMS effectively.

## CONCLUSION

Premenstrual syndrome (PMS) is a psychoneuroendocrine disorder of unknown etiology

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that affects a significant number of females. The severity of PMS symptoms varies among individuals and can impact daily activities and overall health. Although Ayurveda does not explicitly reference PMS, its symptoms, which typically occur during the luteal phase of the menstrual cycle, can be correlated with the *Ritu-Vyateeta Kala* (the luteal phase) and the vitiation of *Vata*, *Pitta*, and *Kapha Doshas* due to *Mithya Achaara* (improper conduct).

Despite the lack of definitive causes and treatments for PMS in contemporary medicine, understanding the relationship between PMS and the *Tridosha* system offers potential benefits. It can improve psychosocial and physical health among females, contributing to a healthier society. Treatment goals for PMS include alleviating symptoms, reducing its impact on daily activities and interpersonal relationships, and minimizing adverse effects. This can be achieved through *Doshic Chikitsa* (Dosha-based treatment), *Satvajaya Chikitsa* (non-pharmacological treatment), and *Pathya Apathya Ahara* and *Vihara* (dietary and behavioral lifestyle modifications).

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### REFERENCES

1. World Health Organization. Reproductive health [Internet]. Available from: <https://www.who.int/westernpacific/health-topics/reproductive-health>. [last accessed on 2023 March 13].
2. Gudipally PR, Sharma GK. Premenstrual syndrome. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Updated 2023 Jul 17. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK560698/>. [last accessed on 2024 February 22].
3. Yonkers KA, O'Brien PM, Eriksson E. Premenstrual syndrome. *Lancet*. 2008 Apr 5;371(9619):1200-10. doi: 10.1016/S0140-6736(08)60527-9. PMID: 18395582; PMCID: PMC3118460. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3118460/>. [last accessed on 12 March 2024].
4. Shariati M, Pourrajabali Astaneh H, Khedmat L, Khatami F. Promoting sustainable physical activity among middle-aged Iranian women: a conceptual model-based interventional study. *BMC Women Health*. 2021 Jan 2;21(1):1. doi: 10.1186/s12905-020-01152-w. PMID: 33388051; PMCID: PMC7777291. Available from: <https://pubmed.ncbi.nlm.nih.gov/33388051/>. [last accessed on 2024 March 15].
5. Dickerson LM, Mazyck PJ, Hunter MH. Premenstrual syndrome. *Am Fam Physician*. 2003 Apr 15;67(8):1743-52. PMID: 12725453.
6. Tiemstra JD, Patel K. Hormonal therapy in the management of premenstrual syndrome. *J Am Board Fam Pract*. 1998 Sep-Oct;11(5):378-81. doi: 10.3122/15572625-11-5-378. PMID: 9796767.
7. Rapkin AJ, Edelmuth E, Chang LC, Reading AE, McGuire MT, Su TP. Whole-blood serotonin in premenstrual syndrome. *Obstet Gynecol*. 1987 Oct;70(4):533-7. PMID: 3627623.
8. Fathizadeh N, Ebrahimi E, Valiani M, Tavakoli N, Yar MH. Evaluating the effect of magnesium and magnesium plus vitamin B6 supplement on the severity of premenstrual syndrome. *Iran J Nurs Midwifery Res*. 2010 Dec;15(Suppl 1):401-5. PMID: 22069417; PMCID: PMC3208934.
9. Tilley A. The heritability of premenstrual syndrome [Internet]. Available from: <https://www.cambridge.org/core/services/aop-cambridge-core/content/view/1B0D2436B3983ED4F80F191B99C1ACCD/S1832427400011646a.pdf/the-heritability-of-premenstrual-syndrome.pdf>
10. Ahmed S. PMS and PMDD are centrally based disorders [Internet]. Available from: <https://www.mdpi.com/2673-396X/3/1/12#:~:text=PMS%20and%20PMDD%20are%20common,PMDD%20are%20centrally%20based%20disorders>. [last accessed on 2024 January 5].
11. Bertone-Johnson ER, Whitcomb BW, Missmer SA, Manson JE, Hankinson SE, Rich-Edwards JW. Early life emotional, physical, and sexual abuse and the development of premenstrual syndrome: a longitudinal study. *J*

## REVIEW ARTICLE

- Womens Health (Larchmt). 2014 Sep;23(9):729-39. PMID: 25064715.
12. Jadavji T, editor. Charak Samhita of Agnivesh elaborated by Charak & Dridhabala, Charak Samhita with Ayurveda Dipika Commentary by Chakrapanidatta. Reprinted 2005. Varanasi: Chaukhamba Surbharati Prakashan; 2005. Vimana sthana, 8th chapter, 224th sloka.
13. Vagbhata. Astanga Hridayam with Sarvangasundara and Ayurvedarasayana's Kusumprabha Hindi- Commentary. Edited by Dr. Harischandra Singh Kushwaha. Varanasi: Chaukhamba Orientalia; 2018. Sutra sthana, 12th chapter, 7th sloka.
14. Bhavaprakasa Sri Bhava Misra. Bhavaprakasha with Vidyotini Hindi commentary. Edited by Sri Brahmasankara Misra and Sri Rupalalaji Vaisya. Varanasi: Chaukhamba Sanskrit Bhawan; 2005. Poorva Khanda, 3rd chapter, 206th Sloka.
15. Charaka Jadavji T, editor. Charak Samhita of Agnivesh elaborated by Charak & Dridhabala, Charak Samhita with Ayurveda Dipika Commentary by Chakrapanidatta. Reprinted 2005. Varanasi: Chaukhamba Surbharati Prakashan; 2005. Sareera sthana, 4th chapter, 224th sloka.
16. Shah N. A thesis of Premenstrual Syndrome (PMS). 2013. Department of Zoology, Veer Narmad South Gujarat University. Available from: <https://shodhganga.inflibnet.ac.in/handle/10603/327036> . [last accessed 2024 March 12].
17. American College of Obstetricians and Gynecologists. Premenstrual syndrome. Clinical management guidelines for Obstetrician – Gynecologists. Number 15. J Obstet Gynecol. 2001; 73:183-191.
18. Susrutha. Susrutha Samhita with Nibhandha Sangraha Commentary by Dalhana. Edited by Vaidya Yadavji Trikamji Acharya. Varanasi: Chaukhamba Sanskrit Sansthana; 2005. Sutra sthana, 15th chapter, 10th sloka.
19. Vrddha Vagbhata. Astangasangraha with the Sasilekha Sanskrit Commentary by Indu. Edited by Dr. Shivprasad Sharma. Varanasi: Chowkhamba Sanskrit Series Office; 2012. Sutra Sthana, Astanga sangraha sutram, 1st chapter, 21st sloka.
20. Charaka Jadavji T, editor. Charak Samhita of Agnivesh elaborated by Charak & Dridhabala, Charak Samhita with Ayurveda Dipika Commentary by Chakrapanidatta. Reprinted 2005. Varanasi: Chaukhamba Surbharati Prakashan; 2005. Sutra sthana, 18th chapter, 44-46th sloka.
21. Charaka Jadavji T, editor. Charak Samhita of Agnivesh elaborated by Charak & Dridhabala, Charak Samhita with Ayurveda Dipika Commentary by Chakrapanidatta. Reprinted 2005. Varanasi: Chaukhamba Surbharati Prakashan; 2005. Sareera sthana, 4th chapter, 7th sloka.
22. Vagbhata. Astanga Hridayam with Sarvangasundara and Ayurvedarasayana's Kusumprabha Hindi- Commentary. Edited by Dr. Harischandra Singh Kushwaha. Varanasi: November 10<sup>th</sup> 2024 Volume 21, Issue 3 **Page 24**

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Chaukhambha Orientalia; 2018. Chikitsa sthana, 22nd chapter, 53-58th sloka.

23. Devaraj A, Gopikrishna S, Saranya K. Critical review on Avarana with contemporary understanding. [Internet]. Available from: <https://ayushdhara.in/index.php/ayushdhara/article/view/1137>. Cited 2024 Mar 23.

24. Charaka Jadavji T, editor. Charak Samhita of Agnivesh elaborated by Charak & Dridhabala, Charak Samhita with Ayurveda Dipika Commentary by Chakrapanidatta. Reprinted 2005. Varanasi: Chaukhamba Surbharati Prakashan; 2005. Chikitsa sthana, 30th chapter, 44-46th sloka.